

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended August 31, 2023

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-11038

NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

41-0857886

(I.R.S. Employer Identification No.)

4201 Woodland Road

P.O. Box 69

Circle Pines, Minnesota

(Address of principal executive offices)

55014

(Zip Code)

(763) 225-6600

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value \$0.02 per share	NTIC	Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES NO

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES NO

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer
Emerging growth company

Accelerated filer

Non-accelerated filer

Smaller reporting company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES NO

The aggregate market value of the registrant's common stock, excluding shares beneficially owned by affiliates, computed by reference to the closing sales price at which the common stock was last sold as of February 28, 2023 (the last business day of the registrant's second fiscal quarter) as reported by the Nasdaq Global Market on that date was approximately \$100.9 million.

As of November 10, 2023, 9,427,599 shares of common stock of the registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Annual Report on Form 10-K incorporates by reference information (to the extent specific sections are referred to herein) from the registrant's Proxy Statement for its 2024 Annual Meeting of Stockholders to be held January 19, 2024.

NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION

ANNUAL REPORT ON FORM 10-K
FISCAL YEAR ENDED AUGUST 31, 2023

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This annual report on Form 10-K contains certain forward-looking statements that are within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and are subject to the safe harbor created by those sections. For more information, see “Part I. Item 1. Business – Forward-Looking Statements.”

As used in this report, references to “NTIC,” the “Company,” “we,” “our,” or “us,” unless the context otherwise requires, refer to Northern Technologies International Corporation and its wholly-owned and majority-owned subsidiaries, all of which are consolidated on NTIC’s consolidated financial statements.

As used in this report, references to: (1) “NTIC China” refer to NTIC’s wholly-owned subsidiary in China, NTIC (Shanghai) Co., Ltd.; (2) “NTI Europe” refer to NTIC’s wholly-owned subsidiary in Germany, NTIC Europe GmbH; (3) “Zerust Mexico” refer to NTIC’s wholly-owned subsidiary in Mexico, ZERUST-EXCOR MEXICO, S. de R.L. de C.V.; (4) “Zerust India” refer to NTIC’s wholly-owned subsidiary in India, HNTI Limited (formerly Harita-NTI Limited); (5) “Zerust Brazil” refer to NTIC’s majority-owned Brazilian subsidiary, Zerust Prevenção de Corrosão S.A.; (6) “Natur-Tec India” refer to NTIC’s majority-owned subsidiary in India, Natur-Tec India Private Limited; (7) “Natur Tec Lanka” refer to NTIC’s majority-owned subsidiary in Sri Lanka, Natur Tec Lanka (Pvt) Ltd and (8) “NTI Asean” refer to NTIC’s majority-owned holding company subsidiary, NTI Asean LLC, which holds investments in certain entities that operate in the Association of Southeast Asian Nations (ASEAN) region.

NTIC’s consolidated financial statements do not include the accounts of any of its joint ventures. Except as otherwise indicated, references in this report to NTIC’s joint ventures do not include any of NTIC’s wholly-owned or majority-owned subsidiaries.

As used in this report, references to “EXCOR” refer to NTIC’s joint venture in Germany, Excor Korrosionsschutz – Technologien und Produkte GmbH.

All trademarks, trade names, or service marks referred to in this report are the property of their respective owners.

PART I

Item 1. BUSINESS

Overview

Northern Technologies International Corporation (NTIC) develops and markets proprietary, environmentally beneficial products and services in over 65 countries either directly or via a network of subsidiaries, joint ventures, independent distributors, and agents. NTIC's primary business is corrosion prevention products and services, marketed mainly under the ZERUST® brand. NTIC has been selling its proprietary ZERUST® products and services to the automotive, electronics, electrical, mechanical, military, and retail consumer markets for almost 50 years and, more recently, has also expanded into the oil and gas industry. Additionally, NTIC markets and sells a portfolio of proprietary bio-based and certified compostable (fully biodegradable) polymer resin compounds and finished products under the Natur-Tec® brand. These products are intended to reduce NTIC's customers' carbon footprint and provide environmentally sound waste disposal options.

NTIC's ZERUST® rust and corrosion inhibiting products include plastic and paper packaging, liquids, coatings, rust removers, cleaners, and diffusers as well as engineered solutions designed specifically for the oil and gas industry. NTIC also offers worldwide, on-site, technical consulting for rust and corrosion prevention issues. NTIC's technical service consultants work directly with the end users of NTIC's ZERUST® rust and corrosion inhibiting products to analyze their specific needs and develop systems to meet their performance requirements. In North America, NTIC sells its ZERUST® corrosion prevention solutions through a network of independent distributors and agents supported by a direct sales force.

Internationally, NTIC sells its ZERUST® corrosion prevention solutions through its wholly-owned subsidiary in China, NTIC (Shanghai) Co., Ltd. (NTIC China), its wholly-owned subsidiary in India, HNTI Limited (Zerust India), its majority-owned joint venture holding company for NTIC's joint venture investments in the Association of Southeast Asian Nations (ASEAN) region, NTI Asean LLC (NTI Asean), and certain other majority-owned and wholly-owned subsidiaries, and joint venture arrangements in North America, Europe, and Asia. NTIC also sells products directly to its European joint venture partners through its wholly-owned subsidiary in Germany, NTIC Europe GmbH (NTI Europe).

One of NTIC's strategic initiatives is to expand into and penetrate other markets for its ZERUST® corrosion prevention technologies. Consequently, for the past several years, NTIC has focused significant sales and marketing efforts on the oil and gas industry, as the infrastructure that supports that industry is typically constructed using metals that are highly susceptible to corrosion. NTIC believes that its ZERUST® corrosion prevention solutions will minimize maintenance downtime on critical oil and gas industry infrastructure, extend the life of such infrastructure, and reduce the risk of environmental pollution due to leaks caused by corrosion.

NTIC markets and sells its ZERUST® rust and corrosion prevention solutions to customers in the oil and gas industry in a continuously increasing number of countries either directly, through its subsidiaries, or through its joint venture partners and other strategic partners. The sale of ZERUST® corrosion prevention solutions to customers in the oil and gas industry typically involves long sales cycles, often including multi-year trial periods with each customer and a slow integration process thereafter.

Natur-Tec® bio-based and compostable plastics are manufactured using NTIC's patented and/or proprietary technologies and are intended to replace conventional petroleum-based plastics. The Natur-Tec® biopolymer resin compound portfolio includes formulations that have been optimized for a variety of applications, including blown-film extrusion, extrusion coating, injection molding, and engineered plastics. These resin compounds are certified to be fully biodegradable in a commercial composting environment and are currently being used to produce finished products, including can liners, shopping and grocery bags, lawn and leaf bags, branded apparel packaging bags and accessories, and various foodservice items, such as disposable cutlery, drinking straws, food-handling gloves, and coated paper products. In North America, NTIC markets its Natur-Tec® resin compounds and finished products primarily through a network of regional and national distributors as well as independent agents. NTIC continues to see significant opportunities for finished bioplastic products and, therefore, continues to strengthen and expand its North American distribution network for finished Natur-Tec® bioplastic products.

Internationally, NTIC sells its Natur-Tec® resin compounds and finished products both directly and through its wholly-owned subsidiary in China and majority-owned subsidiaries in India and Sri Lanka, and through distributors and certain joint ventures.

NTIC's Subsidiaries and Joint Venture Network

NTIC has ownership interests in 11 operating subsidiaries in North America, South America, Europe, and Asia, the results of which are fully consolidated in NTIC's consolidated financial statements. The following table sets forth a list of NTIC's operating subsidiaries as of November 17, 2023, the country in which the subsidiary is organized, and NTIC's ownership percentage in each subsidiary:

Subsidiary Name	Country	NTIC Percent (%) Ownership
HNTI Limited	India	100%
Natur Tec Lanka (Pvt) Ltd	Sri Lanka ⁽¹⁾	75%
Natur-Tec India Private Limited	India	75%
NTI Asean LLC	United States	60%
NTIC (Shanghai) Co., Ltd	China	100%
NTIC Europe GmbH	Germany	100%
Zerust Prevenção de Corrosão S.A.	Brazil	85%
Zerust Singapore Pte Ltd	Singapore ⁽²⁾	60%
Zerust Vietnam Co. Ltd	Vietnam ⁽³⁾	60%
Zerust Taiwan Co., Ltd	Taiwan ⁽⁴⁾	60%
ZERUST-EXCOR MEXICO, S. de R.L. de C.V.	Mexico	100%

(1) Natur Tec Lanka (Pvt) Ltd. is 100% owned by Natur-Tec India Private Limited and, therefore, indirectly owned by NTIC.

(2) Zerust Singapore Pte Ltd is 100% owned by NTI Asean LLC and, therefore, indirectly owned by NTIC.

(3) Zerust Vietnam Co. Ltd is 100% owned by Zerust Singapore Pte Ltd and, therefore, indirectly owned by NTIC.

(4) Zerust Taiwan Co., Ltd is 100% owned by Zerust Singapore Pte Ltd and, therefore, indirectly owned by NTIC.

NTIC participates in 15 active joint venture arrangements in North America, Europe, and Asia. Each of these joint ventures generally manufactures and markets products in the geographic territory to which it is assigned. While most of NTIC's joint ventures exclusively sell rust and corrosion inhibiting products, some of the joint ventures also sell NTIC's Natur-Tec® resin compounds. NTIC has historically funded its investments in joint ventures with cash generated from operations. NTIC accounts for the investments and financial results of its joint ventures in its consolidated financial statements utilizing the equity method of accounting. The following table sets forth a list of NTIC's operating joint ventures as of November 17, 2023, the country in which the joint venture is organized, and NTIC's ownership percentage in each joint venture:

Joint Venture Name	Country	NTIC Percent (%) Ownership
ACOBAL SAS	France	50%
CHONG WAH-NTIA SDN. BHD.	Malaysia ⁽¹⁾	30%
EXCOR KORROSIONSSCHUTZ – TECHNOLOGIEN UND PRODUKTE GMBH	Germany	50%
EXCOR SP. Z.O.O.	Poland	50%
EXCOR-ZERUST S.R.O.	Czech Republic	50%
KOREA ZERUST CO., LTD.	South Korea ⁽¹⁾	30%
PT. CHEMINDO – NTIA	Indonesia ⁽¹⁾	30%
TAIYONIC LTD.	Japan	50%
ZERUST – DNEPR	Ukraine	50%
ZERUST (U.K.) LTD.	United Kingdom	50%
ZERUST A.Ş.	Turkey	50%
ZERUST AB	Sweden	50%
ZERUST CONSUMER PRODUCTS, LLC	United States	50%
ZERUST OY	Finland	50%
ZERUST SPECIALTY TECH CO. LTD.	Thailand ⁽¹⁾	30%

(1) Indirect ownership interest through NTI Asean.

For more information regarding NTIC's joint ventures and their effect on NTIC's operating results, see NTIC's consolidated financial statements in "Part II. Item 8. Financial Statements and Supplementary Data" and "Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this report.

Products

NTIC derives revenues directly and/or indirectly through its subsidiaries and joint ventures from two reportable business segments based on products sold, customer base, and distribution center: ZERUST® corrosion prevention solutions and Natur-Tec® resin compounds and finished products.

ZERUST® Corrosion Prevention Solutions. In fiscal 2023, 77.3% of NTIC's consolidated net sales were derived from developing, manufacturing and marketing ZERUST® rust and corrosion inhibiting products and services. NTIC's consolidated net sales in fiscal 2023 included \$61,728,364 in sales of ZERUST® rust and corrosion inhibiting products and services, an increase of 7.4% from such sales in fiscal 2022. Corrosion not only damages the appearance of metal products and components but also negatively impacts their mechanical performance. This applies to the rusting of ferrous metals (iron and steel) and the deterioration by oxidation of nonferrous metals (aluminum, copper, brass, etc.). NTIC's ZERUST® corrosion prevention solutions include plastic and paper packaging, powders, liquids, coatings, rust removers, cleaners, diffusers, and engineered solutions for the oil and gas industry as well as technical corrosion management and consulting services.

Plastic and Paper Packaging. NTIC's ZERUST® packaging products contain proprietary chemical formulations that continuously release an invisible, odorless and non-toxic vapor that forms a passivating layer on any metal surfaces it comes in contact with and thereby inhibits rust and corrosion. The corrosion inhibiting protection is maintained only as long as the metal products to be protected remain enclosed within the ZERUST® packaging. Electron scanning shows that once metal products are removed from the ZERUST® packaging, the ZERUST® protective layer dissipates from the contents' surfaces within two hours, leaving a clean, dry, and corrosion-free metal component. This mechanism of corrosion protection enables NTIC's customers to easily package metal objects for rust-free shipment and/or long-term storage. Furthermore, by eliminating costly greasing and degreasing processes and/or significantly reducing the use of certain coatings to inhibit corrosion, NTIC's ZERUST® corrosion prevention solutions provide customers significant savings as compared to traditional methods of corrosion prevention in terms of labor, material, and capital expenditures for equipment to apply, remove, and dispose of oils and greases, as well as environmental, health and safety benefits provided by not having to handle and work with hazardous chemicals.

NTIC was the first in the world to develop the means of infusing volatile corrosion inhibiting chemical compounds (VCIs) into polyethylene and polypropylene resins. Combining ZERUST® chemical compounds with polyethylene and polypropylene resins permitted NTIC to introduce a line of plastic packaging products in the form of low and high-density polyethylene bags and shroud film, including stretch, shrink, skin, and bubble cushioning film, thereby giving customers the ability to ship and store ferrous, nonferrous, and mixed-metal products in a clean, dry, and corrosion-free condition, at an overall savings in total process costs. In addition to plastic packaging, NTIC has also developed VCI compounds to imbue kraft paper, corrugated cardboard, solid fiber, and chipboard packaging materials with corrosion protection properties. NTIC's ZERUST® plastic and paper packaging products come in various thicknesses, strength enhancements, protection types, shapes, and sizes. This product line also includes items such as ZERUST® gun cases, car covers, and tool-drawer liners, which are targeted at retail consumers.

Liquids and Coatings. NTIC's corrosion prevention solutions include a line of metal surface treatment liquids and coatings, which are oil, water, or bio-solvent based, and are marketed under brand names including Axxatec™, Axxanol™, and Z-Maxx™. These liquids and coatings provide powerful protection in aggressively corrosive environments, such as salt air, high humidity, and/or high temperatures. Products are formulated for most metal types and protection levels. For exceptionally harsh environments, customers may choose to use a combination of NTIC's liquids and coatings with ZERUST® plastic and/or paper products to achieve robust corrosion protection during manufacturing, shipping, and warehousing stages.

Rust Removers and Cleaners. NTIC also sells rust removal and cleaning products, under the Axxaclean™ brand name, designed to restore rusty parts to a usable condition without the use of labor-intensive, abrasive cleaners that damage surfaces and commonly fail to remove rust from complex metal surfaces, like the teeth of small gears.

Diffusers. NTIC's corrosion prevention solutions include a line of corrosion inhibiting vapor diffusers, such as ZERUST® ActivPak®, ZERUST® ICT® Vapor Capsules, ZERUST® ICT® Plastabs®, ZERUST® ICT® Cor-Tabs®, ZERUST® ICT® Pipe Strip, and ZERUST® ICT® Tube Strip. These diffusers are designed to protect metals within enclosures, like switch gearboxes and electronics cabinets, or can be used as extra protection when added to ZERUST® packaging products. Diffusers work by permeating the interior air of an enclosure with an invisible and odorless corrosion inhibiting vapor that settles as a protective layer on all metal surfaces that are within the range of a specific "radius of protection" for a period of one or two years depending on the product model. This invisible and dry protective layer reevaporizes and dissipates into the air upon removal of a diffuser from an enclosure, leaving all surfaces clean, dry, residue-free, and corrosion-free.

Z-CIS® Technical Services. As an on-going effort to help NTIC's customers improve and control their corrosion management processes, NTIC markets and offers unique corrosion management and consulting services to target customers. This ZERUST® corrosion inhibition system (known as Z-CIS®) leverages NTIC's global network to dispatch highly-trained technical service engineers to customer sites to solve complex corrosion problems. Several major automotive companies and their automotive parts suppliers have used NTIC's Z-CIS® system.

ZERUST® Corrosion Prevention Solutions Designed Specifically for the Oil and Gas Industry. NTIC has developed proprietary engineered corrosion inhibiting solutions specifically to mitigate the types of corrosion that commonly form on the capital assets used in the petroleum and chemical process industries and has targeted the sale of these ZERUST® corrosion solutions to potential customers in the oil and gas industry. NTIC's consolidated net sales in fiscal 2023 included \$7,801,986 in sales made to customers in the oil and gas industry, an increase of 69.3% from such sales in fiscal 2022. On September 19, 2022, NTIC announced the signing of an initial contract with BP Exploration (Caspian Sea) Limited p.l.c. to supply chemical corrosion protection services for 12 storage tanks through December 2025, representing the largest contract to date for oil and gas storage tank solutions. In fiscal 2023, sales of ZERUST® corrosion prevention solutions to large customers in the oil and gas industry became more consistent, with these customers beginning to re-order products. Sales within the U.S. also stabilized somewhat, and key customer relationships were expanded. While NTIC believes these trends show increased acceptance of corrosion solutions for the oil and gas industry, NTIC anticipates that its sales of ZERUST® products and services into the oil and gas industry will continue to remain subject to significant volatility, specifically due to economic factors, such as potential crude oil price changes and global supply/demand churn. NTIC anticipates that its sales of ZERUST® products and services into the oil and gas industry may be subject to additional volatility due to uncertainty caused by certain environmental policies and priorities of the current administration. Demand for ZERUST® oil and gas products around the world depends primarily on market acceptance and the reach of NTIC's distribution network. Because of the typical size of individual orders and overall size of NTIC's net sales derived from sales of oil and gas products, the timing of one or more orders can materially affect NTIC's sales compared to prior fiscal year period sales. Projects in South America, Europe, the Middle East, and Southeast Asia are still a small but growing, strategically important part of the sales growth picture.

The infrastructure/assets that support the oil and gas industry are predominantly constructed using metals that are highly susceptible to corrosion. The industrial environment at these facilities usually contains compounds, including sulfides and chlorides, which cause aggressive corrosion. This problem affects the service life and safety of pipelines, petroleum storage tanks, spare parts in long-term storage, coastal/offshore assets, and other critical equipment. In addition to the costs associated with the replacement of parts and structures, maintenance and repairs, and product loss, there are significant economic losses associated with critical infrastructure being down for repair and maintenance. Furthermore, there are also considerable health, safety, and environmental risks caused by corrosion that can greatly increase economic losses. While the industry predominantly uses various paints/coatings, engineered alloys, cathodic protection, etc. to mitigate corrosion, there are several situations where such options are not feasible and, in many such cases, NTIC believes that its ZERUST® oil and gas corrosion prevention solutions are more effective at minimizing maintenance downtime on critical oil and gas industry infrastructure, extend the life of such infrastructure, and reduce the risk of environmental pollution due to leaks caused by corrosion.

NTIC's rust and corrosion inhibiting products for the oil and gas industry include ZERUST® Flange Savers®, ZERUST® Zif Tape, ZERUST® ReCAST-SSB solutions, and ZERUST® chemicals, including Zerion powders and gels, in addition to many of the standard industrial ZERUST® rust and corrosion inhibiting products previously described.

ZERUST® Flange Savers® are specially designed covers that have been impregnated with a proprietary ZERUST® inhibitor formulation to provide corrosion protection for flanges, valves, and welded joints. Oil and gas pipeline segments are connected by flanges and welded joints of varying sizes, designs, and materials. These connection points often corrode under aggressive industrial environments and harsh operating conditions, thereby causing costly maintenance, operational, and safety problems. ZERUST® Flange Savers® are available in various sizes to accommodate different pipe diameters, pressure ratings, and international standards for pipeline valves and flanges.

ZERUST® ReCAST-SSB solutions protect the Soil Side Bottoms (SSB) of aboveground storage tanks through a variety of unique and highly effective delivery systems designed by the Zerust Oil & Gas team to deliver proprietary Zerion FVS corrosion inhibitor to spaces under tank bottoms that are susceptible to significant corrosion. Tank bottoms are typically made of steel plates, which are in direct contact with a foundation surface that may be concrete, sand/soil, or asphalt/bitumen. It is typically not possible to protect this underside surface with traditional coatings. Cathodic protection (CP) systems can only provide partial protection, but also have significant limitations that cause failures well ahead of the expected service life of a tank. The ZERUST® solutions provide effective protection even to areas that cannot be addressed with CP. These are engineered solutions where each system is tailored to a customer's requirements depending on factors including the tank foundation design, specific environmental conditions, and tank diameter.

ZERUST® Zerion powder-based inhibitor solutions include the following:

- Zerion FVS is a unique inhibitor blend that is used in both the SSB Solutions and in internal pipeline protection. This “best-in-class” product has been successfully deployed at multiple client sites in North and South America, Europe, the Middle East, India as well as other parts of Asia.
- Zerion FAN-5 is a lower cost inhibitor that is very effective at protecting metals upon contact. It can be used to treat large volumes of water that may be used for hydrotesting. In combination with Zerion FVS, it offers a more complete solution for the protection of pipelines.
- AutoFog is a revolutionary product that allows for the quick VCI saturation of large volume spaces without the need for mechanical “fogging” equipment. This rapid self-diffusing capability is designed for sealed void spaces, protection of large/complex assets like heat exchangers, and heater-treaters.

Natur-Tec® Resin Compounds and Finished Products. NTIC manufactures and sells a broad range of bioplastic packaging solutions, including bio-based and certified compostable (fully biodegradable) polymer resin compounds, and finished products under the Natur-Tec® brand. NTIC's consolidated net sales in fiscal 2023 included \$18,174,588 in sales of Natur-Tec® resins and finished products, an increase of 8.8% compared to sales in fiscal 2022.

Market drivers such as volatile petroleum prices, reduced dependence on foreign oil, reduced carbon footprints, requirements by multinational brands for sustainable packaging solutions that meet Circular Economy and environmentally responsible end-of-life disposal mandates, and concerns about plastic residue in the environment have led to heightened interest in using sustainable, bio-based and renewable plant-biomass resources for the manufacture of plastics and industrial products. Plastics that are fully biodegradable in commercial composting or anaerobic digester systems allow the safe and effective conversion of these plastics to carbon dioxide, water, and fertilizer at the end of their service life. Increased environmental and sustainability awareness at the corporate and consumer level, improved technical properties and product functionality, as well as recent foreign, state, and local governmental regulations banning the use of conventional plastics or mandating the use of certain biodegradable or compostable products, including regulations in China, India and California, have also fueled this interest in bio-based and biodegradable-compostable plastics. The term “bio-plastics” encompasses a broad category of plastics that are either bio-based, which means derived from renewable resources such as corn or cellulosic/plant material or blends thereof, or are engineered to be fully commercially compostable, or both.

Natur-Tec® resins and finished products sales in North America and finished product sales at NTIC's majority-owned subsidiary in India and at NTIC's subsidiary in China, experienced reduced demand globally as a result of the COVID-19 pandemic. The COVID-19 pandemic had a significant impact on demand from many large users of bioplastics, including college campuses, stadiums, arenas, restaurants, and corporate office complexes. Additionally, demand for apparel packaging solutions was impacted by ongoing COVID- related lockdowns and supply-chain bottlenecks in Asia. Beginning in fiscal 2022 and throughout 2023, NTIC experienced a significant recovery in many of these areas to pre-pandemic levels. NTIC anticipates that college campuses and other venues will return to pre-pandemic levels of operation in 2024.

Resin Compounds. Natur-Tec® resin compounds are produced by blending commonly available base resins, such as Ecoflex® from BASF, Ingeo® PLA from NatureWorks LLC, and Luminy® from Total-Corbion with organic and inorganic fillers and proprietary polymer modifiers and compatibilizers using NTIC's proprietary and patented ReX Process. In this process, biodegradable polymers, natural polymers made from renewable, plant-biomass resources, and organic and inorganic materials are reactively blended in the presence of proprietary compatibilizers and polymer modifiers to produce bio-based and/or compostable polymer resin formulations that exhibit unique and stable morphology. Natur-Tec® resin compounds are engineered for high performance, ease of processing, and reduced cost compared to most other bio-plastic materials and can be processed by converters using conventional plastic manufacturing processes and equipment.

Natur-Tec® resin compounds are sold in several grades tailored for a variety of applications, such as blown-film extrusion, profile extrusion, thermoforming, extrusion coating, and injection molding.

Natur-Tec® flexible film resin compounds are fully commercially compostable and meet the requirements of international standards for compostable plastics, such as ASTM (American Society for Testing and Materials) D6400 (U.S.), EN 13432 (European standards for products and services by European Committee for Standardization), and ISO (International Organization for Standardization) 17088, and are certified as 100% compostable by organizations including the BPI (Biodegradable Products Institute) in the United States and TÜV Austria in Europe. Natur-Tec® film resin compounds can be used to produce film for applications, such as bags, including compost bags, lawn and leaf bags, carry-out bags, agricultural film, and consumer and industrial packaging. Natur-Tec® film resin compounds are also used to produce bags and covers for branded apparel packaging and to manufacture specialty foodservice items, such as compostable drinking straws, thermoformed lids and disposable food-handling gloves.

The Natur-Tec® compostable extrusion coating resin compounds are bio-based and biodegradable and are designed to replace conventional plastic materials for extrusion coating applications. Natur-Tec® extrusion coating resin compounds are manufactured using sustainable and renewable resources, per the ASTM D6866 standard, which allows companies and consumers the opportunity to reduce or neutralize their carbon footprint and are designed to meet the requirements of international standards for compostable plastics, such as ASTM D6400. Natur-Tec® extrusion coating resin compounds provide good adhesion to paper, an excellent print surface, and good heat seal strength and the coating material is suitable for food contact applications, including both hot and cold applications. Natur-Tec® extrusion coating resin compounds can be used for coating paper and paperboards for the manufacture of disposable cups, plates, and other foodservice items.

The Natur-Tec® compostable injection molding resin compounds are bio-based and compostable and are designed to replace conventional plastic materials for injection molded plastic applications. Natur-Tec® compostable injection molding resin compounds are manufactured using sustainable and renewable resources, per the ASTM D6866 standard, and are designed to meet the requirements of international standards for compostable plastics, such as ASTM D6400 and EN 13432. Natur-Tec® compostable injection molding resin compounds can be used for injection molded plastic applications, such as cutlery, pens, hangers, containers, and packaging. Natur-Tec® bio-based injection molding resin compounds are made with at least 90% bio-based/renewable resource-based materials, per the ASTM D6866 standard, and are meant to enhance sustainability by replacing petroleum-based plastics. Natur-Tec® bio-based injection molding resin compounds exhibit the same properties as conventional plastic materials and can be used in applications such as automotive components, consumer goods, electronics, medical products, furniture, and packaging.

Finished Products. Natur-Tec® finished products include totally biodegradable and compostable trash bags, agricultural film, and other single-use disposable products, such as food and consumer goods packaging currently marketed under the Natur-Bag® brand. The Natur-Bag® product line offers 15 different compostable trash bag sizes, from 3-gallon to 96-gallon, as well as shopper bags, produce bags and gloves. The bags are available in various SKU configurations, including retail packs that are sold to the consumer either through retail outlets or through online stores and industrial case packs that are sold to commercial and industrial customers primarily through wholesalers and distributors. The Natur-Bag® products are manufactured from the Natur-Tec® flexible film resin compounds and thus are fully biodegradable and compostable. These products are certified fully commercially compostable and carry the BPI Compostable logo in the United States and the TÜV Austria OK Compost logo in Europe. Furthermore, these products were also independently tested and approved for use in organic waste diversion systems by Cedar Grove, one of the largest compost operators in the United States.

Sales, Marketing, and Distribution

ZERUST® Corrosion Prevention Solutions. In the United States, NTIC markets its ZERUST® rust and corrosion inhibiting products and services, including its products designed for the oil and gas industry, principally to industrial users in the automotive, electronics, electrical, mechanical, military, retail consumer, and oil and gas markets by a direct sales force and through a network of independent distributors, manufacturer's sales representatives, and strategic partners. Prior to placing an order, NTIC's technical service consultants work directly with the end users of NTIC's ZERUST® products to analyze their specific corrosion prevention needs and develop systems to meet their performance requirements.

Internationally, NTIC has entered into a series of joint ventures with foreign partners (either directly or through a holding company). NTIC receives fees for providing technical support, marketing assistance, and other services to its joint ventures based primarily on the net sales of the individual joint ventures in accordance with the terms of the joint venture arrangements. Such services include consulting, legal, insurance, technical, and marketing services.

In China, NTIC sells its products and services through NTIC China. NTIC has wholly owned or majority-owned subsidiaries to conduct its business in Brazil, Mexico, Vietnam, and Singapore. In addition, NTIC sells its ZERUST products in India through this wholly-owned subsidiary, HNTI Limited.

With respect to the sales and marketing of ZERUST® rust and corrosion inhibiting products and services to the oil and gas industry, NTIC uses a combination of direct sales personnel, independent sales agents, and its joint venture network. In addition, in an attempt to penetrate the oil and gas industry within certain markets more quickly, NTIC has entered into various agreements with specific organizations that have existing long-term relationships with key oil and gas industry clients. NTIC also engages in certain direct marketing activities to build its brand within the oil and gas industry, such as traditional advertising and direct mail campaigns and presence and participation at selected key trade shows and technical forums. NTIC continues to believe the sale of its ZERUST® corrosion prevention solutions to customers in the oil and gas industry will involve long sales cycles, likely including multi-year trial periods with each user and a slow integration process thereafter.

Natur-Tec® Resin Compounds and Finished Products. In the United States, NTIC markets its Natur-Tec® resin compounds and finished products through a network of national and regional distributors and independent manufacturer's sales representatives and two NTIC direct sales employees as of August 31, 2023. Target customers for Natur-Tec® finished products include individual consumers as well as commercial and institutional organizations, such as corporations and government agencies, and educational organizations, such as universities and school districts. NTIC is also targeting key national and regional retailers utilizing independent sales agents. Target customers for Natur-Tec® resin compounds include plastics converters and foodservice ware brands that would purchase Natur-Tec® resin compounds to manufacture and sell their own finished bio-based and compostable end products, such as film, bags, and cutlery. In June 2022, the State of California passed a law intended to reduce single-use plastics. Notably, the bill provides that, by 2032, all packaging must be recyclable or compostable. Accordingly, NTIC expects the market in California for bio-plastic packaging solutions to grow substantially in the coming decade.

Internationally, NTIC uses Natur-Tec India, Natur Tec Lanka, NTIC China and a network of international distributors to market its Natur-Tec® resin compounds and finished products. The government of India recently announced a phased ban on the manufacture and sale of single-use plastics beginning in July 2022. The first phase bans earbuds and plastic sticks used in balloons and ice cream. The second phase bans plastic cigarette packets and plastic bags less than 100 microns thick. Notably, compostable plastics are exempt from this ban. Accordingly, NTIC expects the market in India for bio-plastic packaging solutions to continue to grow substantially.

NTIC's Natur-Tec® resin compounds and finished products are produced at facilities in India, China, Malaysia, and the United States. NTIC's Natur-Tec® resin compounds can be shipped to manufacturing facilities around the world, where they then can be converted into finished products, such as film or pieces of cutlery. NTIC's Natur-Tec® finished products are manufactured using NTIC's Natur-Tec® resin compounds by select sub-contractors.

Competition

ZERUST® Corrosion Prevention Solutions. While NTIC is unaware of any third parties with which NTIC competes on a worldwide basis with respect to its corrosion prevention solutions, NTIC does compete with several third parties on a regional basis. NTIC evaluates competing rust and corrosion inhibiting products on an ongoing basis. Some of NTIC's competitors are established companies that may have financial resources, marketing capabilities, distribution networks and other resources substantially greater than those of NTIC. As a result, they may be able to adapt more quickly to new or emerging technologies and changes in customer requirements or to devote greater resources to the promotion and sale of their products than NTIC. With respect to its rust and corrosion inhibiting products, NTIC competes on the basis of product innovation, quality, reliability, product support, customer service, reputation, and price. Some of NTIC's competitors may have achieved significant market acceptance of their competing products and brand recognition. NTIC, however, believes it has an advantage over most of its competitors as a result of NTIC's technical innovation and its value-added services. NTIC attempts to provide its customers with the highest level of technical service and applications engineering in addition to ZERUST® rust and corrosion inhibiting products. Nonetheless, the commoditization of certain of NTIC's ZERUST® rust and corrosion inhibiting products has led, and may continue to lead, to lower prices and lower margins on such products. In addition, because certain barriers to entry are low, additional competitors may emerge, which likely would lead to the further commoditization of NTIC's rust and corrosion inhibiting products.

With respect to the sales and marketing of ZERUST® rust and corrosion inhibiting products and services to the oil and gas industry, NTIC uses a combination of direct sales personnel, independent sales agents, and its joint venture network. In addition, in an attempt to penetrate the oil and gas industry within certain markets more quickly, NTIC has entered into various agreements with specific organizations that have existing long-term relationships with key oil and gas industry clients. NTIC also engages in certain direct marketing activities to build its brand within the oil and gas industry, such as traditional advertising and direct mail campaigns and presence and participation at selected key trade shows and technical forums. NTIC continues to believe the sale of its ZERUST® corrosion prevention solutions to customers in the oil and gas industry will involve long sales cycles, likely including multi-year trial periods with each user and a slow integration process thereafter.

Natur-Tec® Resin Compounds and Finished Products. With respect to NTIC's Natur-Tec® resin compounds and finished products, NTIC competes with several established companies that have been producing and selling similar products for a significantly longer time period and have significantly more sales, more extensive and effective distribution networks, and better brand recognition than NTIC. Most of these companies also have substantially more financial and other resources than NTIC. NTIC competes on the basis of performance, brand awareness, distribution network, product availability, product offering, improved shelf life, place of manufacture, and price. Because of price competition, NTIC's margins on its Natur-Tec® resin compounds and finished products are lower than its margins on its ZERUST® corrosion prevention solutions. NTIC also has encountered in the past and could continue to encounter additional supply constraints for the base polymer resins used to manufacture NTIC's Natur-Tec® resin compounds and finished products since there are a limited number of suppliers of such base polymer resins and limited capacity for their production.

Research and Development

NTIC's research and development activities are directed at improving existing products, developing new products, reducing costs, and improving quality assurance through improved testing of NTIC's products. NTIC's internal research and development activities are conducted at its facilities located in Circle Pines, Minnesota; Beachwood, Ohio; and Dresden, Germany under the direction of internationally known scientists and research institutes under exclusive contract with NTIC with respect to the subject of their respective research efforts. EXCOR has established a wholly-owned subsidiary, Excor Korrosionsforschung GmbH, to conduct research into new fields of corrosion inhibiting packaging and the applications engineering of such products in conjunction with NTIC's domestic research and development operations. With respect to NTIC's Natur-Tec® resin compounds and finished products, Ramani Narayan, Ph.D., a current director of NTIC and Distinguished Professor in the Department of Chemical Engineering & Materials Science at Michigan State University, provides his expertise and technical support to NTIC.

NTIC anticipates that it will spend between \$4,400,000 and \$4,800,000 in fiscal 2024 on research and development activities.

Intellectual Property Rights

NTIC's success depends and will continue to depend in part upon its ability to maintain patent and trademark protection for its products and processes, to preserve its proprietary information and trade secrets, and to operate without infringing the proprietary rights of third parties. NTIC's policy is to attempt to protect its technology by, among other things, filing patent applications and trademark applications and vigorously preserving the trade secrets covering its technology and other intellectual property rights.

In 1980, NTIC developed and patented the first polyolefin (plastic) based industrial corrosion inhibiting packing material in the world. The U.S. patent granted under this patent application became the most important intellectual property right in NTIC's history. This patent expired in 2000. NTIC has since filed for 12 letters of patent in the United States covering various corrosion inhibiting technologies, systems, and applications and now owns several patents in these areas. These patents and patent applications have been extended to the countries of strategic relevance to NTIC, including Australia, Brazil, Canada, China, Europe, Japan, India, Korea, Mexico, Russia, and Taiwan. In addition, EXCOR owns several patents in the area covering various corrosion inhibiting technologies and has also applied for new patents on proprietary new corrosion inhibiting technologies. NTIC is also seeking additional patent protection covering various host materials into which its corrosion inhibiting additives and other protective features can be incorporated, proprietary new process technologies, and chemical formulations outside the area of corrosion protection. NTIC owns several patents outside the area of corrosion protection both in the United States and in countries of strategic relevance to NTIC, including the above-noted countries.

In addition to seeking patent protection, NTIC maintains an extensive portfolio of trademarks in countries where NTIC has a presence directly or through its subsidiaries and joint ventures. NTIC continuously pursues new trademark applications of strategic interest worldwide. NTIC owns the following U.S. registered trademarks: NTI®, NTI & Globe Design®, ZERUST®, EXCOR®, ICT®, Z-CIS®, COR TAB®, PLASTABS®, NATUR-TEC®, NATUR-TEC & Design®, NATUR-BAG® and NATUR-WARE®, ZERION®, AUTOFOG®, FLANGE SAVER®, and ACTIVPAK®. NTIC also has a registered trademark on the use of the Color Yellow with respect to corrosion inhibiting packaging. Furthermore, NTI®, ZERUST®, EXCOR®, the Color Yellow®, and NTI ASEAN®, as well as other marks, have been registered in the European Union, and several new applications are pending.

NTIC requires its employees, consultants, and advisors with access to its confidential information, including trade secrets, to execute confidentiality agreements upon commencement of their employment or consulting relationships with NTIC. These agreements generally provide that all confidential information NTIC develops or makes known to the individual during the course of the individual's employment or consulting relationship with NTIC must be kept confidential by the individual and not disclosed to any third parties. NTIC also requires all of its employees and consultants who perform research and development for NTIC to execute agreements that generally provide that all inventions developed by these individuals during their employment or service arrangement with NTIC will fall under NTIC's proprietary intellectual property rights.

Manufacturing

NTIC's ZERUST® rust and corrosion inhibiting products are manufactured according to NTIC's specifications primarily by selected independent sub-contractors under trade secrecy agreements and/or license agreements. In addition, NTIC manufactures select ZERUST® rust and corrosion inhibiting products, consisting primarily of liquids and powders, at its corporate headquarters location in Circle Pines, Minnesota.

NTIC's Natur-Tec® resin compounds and finished products are produced at facilities in India, China, Malaysia, and the United States. NTIC's Natur-Tec® resin compounds can be shipped to manufacturing facilities around the world, where they then can be converted into finished products, such as film or piece of cutlery. NTIC's Natur-Tec® finished products are manufactured using NTIC's Natur-Tec® resin compounds by select sub-contractors.

NTIC is ISO 9001 certified with respect to the manufacturing of its products. NTIC believes that the process of ISO 9001 certification serves as an excellent total quality management tool, enabling NTIC to ensure consistency in the performance of its products. In addition, because potential customers may prefer or require manufacturers to have achieved ISO certification, such ISO certifications may provide NTIC with certain competitive advantages.

Availability of Raw Materials

NTIC does not typically carry excess quantities of raw materials because of historically widespread availability for such materials from various suppliers. However, with respect to its Natur-Tec® resin compounds and finished products, there are a limited number of suppliers of the base resins used to manufacture the resin compounds and finished products. Additionally, there is growing demand for these base resins, which has caused cost increases and, occasionally, supply issues. During fiscal 2022, for example, NTIC experienced some delays in obtaining these base resins due to production slowdowns, which resulted from manufacturing issues, labor shortages and power restrictions in China, freight container shortages, and the war in Ukraine. While NTIC experienced longer lead times for raw materials and experienced raw material cost increases during fiscal 2022 as a result of supply chain disruptions, lead times and raw material costs declined during fiscal 2023. It is anticipated that these worldwide disruptions and supply issues will subside in fiscal 2024.

In addition, a few raw materials and purchased parts used in NTIC's rust and corrosion inhibiting products and Natur-Tec® finished products are sourced from suppliers who currently serve as NTIC's sole source of supply for these materials and parts. Although NTIC believes it can obtain these raw materials and parts from other suppliers, an unexpected loss of supply over a short period of time, including as a result of future worldwide disruptions in supply, may not allow NTIC to replace these sources in the ordinary course of business.

Backlog

NTIC had an estimated order backlog of \$5,337,717 as of August 31, 2023, compared to \$5,856,655 as of August 31, 2022, which was generally across all business units. Sales relating to this backlog are expected to be realized during first quarter of fiscal 2024. These are orders that are held by NTIC pending release instructions from the customers to be used for just-in-time production. Customers generally place orders on an "as needed" basis and expect delivery within a relatively short period of time.

Governmental Regulation

The U.S. Food and Drug Administration (FDA) has indicated to NTIC that it has no objection to the use of ZERUST® ICT® packaging products in protecting metal food containers and processing equipment. In addition, the manufacture, sale and use of NTIC's Natur-Tec® resin compounds and finished products are subject to regulation in the United States by the FDA. The FDA's regulations are concerned with substances used in food packaging materials. Thus, food and beverage containers are in compliance with FDA regulations if the components used in the food and beverage containers are approved by the FDA as indirect food additives for their intended uses and comply with the applicable FDA indirect food additive regulations or are generally recognized as safe for their intended uses and are of suitable purity for those intended uses. NTIC believes that its resin compounds are in compliance with all FDA requirements and that NTIC does not require further FDA approval prior to the sale of its products.

Human Capital Management

Headcount and Employee Demographics

As of August 31, 2023, NTIC had a total of 86 full-time employees located in North America, consisting of 26 in sales and marketing, 26 in research and development and lab, 18 in administration, and 16 in production. As of August 31, 2023, NTIC's wholly-owned subsidiary in India, HNTI Limited, had 58 full-time employees, NTIC's wholly owned subsidiary in China had 35 full-time employees, its majority-owned subsidiary in Brazil had 20 full-time employees, its majority-owned subsidiary in India, Natur Tec India, had 9 full-time employees, its majority-owned subsidiary in Singapore, Zerust Singapore, had 1 full-time employee, its majority-owned subsidiary in Taiwan, Zerust Taiwan, had 9 full-time employees, its majority-owned subsidiary in Vietnam, Zerust Vietnam, had 6 full-time employees its wholly owned subsidiary in Mexico had no full-time employees, and its holding company, NTI Asean, had no full-time employees.

As of August 31, 2023, of our global workforce, 41% are female and 27% are racially or ethnically diverse. Of our management team, 40% are female and 23% are racially or ethnically diverse. Of our eight Board members, nearly 40% are female and nearly 40% are racially or ethnically diverse. Of our U.S. workforce, 6% are veterans.

Turnover

NTIC continually monitors employee turnover rates as its success depends upon retaining highly trained engineering, manufacturing and operations personnel. The average tenure of our employees is nine years.

Management Team

NTIC believes its management team has the experience necessary to effectively execute its strategy and advance its product and technology leadership. The average tenure of the members of NTIC's management team is 16 years.

Employee Unions, Collective Bargaining Agreements and Work Councils

There are no unions representing NTIC's employees, and NTIC believes that its relations with its employees are good.

Health, Safety and Environment

Health, safety and environment (HSE) are the cornerstones of NTIC. NTIC is in the business of converting unique, environmentally beneficial materials science into value added products and services for industrial and consumer applications. NTIC believes that it is responsible to its worldwide customers, its people, its communities and its stockholders, and NTIC takes these responsibilities seriously. NTIC is dedicated to investing in the future of the planet and NTIC's people and intends to continue to invest in HSE protection and improvements in a timely manner consistent with available technology.

NTIC is guided by its Policy Statement on HSE, which sets forth NTIC's HSE objectives, including ensuring that all activities across the value chain are conducted in a manner which is consistent with NTIC's quality management standard and HSE programs, ensuring that business activities are conducted to prevent harm and protect health and safety, and developing, manufacturing, distributing and marketing products and services with full regard for HSE aspects. To accomplish these objectives, NTIC intends to, among other things, establish targets within its quality management standard and HSE programs to measure progress and ensure continuous improvement, provide safe and healthy workplaces for its employees, contractors and other service providers, and provide continued training to enable employees to meet their responsibility to contribute to compliance with NTIC's HSE objectives.

NTIC monitors conditions that could lead to safety incidents and keeps track of injuries through reporting systems in accordance with the laws in the jurisdictions in which NTIC operates. NTIC tracks this data to assess the quality of its safety performance. NTIC defines lost time incidents as work-related incidents where a worker sustains an injury that results in time away from work. NTIC had only one lost time incident in each 2023 and 2022.

Diversity and Inclusion

Diversity and inclusion are embedded in NTIC's values and integrated into its strategies. NTIC's Human Rights Policy was designed to align with the United Nations Global Compact and core elements of the United Nations Universal Declaration of Human Rights. NTIC is committed to providing an environment free of discrimination and harassment, where all individuals are treated with respect and dignity, can contribute fully, and have equal opportunities. NTIC has worked to build a diverse and inclusive workforce and is committed to equal opportunity. NTIC invests in building diverse talent pools and provides training to improve skills where appropriate. NTIC upholds and supports the right to equal treatment without discrimination or harassment.

Education

NTIC offers an educational assistance benefit program to eligible employees. NTIC may reimburse all or part of the registration and tuition costs for full-time employees who continue their education in a work-related field. In addition to educational assistance for formal education, NTIC may arrange training programs that enable employees to progress in their technical, commercial, or financial knowledge of NTIC's business.

Compensation and Benefits

NTIC's compensation program is designed to attract and retain talented employees in the industry by offering competitive compensation and benefits. NTIC has established fair and competitive pay levels that are based on local markets and job descriptions and are not based on gender, age, ethnicity, nationality or other personal characteristics or beliefs. NTIC provides compensation and benefits that are competitive and comply with applicable laws, and NTIC commits to a fair and living wage.

NTIC's employees have immediate eligibility to participate in NTIC's 401(k) employee savings plan. Employees are immediately vested upon contributing to the 401(k) employee savings plan. NTIC matches 401(k) contributions made by employees and may also make profit-sharing contributions. NTIC believes these profit-sharing contributions are a meaningful way of sharing NTIC's success with its employees.

To further the goal of sharing NTIC's success with its employees and incentivizing strong employee performance, NTIC may award cash bonuses to its employees. Additionally, NTIC has an employee stock purchase plan, which allows employees to purchase NTIC stock at a 10% discount to fair market value. NTIC believes that this gives employees an interest in providing for the continued success of the business, encourages regular and scheduled investing, and is a means of supplementing individual savings programs.

As part of its compensation package, NTIC provides employees with access to a medical plan with an employee-funded health savings account option. The medical plan has no co-pay, and employees are not required to contribute toward premium costs. Dental, vision, life, and long and short-term disability insurance plans are also available to NTIC's employees.

NTIC prides itself on offering employment arrangements that include competitive time off policies and flexibility. NTIC's full-time employees are eligible for paid holidays and vacation time based on the length of their service, ranging from 15 to 25 days. NTIC's part-time employees receive compensation for paid holidays as well. NTIC offers employees the opportunity to work remotely, requiring Tuesday in-person attendance for office staff employees and permitting remote work in the discretion of individual employees the remaining days of the week.

Values and Ethics

In connection with NTIC's core values, NTIC acts in accordance with its Code of Ethics. NTIC's Code of Ethics requires its employees, officers and directors to be honest, trustworthy, conscientious and dedicated to the highest standards of ethical business practices. Each employee, officer and director must know and abide by applicable laws.

Additional Information

Additional information about our human capital and people, including our HSE Policy, Human Rights Policy, Code of Ethics, is included on the Commitment to Environmental, Social and Governance (ESG) page of the Investor Relations portion of our corporate website. Information contained or referenced on our website is not incorporated by reference and does not form a part of this Annual Report on Form 10-K.

Available Information

NTIC is a Delaware corporation that was originally organized as a Minnesota corporation in 1970. NTIC's principal executive office is located at 4201 Woodland Road, Circle Pines, Minnesota 55014, and its telephone number is (763) 225-6600. NTIC's website is located at www.ntic.com. References to NTIC's website addressed in this report are provided as a convenience and as an inactive textual reference only. The information on NTIC's website or any other website is not incorporated by reference into, and is not considered a part of, this report.

NTIC makes available, free of charge and through its Internet web site, its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to any such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after NTIC electronically files such material with, or furnishes it to, the Securities and Exchange Commission (SEC). Reports filed with the SEC may be viewed at www.sec.gov.

Forward-Looking Statements

This report on Form 10-K contains not only historical information, but also forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements are subject to the safe harbor created by those sections. In addition, NTIC or others on NTIC's behalf may make forward-looking statements from time to time in oral presentations, including telephone conferences and/or web casts open to the public, in press releases or reports, on NTIC's Internet web site, or otherwise. All statements other than statements of historical facts included in this report or expressed by NTIC orally from time to time that address activities, events, or developments that NTIC expects, believes, or anticipates will or may occur in the future are forward-looking statements, including, in particular, the statements about NTIC's plans, objectives, strategies, and prospects regarding, among other things, NTIC's financial condition, results of operations and business, the anticipated effect of COVID-19 and its acquisition of Zerust India on NTIC's business, operating results and financial condition, and the outcome of contingencies, such as legal proceedings. NTIC has identified some of these forward-looking statements in this report with words like "believe," "can," "may," "could," "would," "might," "forecast," "possible," "potential," "project," "will," "should," "expect," "intend," "plan," "predict," "anticipate," "estimate," "approximate," "outlook," or "continue" or the negative of these words or other words and terms of similar meaning. The use of future dates is also an indication of a forward-looking statement. Forward-looking statements may be contained in the notes to NTIC's consolidated financial statements and elsewhere in this report, including under "*Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.*"

Forward-looking statements are based on current expectations about future events affecting NTIC and are subject to uncertainties and factors that affect all businesses operating in a global market as well as matters specific to NTIC. These uncertainties and factors are difficult to predict, and many of them are beyond NTIC’s control. Some of the uncertainties and factors known to us that could cause NTIC’s actual results to differ materially from what NTIC has anticipated in its forward-looking statements are described under “*Part I. Item 1A. Risk Factors.*” All forward-looking statements included in this report are expressly qualified in their entirety by the foregoing cautionary statements. NTIC wishes to caution readers not to place undue reliance on any forward-looking statement that speaks only as of the date made and to recognize that forward-looking statements are predictions of future results, which may not occur as anticipated. Actual results could differ materially from those anticipated in the forward-looking statements and from historical results due to the uncertainties and factors described above and others that NTIC may consider immaterial or does not anticipate at this time. Although NTIC believes that the expectations reflected in its forward-looking statements are reasonable, NTIC does not know whether its expectations will prove correct. NTIC’s expectations reflected in its forward-looking statements can be affected by inaccurate assumptions NTIC might make or by known or unknown uncertainties and factors, including those described above. The risks and uncertainties described above are not exclusive, and further information concerning NTIC and its business, including factors that potentially could materially affect its financial results or condition, may emerge from time to time. NTIC assumes no obligation to update, amend, or clarify forward-looking statements to reflect actual results or changes in factors or assumptions affecting such forward-looking statements. NTIC advises you, however, to consult any further disclosures NTIC makes on related subjects in its annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K that NTIC files with or furnishes to the SEC.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The two individuals named below have been designated by NTIC’s Board of Directors as “executive officers” of NTIC. Their ages and the offices held, as of November 10, 2023, are as follows:

Name	Age	Position with NTIC
G. Patrick Lynch	56	President and Chief Executive Officer
Matthew C. Wolsfeld	49	Chief Financial Officer and Corporate Secretary

G. Patrick Lynch, an employee of NTIC since 1995, has been President since July 2005 and Chief Executive Officer since January 2006 and was appointed a director of NTIC in February 2004. From July 2005 to January 2006, Mr. Lynch served as Chief Operating Officer of NTIC. Mr. Lynch served as President of North American Operations of NTIC from May 2004 to July 2005. Prior to May 2004, Mr. Lynch held various positions with NTIC, including Vice President of Strategic Planning, Corporate Secretary and Project Manager. Mr. Lynch is also an officer and director of Inter Alia Holding Company, a holding company that is a significant stockholder of NTIC. Prior to joining NTIC, Mr. Lynch held positions in sales management for Fuji Electric Co., Ltd. in Tokyo, Japan and programming project management for BMW AG in Munich, Germany. Mr. Lynch received an M.B.A. degree from the University of Michigan Ross School of Business in Ann Arbor, Michigan.

Matthew C. Wolsfeld, an employee of NTIC since February 2001, has been NTIC’s Chief Financial Officer since November 2001 and Corporate Secretary since November 2004. Mr. Wolsfeld was Controller of NTIC from May 2001 through November 2001. Prior to joining NTIC, Mr. Wolsfeld held an auditing position with PricewaterhouseCoopers LLP in Minneapolis, Minnesota from 1997 to 2001. Mr. Wolsfeld received a B.A. degree in Accounting from the University of Notre Dame and received his M.B.A. degree at the University of Minnesota, Carlson School of Business. Mr. Wolsfeld is a Certified Public Accountant.

Other corporate officers of NTIC, their ages, and offices held, as of November 10, 2023, are as follows:

Name	Age	Position with NTIC
Vineet R. Dalal	54	Vice President and Director – Global Market Development – Natur-Tec®
Gautam Ramdas	50	Vice President and Director – Global Market Development – Oil & Gas
Brian Haglund	39	Vice President of Operations – North America

Vineet R. Dalal, an employee of NTIC since 2004, has served as Vice President and Director – Global Market Development – Natur-Tec® since November 2005. Prior to joining NTIC, Mr. Dalal was a Principal in the Worldwide Product Development Practice of PRTM, a management consultancy to technology-based companies (now part of PricewaterhouseCoopers Management Consulting). In this position, Mr. Dalal consulted for several Fortune 500 companies, in the areas of product strategy, Product Lifecycle Management (PLM) and technology management. Prior to that, Mr. Dalal held positions in program management and design engineering at National Semiconductor Corporation in Santa Clara, California. Mr. Dalal received an M.B.A. degree from the University of Michigan Ross School of Business in Ann Arbor, Michigan. He also holds an M.S. degree in Electrical and Computer Engineering from Oregon State University, and a B.Eng. degree in Electronics Engineering from Karnatak University, India.

Gautam Ramdas, an employee of NTIC since 2005, has served as Vice President and Director – Global Market Development – Oil & Gas since 2005. Prior to joining NTIC, Mr. Ramdas was a Manager in the Strategic Change group of IBM Business Consulting Services. In this position, Mr. Ramdas led consulting engagements at several Fortune 500 companies, in the areas of service strategy, global supplier relationship management and supply chain streamlining. Mr. Ramdas held positions in the E-Commerce and Supply Chain strategy groups at PricewaterhouseCoopers Management Consulting, again providing consulting services for Fortune 500 clients. Prior to management consulting, Mr. Ramdas worked as a program manager and design engineer with Kinhill Engineers in Australia. He has also been involved in the start-up stage of successful small businesses in the United States and in India. Mr. Ramdas received an M.B.A. from the University of Michigan Ross School of Business in Ann Arbor, Michigan. He also holds a bachelor's degree in Mechanical Engineering from the College of Engineering, Guindy (Chennai), India.

Brian Haglund, an employee of NTIC since 2018, is currently serving as Vice President of Operations – North America. Prior to joining NTIC, Mr. Haglund held various leadership roles within Textron, a Fortune 500 industrial conglomerate. During his tenure with Textron, Mr. Haglund led various global operations and manufacturing facilities across the US, in China, and in Germany focusing on aerospace and industrial manufacturing. Mr. Haglund received an M.B.A. degree with a concentration in Finance from The Miller College of Business through Ball State University. He also holds a B.A. degree in Supply Chain Management from Eli Broad College of Business through Michigan State University.

Item 1A. RISK FACTORS

The following are the most material factors known to NTIC that could materially adversely affect its business, operating results, or financial condition.

Risk Factors Summary

This summary is not complete and should be read in conjunction with the risk factors set forth below.

Risks Related to NTIC's Business and Industry

- Any weakness in the global economy, and in particular in the United States, Europe, India and China, and in the automotive industry, has negatively impacted and in the future may negatively impact NTIC's business, operating results, and financial condition.
- COVID-19 has adversely impacted and may continue to adversely impact NTIC's business, operating results and financial condition.
- NTIC's business in the past has been and in the future may be negatively impacted by inflation.
- Supply chain disruptions in the past have interrupted and in the future could interrupt product manufacturing, increase product costs and result in lost sales, which have had and in the future may have a material adverse effect on NTIC's business, operating results and financial condition.
- Disruptions to the distribution channels for NTIC's products in the past have negatively impacted and in the future may negatively impact NTIC's business, operating results, and financial condition.
- NTIC's dependence on key suppliers puts NTIC at risk of interruptions in the availability of its products, which could reduce its net sales and adversely affect its operating results and harm its reputation.
- Increases in prices for raw materials and components used in NTIC's products in the past have adversely affected and in the future could adversely affect NTIC's operating results.
- NTIC relies on others for its production and any interruptions of these arrangements could disrupt NTIC's ability to fill its customers' orders.
- Changes to trade regulation, quotas, duties, or tariffs, caused by the changing U.S. and geopolitical environments or otherwise, have negatively impacted in the past and in the future may negatively impact NTIC's business, operating results, and financial condition.
- Global credit and financial markets in the past have experienced disruptions, including diminished liquidity and credit availability and rapid fluctuations in market valuations, which, if they happen again, could negatively impact NTIC's business, operating results, and financial condition.
- NTIC has limited staffing, faces challenges caused by its aging workforce and given its limited resources, it may not effectively manage its growth.
- The evolution of the automotive industry towards electric vehicles could adversely affect NTIC's business.

Risks Related to NTIC's Joint Ventures

- NTIC's liquidity and financial position rely on the receipt of fees for services provided to its joint ventures and dividend distributions from its joint ventures. No assurance can be provided that NTIC will continue to receive such fees and dividend distributions in amounts NTIC historically has received or anticipates receiving.
- Since a significant portion of NTIC's earnings results from its equity income from joint ventures which varies quarter to quarter, NTIC's earnings are subject to quarterly fluctuations.

Risks Related to NTIC's International Operations and the Foreign Markets in which NTIC Operates

- NTIC's international business, which is conducted primarily through its subsidiaries and joint ventures, requires management attention and financial resources and exposes NTIC to difficulties and risks presented by international economic, political, legal, accounting, and business factors.
- If sales of NTIC's products and services by its joint venture in Germany were to decline significantly or if NTIC's relationships with this joint venture were to deteriorate significantly, NTIC's operating results likely would be adversely affected.
- NTIC's acquisition of the remaining 50% ownership interest of HNTI Limited and any future similar acquisitions involve risk.
- The ongoing war between Russia and Ukraine may adversely affect NTIC's business and results of operations.
- The ongoing war between Israel and Hamas may adversely affect NTIC's business and results of operations.
- The operations of NTIC China may be adversely affected by China's evolving economic, political, and social conditions, as well as increasing tensions between the United States and China.
- Intellectual property rights are difficult to enforce in China, which could harm NTIC's business, results of operations, or financial condition.

- Uncertainties with respect to the Chinese legal system may adversely affect the operations of NTIC China.
- Failure to comply with the U.S. Foreign Corrupt Practices Act could subject NTIC to penalties and legal expenses.
- Fluctuations in foreign currency exchange rates could result in declines in NTIC's earnings and changes in NTIC's foreign currency translation adjustments.
- Economic uncertainty in developing markets could adversely affect NTIC's revenue and earnings.

Risks Related to NTIC's Products

- NTIC faces intense competition in almost all of its product lines, including from competitors that have substantially greater resources than NTIC does. No assurance can be provided that NTIC will be able to compete effectively, which would harm its business and operating results.
- NTIC's ZERUST® rust and corrosion inhibiting products and services generate a significant portion of NTIC's net sales and the net sales of NTIC's joint ventures. Accordingly, if sales of these products and services were to decline, NTIC's operating results would be adversely affected.
- If NTIC is unable to continue to enhance its existing products and develop and market new products that respond to customer needs and achieve market acceptance, NTIC may experience a decrease in demand for its products, and its business could suffer.
- No assurance can be provided that NTIC's investments in additional research and development and marketing efforts and resources into the application of its corrosion prevention solutions into the oil and gas industry and the continued launch of its Natur-Tec® resin compounds and finished products will be successful.
- NTIC's strategy of expanding its corrosion prevention solutions into the oil and gas industry and continuing the expansion of its Natur-Tec® bioplastics resin compounds and finished products is risky and may not prove to be successful, which could harm NTIC's operating results and financial condition.
- NTIC's dependence on manufacturing and logistical services provided by contractors could give rise to product defect or warranty liability.
- The commercial success of NTIC's Natur-Tec® resin compounds and finished products depends on the widespread market acceptance of products manufactured with bio-based and biodegradable resins.
- NTIC relies on its joint ventures, distributors, manufacturer's sales representatives, and other agents to market and sell its products.
- NTIC may be subject to product liability claims or other claims arising out of the activities of its joint ventures, which could adversely affect NTIC and its business, and the sale of ZERUST® rust and corrosion inhibiting products into the oil and gas industry is risky in light of the hazards typically associated with such operations and the significant amount of potential liability involved.
- The sale of ZERUST® rust and corrosion inhibiting products into the oil and gas industry is somewhat seasonal and dependent upon oil prices.
- The expansion of NTIC's corrosion prevention solutions into the oil and gas industry and the continued launch of NTIC's Natur-Tec® resin compounds and finished products may require additional capital in the future, which may not be available or may be available only on unfavorable terms.

Risks Related to Governmental Regulation, Laws, and Compliance

- NTIC's business, properties, and products are subject to governmental regulation and taxes, compliance with which may require NTIC to incur expenses or modify its products or operations, and which may expose NTIC to penalties for non-compliance. Governmental regulation also may adversely affect the demand for some of NTIC's products and its operating results.
- Fluctuations in NTIC's effective tax rate could have a significant impact on NTIC's financial position, results of operations, or cash flows.
- Certain of NTIC's operations are subject to regulation by the U.S. Food and Drug Administration.
- NTIC's reliance upon patents, trademark laws, trade secrets, and contractual provisions to protect its proprietary rights may not be sufficient to protect its intellectual property.
- NTIC has identified a material weakness in its internal controls, and cannot provide assurances that this weakness will be effectively remediated or that additional material weaknesses will not occur in the future.
- Any changes in U.S. generally accepted accounting principles might adversely affect NTIC's operating results.

Risks Related to NTIC's Common Stock

- The trading volume of NTIC's common stock is typically very low, leaving NTIC's common stock open to risk of high volatility and the price and trading volume has been, and may continue to be, volatile.
- A large percentage of NTIC's outstanding common stock is held by insiders, and, as a result, the trading market for NTIC's common stock is not as liquid as the stock of other public companies.

Risks Related to NTIC's Business and Industry

Any weakness in the global economy, and in particular in the United States, Europe, India and China, and in the automotive industry, has negatively impacted and in the future may negatively impact NTIC's business, operating results, and financial condition.

From time to time, the U.S. and world economies suffer from uncertainty, volatility, disruption, and other adverse conditions, which has adversely impacted and in the future may adversely impact the business community and the financial markets. Adverse economic and financial market conditions have negatively affected and in the future may negatively affect NTIC's customers and its markets, thereby negatively impacting NTIC's business and operating results. For example, weak market conditions could extend the length of NTIC's sales cycle and cause potential customers to delay, defer, or decline to make purchases of NTIC's products and services due to uncertainties surrounding the future performance of their businesses, limitations on their capital expenditures due to internal budget constraints, the inability to obtain financing in the capital markets, and the adverse effects of the economy on their business and financial condition. As a result, if economic and financial market conditions weaken or deteriorate, then NTIC's business, financial condition, and operating results, including its ability to grow and expand its business and operations, could be materially and adversely affected.

NTIC's operating results are especially dependent upon the economic health of the economies in the United States, Europe, India and China. Since a significant portion of NTIC's ZERUST® rust and corrosion inhibiting products and services are sold to customers in the automotive industry, adverse economic conditions affecting the automotive industry or other events that may adversely affect the automotive industry, such as the recent UAW strike, may result in an adverse effect on NTIC's net sales and its other operating results. Accordingly, any weakness in the global economy, particularly the United States, Europe, India and China, and in the automotive industry, including decreased production resulting from the ongoing microchip shortage, have negatively impacted and may continue to negatively impact NTIC's business, operating results, and financial condition.

COVID-19 has adversely impacted and may continue to adversely impact NTIC's business, operating results and financial condition.

As a result of COVID-19 and related government mandated restrictions on NTIC's business, as well as the businesses of its joint ventures, customers and suppliers, disruption to NTIC's business and the manufacture and sale of its products and services continued to occur during fiscal 2023, including in particular in China. While demand in China improved in fiscal 2023 as a result of government restrictions being lifted, NTIC has continued to experience softened demand. This decreased demand may have a material adverse effect on NTIC's business, operating results and financial condition in fiscal 2024. Due to the international reach of COVID-19, NTIC anticipates that its international subsidiaries and joint ventures will continue to be adversely impacted by the causes listed above, as well as other local issues that may arise, which will likely continue to have a material adverse effect on NTIC's international subsidiaries and joint venture operations and equity in income from joint ventures. A resurgence of COVID-19 and any related government mandated restrictions could have a significant adverse effect on economies and financial markets globally, which could have a significant adverse effect on NTIC's business, operating results and financial condition. Any of these events could materially adversely affect NTIC's business, operating results and financial condition and could adversely affect NTIC's stock price.

NTIC's business in the past has been and in the future may be negatively impacted by inflation.

Increases in inflation may have a negative impact on NTIC's business. While the persistent inflation experienced in fiscal 2022 began stabilizing in fiscal 2023, initial increases in inflation impacted the cost of raw materials, the overall demand for NTIC's products, labor, and the margins NTIC and its joint ventures are able to realize on the sale of products, all of which have had and could continue to have a negative impact on NTIC's business, financial position, results of operations and cash flows. Sustained levels of high inflation caused the U.S. Federal Reserve and other central banks to increase interest rates, which could increase the cost of capital available to NTIC and depress economic growth, could also negatively impact our business.

Supply chain disruptions in the past have interrupted and in the future could interrupt product manufacturing, increase product costs and result in lost sales, which may have a material adverse effect on NTIC's business, operating results and financial condition.

Supply chain disruptions, which were initially brought about by the impact of COVID-19, persisted during fiscal 2023. These disruptions resulted in longer lead times for raw materials and increased product costs and shipping expenses. While NTIC took steps to minimize the impact of these increased costs by working closely with its suppliers and customers and, in some cases, identifying new suppliers of certain raw materials, and while these issues improved in late fiscal 2023 and are expected to continue improving in fiscal 2024, there can be no assurances that unforeseen events impacting the supply chain will not have a material adverse effect on NTIC in the future. Additionally, the impacts supply chain disruptions have on NTIC's third-party manufacturers are not within NTIC's control. Prolonged supply chain disruptions impacting NTIC and its third-party manufacturers could interrupt product manufacturing, increase product costs and result in lost sales, which may have a material adverse effect on NTIC's business, operating results and financial condition.

Disruptions to the distribution channels for NTIC's products in the past have negatively impacted and in the future may negatively impact NTIC's business, operating results, and financial condition.

During fiscal 2022 and fiscal 2023, NTIC experienced supply chain disruptions, initially as a result of the COVID-19 pandemic, shipping container shortages, and changes in global demand. While these conditions had improved by the end of fiscal 2023 and are expected to continue to stabilize in fiscal 2024, it is possible that NTIC may encounter similar conditions again in the future. Similar delays and elevated costs in the future could have a material adverse effect on NTIC's consolidated results of operations. Furthermore, transportation delays, increased shipping containers rates, closures or disruptions of businesses and facilities or social, economic, political or labor instability in the affected areas may impact the operations of NTIC's suppliers, which could in turn adversely affect NTIC, and its revenues and operating costs. Any of these disruptions may negatively impact NTIC's business, operating results, and financial condition.

NTIC's dependence on key suppliers puts NTIC at risk of interruptions in the availability of its products, which could reduce its net sales and adversely affect its operating results and harm its reputation.

NTIC relies on suppliers for certain raw materials and components used in its products. For reasons of quality assurance, cost effectiveness, or availability, NTIC procures certain raw materials and components from sole or limited source suppliers. Among the limited source suppliers NTIC does business with are the manufacturers of plastic resins used in Natur-Tec® products. NTIC generally acquires these and other raw materials and components through purchase orders placed in the ordinary course of business, and as a result, NTIC does not have a significant inventory of these materials and components and does not have any guaranteed or contractual supply arrangements with many of these suppliers for these materials and components. NTIC's dependence on third-party suppliers involves several risks, including limited control over pricing, availability, quality, and delivery schedules, as well as manufacturing yields and costs. Suppliers of such raw materials and components may decide, or be required, for reasons beyond NTIC's control, to cease supplying such raw materials and components to NTIC or to raise their prices.

Shortages of raw materials, quality control problems, production capacity constraints, or delays by suppliers could negatively affect NTIC's ability to meet its production obligations and result in increased prices for affected parts, and NTIC may be forced to find new suppliers for certain raw materials. The rapid growth in demand for bioplastics products globally has increased the demand and the price for plastic resins, and limited suppliers of such plastic resins may experience shortages caused by demand outpacing their production capabilities, which could result in NTIC's inability to produce its Natur-Tec® products promptly or in the volumes demanded. Any such shortages, constraints, or delays may result in delays in shipments of products or components, which could adversely affect NTIC's net sales and other operating results and its reputation. From time to time, materials and components used in NTIC's products are subject to allocation because of shortages of these materials and components.

Increases in prices for raw materials and components used in NTIC's products in the past have adversely affected and in the future could adversely affect NTIC's operating results.

NTIC uses certain raw materials and components in its products, including in particular plastic resins, which are subject to price increases. In light of increased global demand for bioplastics, production slowdowns due to manufacturing issues, labor shortages and power restrictions in China, freight container shortages, the war in Ukraine, and the lingering effects of COVID-19, the prices of certain plastic resins increased in fiscal 2022 and, through the majority of fiscal 2023, remained above historical levels. Although resin prices began dropping in late fiscal 2023, future elevated prices could adversely affect gross margins on NTIC's Natur-Tec® products. Similarly, if shortages of resins arise again in the future, the cost and/or production of NTIC's products could be adversely affected. Additionally, the war between Russia and Ukraine and the resulting sanctions by U.S. and European governments have resulted in and may continue to result in commodity price fluctuations, which have decreased our margins and the margins of our joint ventures and resulted in decreased joint venture profitability, which will likely continue during fiscal 2024. The war between Israel and Hamas may have similar impacts during fiscal 2024. Finally, changes to international trade agreements could result in additional tariffs, duties, or other charges on raw materials or components we import into the U.S.

NTIC relies on others for its production and any interruptions of these arrangements could disrupt NTIC's ability to fill its customers' orders.

NTIC utilizes contract manufacturers for a significant portion of its production requirements. The majority of NTIC's manufacturing is conducted in the United States by contract manufacturers that also perform services for numerous other companies. NTIC does not have a guaranteed level of production capacity with any of its contract manufacturers. Qualifying new contract manufacturers is time consuming and might result in unforeseen manufacturing and operations problems. The loss of NTIC's relationships with its contract manufacturers or their inability to conduct their manufacturing and assembly services for NTIC as anticipated in terms of capacity, cost, quality, and timeliness could adversely affect NTIC's ability to fill customer orders in accordance with required delivery, quality, and performance requirements, thus adversely affecting NTIC's net sales and other operating results.

Changes to trade regulation, quotas, duties, or tariffs, caused by the changing U.S. and geopolitical environments or otherwise, have negatively impacted in the past and in the future may negatively impact NTIC's business, operating results, and financial condition.

There is significant uncertainty about the future relationship between the United States and other countries with respect to trade policies, taxes, government regulations, and tariffs. Within recent years, for example, trade policy changes included the imposition of additional tariffs on imported products in an effort to address trade imbalances, specifically with China, the withdrawal of the U.S. from the Trans-Pacific Partnership, the renegotiation of the North American Free Trade Agreement, and sanctions on Russia. In response to some of these actions, certain countries imposed retaliatory actions against the U.S. NTIC and its subsidiaries and joint ventures engage in sales outside of the United States and is, therefore, negatively impacted by such actions. Any changes or potential changes in trade policies in the United States and the potential corresponding actions by other countries in which NTIC does business could adversely and materially affect NTIC's business, results of operations, and financial condition.

Global credit and financial markets in the past have experienced disruptions, including diminished liquidity and credit availability and rapid fluctuations in market valuations, which, if they happen again, could negatively impact NTIC's business, operating results, and financial condition.

Any tightening of the credit and financial markets could negatively impact the ability of companies to borrow money from their existing lenders, obtain credit from other sources, or raise financing to fund their operations. This could negatively impact the ability of NTIC's customers and the customers of NTIC's joint ventures to purchase NTIC's products, suppliers' ability to provide NTIC and its joint ventures with materials and components, and the ability of NTIC and its joint ventures, distributors, and sales representatives to finance operations, if needed, on commercially reasonable terms, or at all. Any or all of these events could negatively impact NTIC's business, operating results, and financial condition. Although NTIC maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers, distributors, and joint ventures to make required payments, and such losses historically have been within NTIC's expectations and the provisions established, NTIC cannot guarantee that it will continue to experience the same loss rates that it has in the past, especially if there are weaknesses in the worldwide economy. A significant change in the liquidity or financial condition of NTIC's customers, distributors, or joint ventures could cause unfavorable trends in NTIC's receivable collections and additional allowances may be required, which could adversely affect NTIC's operating results. In addition, weaknesses in the worldwide economy, including the imposition of higher tariffs, the withdrawal from the Trans-Pacific Partnership and sanctions on Russia, may adversely impact the ability of suppliers to provide NTIC with materials and components, which could adversely affect NTIC's business and operating results. NTIC is unable to predict the prospects for a global economic recovery, but the longer the duration of such adverse and uncertain economic conditions, the greater the risks NTIC faces in operating its business.

NTIC has limited staffing and will continue to be dependent upon key employees.

NTIC's success is dependent upon the efforts of a small management team and group of employees. NTIC's future success will depend in large part on its ability to retain its key employees and identify, attract, and retain other highly qualified managerial, technical, research and development, sales and marketing, and customer service personnel when needed. Competition for these individuals may be intense, especially in the markets in which NTIC operates. NTIC may not succeed in identifying, attracting, and retaining these personnel. Inadequate performance by any of NTIC's limited staff could have a negative impact on the performance of the company. In addition, none of NTIC's employees have any contractual obligation to maintain his or her employment with NTIC. The loss or interruption of services of any of NTIC's key personnel, including in particular its technical personnel, the inability to identify, attract, or retain qualified personnel in the future, delays in hiring qualified personnel, or any employee slowdowns, strikes, or similar actions could make it difficult for NTIC to manage its business and meet key objectives, which could harm NTIC's business, operating results, and financial condition.

Although we have not experienced any material labor shortage to date, we have observed an overall tightening and increasingly competitive labor market in the past two years. A sustained labor shortage or increased turnover rates within our employee base could lead to increased costs, such as increased overtime to meet demand and increased wage rates to attract and retain employees and could negatively affect our ability to efficiently operate our manufacturing and distribution facilities and overall business. If we are unable to hire and retain employees capable of performing at a high-level, or if mitigation measures we may take to respond to a decrease in labor availability, such as overtime and third-party outsourcing, have unintended negative effects, our business could be adversely affected. An overall labor shortage, lack of skilled labor, increased turnover or labor inflation could have a material adverse impact on NTIC's operations, results of operations, liquidity or cash flows.

NTIC faces challenges caused by its aging workforce, and NTIC may not be able to recruit, train and retain adequate replacements for its qualified and skilled employees.

Many of our employees are approaching retirement age. As these experienced employees retire, we may have difficulty recruiting new employees with comparable qualifications and experience, and we may be unable to transfer our employees' institutional knowledge successfully to new qualified employees. Any such failures would be exacerbated at times of peak demand. Our failure to recruit and train new employees and to ensure they obtain adequate qualifications and experience could result in reduced revenues, loss of customer goodwill and a material negative impact on our results of operations.

Given NTIC's limited resources, it may not effectively manage its growth.

NTIC's strategy to grow its business, including in particular its ZERUST® rust and corrosion inhibiting products for the oil and gas industry and its Natur-Tec® bio-plastic resin compounds and finished products, requires significant management time and operational and financial resources. There is no assurance that NTIC has the necessary operational and financial resources to manage its growth. This is especially true as it expands facilities and manufactures its products on a larger commercial scale. In addition, rapid growth in NTIC's headcount and operations may place a significant strain on its management, administrative, operational, and financial infrastructure. Failure to adequately manage its growth could have a material and adverse effect on NTIC's business, operating results, and financial condition. For example, NTIC's soil side bottom solutions for tanks require implementation teams comprised of both internal NTIC personnel and outside consulting firms. NTIC's failure to expand these implementation teams to service additional customers may limit NTIC's ability to grow this business. In addition, NTIC may not be successful in its strategy to grow its business.

The evolution of the automotive industry towards electric vehicles could adversely affect NTIC's business.

The global automotive industry is experiencing a period of significant technological change, including the development and use of electric vehicles, which do not contain as many components that require NTIC's ZERUST® products and solutions. During fiscal 2023, the automobile sector represented approximately 40-45% of ZERUST® industrial net sales in North America and 55-60% of net sales of NTIC's joint ventures. NTIC continues to seek additional applications of its ZERUST® products and solutions related to electric vehicles and batteries. However, increased demand for electric vehicles, which do not contain as many components requiring these products and solutions, will still adversely affect NTIC's net sales and other operating results and business.

Risks Related to NTIC's Joint Ventures

NTIC's liquidity and financial position rely on the receipt of fees for services provided to its joint ventures and dividend distributions from its joint ventures. No assurance can be provided that NTIC will continue to receive such fees and dividend distributions in amounts NTIC historically has received or anticipates receiving.

NTIC conducts business, either directly or indirectly, through several joint venture arrangements that operate in North America, Europe, and Asia. Each of these joint ventures manufactures, markets, and sells finished products in the geographic territory that it is assigned. NTIC's receipt of funds as a result of sales by its joint ventures is dependent upon NTIC's receipt of fees for services that NTIC provides to its joint ventures based primarily on the net sales of the individual joint ventures and NTIC's receipt of dividend distributions from its joint ventures based on the profitability of its joint ventures. NTIC's liquidity and financial position in part rely on NTIC's receipt of fees for services that NTIC provides to its joint ventures and dividend distributions from its joint ventures. During fiscal 2023, NTIC recognized \$5,189,185 in fees and \$5,639,198 in dividend distributions from its joint ventures. Because NTIC owns 50% or less of each of its joint venture entities, NTIC does not control the decisions of these entities regarding whether to pay dividends and, if paid, how much they should be in any given year. Thus, NTIC cannot guarantee that any of its joint ventures will pay dividends in any given year. The failure of NTIC's joint ventures to declare dividends or the failure of NTIC to receive fees for services provided to joint ventures in amounts typically expected by NTIC could adversely affect NTIC's liquidity and financial position.

Since a significant portion of NTIC's earnings results from NTIC's equity income from joint ventures, and since NTIC's equity income from joint ventures varies from quarter to quarter, NTIC's earnings are subject to quarterly fluctuations.

A significant portion of NTIC's earnings results from NTIC's equity income from its joint ventures. NTIC's equity in income from joint ventures consists of NTIC's share of equity in income from its joint ventures based on the overall profitability of the joint ventures. Such profitability varies from quarter to quarter. Since NTIC's management typically receives quarterly joint venture financial information after the completion of each fiscal quarter, it is impossible for NTIC's management to cut costs and expenses to make up for any unanticipated shortfall in NTIC's equity income from joint ventures. Accordingly, the variability in NTIC's equity income from joint ventures, in turn, subjects NTIC's earnings to quarterly fluctuations.

Risks Related to NTIC's International Business and the Foreign Markets in which NTIC Operates

NTIC's international business, which is conducted primarily through its subsidiaries and joint ventures, requires management attention and financial resources and exposes NTIC to difficulties and risks presented by international economic, political, legal, accounting, and business factors.

NTIC sells products and services directly, through its wholly-owned and majority-owned subsidiaries, and indirectly, via a network of joint ventures, independent distributors, manufacturer's sales representatives, and agents in over 65 countries, including countries in North America, South America, Europe, Asia, and the Middle East. One of NTIC's strategic objectives is the continued expansion of its international operations. The expansion of NTIC's existing international operations and entry into additional international markets requires management attention and financial resources.

The sale and shipping of products and services across international borders subjects NTIC to extensive and complicated U.S. and foreign governmental trade regulations. Compliance with such regulations is costly and exposes NTIC to penalties for non-compliance. Other laws and regulations that can significantly impact NTIC include various anti-bribery laws, including the U.S. Foreign Corrupt Practices Act, laws restricting business with suspected terrorists, and anti-boycott laws. Any failure to comply with applicable legal and regulatory obligations could impact NTIC in a variety of ways that include, but are not limited to, significant criminal, civil, and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments, and restrictions on certain business activities. Also, the failure to comply with applicable legal and regulatory obligations could result in the disruption of NTIC's shipping and sales activities.

Several factors, including implications of withdrawal by the U.S. from, or revision to, international trade agreements, foreign policy changes between the U.S. and other countries, weakened international economic conditions, or the impact of sovereign debt defaults by certain European countries, could adversely affect our international net sales. Additionally, the expansion of our existing international operations and entry into additional international markets require significant management attention and financial resources. In many of the countries in which NTIC sells its products directly or indirectly through NTIC China, Zerust Brazil, Natur-Tec India, Natur-Tec Lanka, Zerust Mexico, Zerust Singapore, Zerust Taiwan, Zerust Vietnam, and NTI Asean, its joint ventures, distributors, representatives, and agents are, to some degree, subject to political, economic, and/or social instability. NTIC's international operations expose NTIC and its joint venture partners, distributors, representatives, and agents to risks inherent in operating in foreign jurisdictions. These risks include:

- difficulties in managing and staffing international operations and the required infrastructure costs, including legal, tax, accounting, and information technology;
- the imposition of additional U.S. and foreign governmental controls or regulations, new trade restrictions, and restrictions on the activities of foreign agents, representatives, and distributors, the imposition of costly and lengthy export licensing requirements and changes in duties and tariffs, license obligations, and other non-tariff barriers to trade;
- the imposition of U.S. and/or international sanctions against a country, company, person, or entity with whom NTIC does business that would restrict or prohibit continued business with the sanctioned country, company, person, or entity;
- pricing pressure that NTIC or its joint ventures, distributors, representatives, and agents may experience internationally;
- laws and business practices favoring local companies;
- adverse currency exchange rate fluctuations;
- longer payment cycles and difficulties enforcing agreements and collecting receivables through certain foreign legal systems;
- national and international conflicts, including foreign policy changes or terrorist acts;
- difficulties in enforcing or defending intellectual property rights;
- multiple, changing, and often inconsistent enforcement of laws and regulations; and
- the potential payment of U.S. income taxes on certain earnings of joint ventures upon repatriation.

Furthermore, in June 2016, the United Kingdom held a referendum in which voters approved an exit from the European Union, commonly referred to as “Brexit.” The United Kingdom officially terminated its membership of the European Union on January 31, 2020 and remained in a transition phase until December 31, 2020. Although the United Kingdom and the European Union struck a bilateral trade and cooperation deal governing the future relationship between the United Kingdom and the European Union, which became effective on May 1, 2021, political and economic uncertainties remain, and it is possible that there will be increased regulatory complexities, which could affect NTIC’s ability to sell its products in certain European Union countries and subject NTIC to heightened risks in that region. Any of these effects of Brexit, and other similar referenda that NTIC cannot anticipate, could adversely affect its business, operations, and financial results.

Out of NTIC’s joint ventures, NTIC’s joint venture in Germany is the most significant in terms of assets and income to NTIC. If sales of NTIC’s products and services by this joint venture were to significantly decline or if NTIC’s relationships with this joint venture were to significantly deteriorate, NTIC’s operating results likely would be adversely affected.

NTIC considers its joint venture in Germany (EXCOR) to be individually significant to NTIC’s consolidated assets and income and, therefore, provides certain additional information regarding EXCOR in the notes to NTIC’s consolidated financial statements and in certain sections of this report. Of the total equity in income from joint ventures of \$6,452,719 during fiscal 2023, NTIC had equity in income from joint ventures of \$2,852,229 attributable to EXCOR. Of the total fee income for services provided to joint ventures of \$5,189,185 during fiscal 2023, fees of \$816,089 were attributable to EXCOR. Accordingly, if sales of NTIC’s products and services by this joint venture were to significantly decline or if NTIC’s relationships with this joint venture were to significantly deteriorate such that the joint venture terminated or was not motivated to sell NTIC’s products and services, NTIC’s operating results likely would be adversely affected. While this is also true with respect to the other joint venture entities of which additional information is provided in NTIC’s consolidated financial statements and in certain other sections of this report, the significance is not as great as with EXCOR. While EXCOR’s financial performance has not significantly deteriorated, its profitability has decreased over the past few years as compared to prior years which has adversely affected NTIC’s financial results.

NTIC's acquisition of the remaining 50% ownership interest of HNTI and any future similar acquisitions involve risk.

Effective as of September 1, 2021, NTIC acquired the remaining 50% ownership interest in its Indian joint venture, HNTI. It is possible that as part of its succession planning efforts with respect to its joint venture partners, NTIC may complete similar acquisitions in the future. Similar future acquisitions will depend, in part, on the availability of similar opportunities or other suitable acquisition candidates at acceptable prices, terms, and conditions and the availability of capital and personnel resources to complete such acquisitions and run and integrate the acquired business effectively. These acquisitions involve risk and may harm NTIC's business, reputation, financial condition, and operating results. For instance, the benefits of the HNTI acquisition or any future acquisition may take more time than expected to develop or integrate into NTIC's operations, and NTIC cannot guarantee that either the HNTI or any future acquisitions will, in fact, produce any long-term benefits. Acquisitions, such as the HNTI acquisition, involve a number of risks, the occurrence of which could adversely affect NTIC's business, reputation, financial condition, and operating results, including:

- diversion of management's attention to manage and integrate the acquired business;
- disruption to existing operations and plans;
- inability to effectively manage the expanded operations;
- difficulties or delays, which may be exacerbated by the impact of COVID-19, in integrating and assimilating information and financial systems, internal controls, operations, manufacturing processes and products of an acquired business or in realizing projected efficiencies, growth prospects, cost savings, and other synergies;
- potential loss of key employees, customers or suppliers of the acquired businesses or adverse effects on existing business relationships with employees, customers or suppliers;
- write-off of significant amounts of goodwill, other intangible assets, and/or long-lived assets as a result of deterioration in the performance of an acquired business, adverse market conditions, changes in the competitive landscape, changes in laws or regulations that restrict activities of an acquired business, or as a result of a variety of other circumstances;
- violation of confidentiality, intellectual property, and non-compete obligations or agreements by employees of an acquired business or lack of or inadequate formal intellectual property protection mechanisms in place at an acquired business;
- adverse impact on overall profitability if NTIC's expanded operations do not achieve the growth prospects, net sales, net earnings, cost and/or revenue synergies, or other financial results projected in NTIC's valuation models, delays in the realization thereof or costs or charges incurred to achieve any revenue or cost synergies;
- reallocation of amounts of capital from other operating initiatives and/or an increase in leverage and debt service requirements to pay acquisition purchase prices, which could in turn restrict NTIC's ability to access additional capital when needed or limit its ability to pursue other important elements of its business strategy;
- inaccurate assessment of additional post-acquisition, undisclosed, contingent or other liabilities or problems, unanticipated costs associated with an acquisition; and
- impacts as a result of purchase accounting adjustments, incorrect estimates made in the accounting for acquisitions, incurrence of non-recurring charges, or other potential financial accounting or reporting impacts.

In addition, effective internal controls are necessary for NTIC to provide reliable and accurate financial reports and to effectively prevent fraud. The integration of acquired businesses may result in NTIC's systems and controls becoming increasingly complex and more difficult to manage. NTIC devotes significant resources and time to comply with the internal control over financial reporting requirements of the Sarbanes-Oxley Act of 2002. However, it cannot be certain that these measures will ensure that NTIC designs, implements, and maintains adequate control over its financial processes and reporting in the future, particularly in the context of acquisitions of other businesses. Any difficulties in the assimilation of acquired businesses into NTIC's internal control framework could harm its operating results or cause NTIC to fail to meet its financial reporting obligations. Also, acquisitions require the consent of the lender under NTIC's loan agreement. NTIC cannot predict whether such approval would be forthcoming or the terms on which the lender would approve such acquisitions. These risks, among others, could be heightened if NTIC completes a large acquisition or multiple transactions within a relatively short period of time.

The ongoing war between Russia and Ukraine may adversely affect NTIC's business and results of operations.

Given the nature of NTIC's business and its global operations, political, economic, and other conditions in foreign countries and regions, including geopolitical risks, such as the ongoing war between Russia and Ukraine, may adversely affect NTIC's business and results of operations. In 2022, NTIC took actions to limit its operations in Russia and Ukraine, which were adversely affected by the war between Russia and Ukraine, though these losses did not have a material impact on NTIC's operating results. NTIC terminated its joint venture in Russia in May 2022, which also did not have an adverse effect on its results of operations or financial condition given the immateriality of the joint venture. The broader consequences of this conflict, which may include additional international sanctions, embargoes, regional instability, and geopolitical shifts; increased tensions between the United States and countries in which NTIC operates; and the extent of the conflict's effect on NTIC's business and results of operations, as well as the global economy, cannot be predicted.

To the extent the ongoing war between Russia and Ukraine adversely affects NTIC's business, it may also have the effect of heightening many other risks disclosed herein, any of which could materially and adversely affect NTIC's business and results of operations. Such risks include, but are not limited to, adverse effects on macroeconomic conditions, including inflation, demand for NTIC's products and potential recessionary economic conditions; increased cyber security threats; adverse changes in trade policies, taxes, government regulations, and tariffs; NTIC's ability to implement and execute its business strategy, particularly with regard to its joint ventures; disruptions in global supply chains; its exposure to foreign currency fluctuations; and constraints, volatility, or disruption in the capital markets.

The ongoing war between Israel and Hamas may adversely affect NTIC's business and results of operations. On October 7, 2023, Hamas, a U.S. designated terrorist organization, launched a series of coordinated attacks from the Gaza Strip onto Israel. On October 8, 2023, Israel formally declared war on Hamas, and the armed conflict is ongoing as of the date of this filing. Hostilities between Israel and Hamas could escalate and involve surrounding countries in the Middle East. Although the length, impact and outcome of the military conflict between Israel and Hamas are highly unpredictable, this conflict could lead to significant market and other disruptions, including disruptions to the oil and gas industry, significant volatility in commodity prices and supply of energy resources, instability in financial markets, supply chain interruptions, political and social instability and other material and adverse effects on macroeconomic conditions. It is not possible at this time to predict or determine the ultimate consequences of this conflict.

To the extent the ongoing war between Israel and Hamas adversely affects NTIC's business, it may also have the effect of heightening many other risks disclosed herein, any of which could materially and adversely affect NTIC's business and results of operations. Such risks include, but are not limited to, adverse effects on the oil and gas industry, adverse effects on macroeconomic conditions, including inflation, demand for NTIC's products and potential recessionary economic conditions; increased cyber security threats; adverse changes in trade policies, taxes, government regulations, and tariffs; NTIC's ability to implement and execute its business strategy, particularly with regard to its joint ventures; disruptions in global supply chains; its exposure to foreign currency fluctuations; and constraints, volatility, or disruption in the capital markets.

The operations of NTIC China may be adversely affected by China's evolving economic, political, and social conditions, as well as increasing tensions between the United States and China.

The results of operations and future prospects of NTIC China may be adversely affected by, among other things, changes in China's political, economic, and social conditions, escalating tensions between China and Taiwan, changes in the relationship between China and its western trade partners, changes in policies of the Chinese government, changes in laws and regulations or in the interpretation of existing laws and regulations, changes in foreign exchange regulations, measures that may be introduced to control inflation, such as interest rate increases, changes in the rates or methods of taxation, and increasing tensions between the United States and China. In addition, changes in demand could result from increased competition with local Chinese manufacturers who have cost advantages or who may be preferred suppliers for Chinese end users. Also, Chinese commercial laws, regulations, and interpretations applicable to non-Chinese owned market participants, such as NTIC China, are continually changing, and such changes may require NTIC China to change how it conducts its business. These laws, regulations, and interpretations could impose restrictions on NTIC's and NTIC China's ownership or operations or NTIC's interests in China and could adversely affect NTIC's business, results of operations, and financial condition.

Local regulations in China related to the electric power shortage that began in 2021 may adversely affect NTIC China's operations or the operations of our suppliers with facilities in China. For example, these regulations could result in partial or complete factory shutdowns due to a lack of continuous supply of electrical power. Additionally, the price of electric power may be increased, and peak-demand periods during which prices are higher may be extended by local governments. Certain of our resin suppliers with facilities in China were adversely impacted by these regulations, which contributed to constrained supply. Although NTIC China's operations have not been significantly impacted by regulations related to electric power shortages to date, such regulations may in the future decrease or shut down production or increase product costs, which could adversely affect NTIC's business, results of operations, and financial condition.

Intellectual property rights are difficult to enforce in China, which could harm NTIC's business, results of operations, or financial condition.

Chinese commercial law is relatively undeveloped compared to commercial law in many of NTIC's other major markets, and limited protection of intellectual property is available in China as a practical matter. Although NTIC takes precautions in the operation of NTIC China to protect NTIC's intellectual property, any local manufacturer of products that NTIC undertakes in China could subject NTIC to an increased risk that unauthorized parties will be able to copy or otherwise obtain or use NTIC's intellectual property, which could harm NTIC's business. NTIC may also have limited legal recourse in the event it encounters patent or trademark infringers, which could adversely affect NTIC's business, results of operations, and financial condition.

Uncertainties with respect to the Chinese legal system may adversely affect the operations of NTIC China.

NTIC China is subject to laws and regulations applicable to foreign investment in China. There are uncertainties regarding the interpretation and enforcement of laws, rules, and policies in China. The Chinese legal system is based on written statutes, and prior court decisions have limited precedential value. Because many laws and regulations are relatively new, and the Chinese legal system is still evolving, the interpretations of many laws, regulations, and rules are not always uniform. Moreover, the relative inexperience of China's judiciary in many cases creates additional uncertainty as to the outcome of any litigation, and the interpretation of statutes and regulations may be subject to government policies reflecting domestic political agendas. Finally, enforcement of existing laws or contracts based on existing law may be uncertain and sporadic. For the preceding reasons, it may be difficult for NTIC or NTIC China to obtain timely or equitable enforcement of laws ostensibly designed to protect companies like NTIC or NTIC China, which could adversely affect NTIC's business, results of operations, and financial condition.

Failure to comply with the U.S. Foreign Corrupt Practices Act could subject NTIC to, among other things, penalties and legal expenses that could harm its reputation and have a material adverse effect on its business, results of operations, and financial condition.

NTIC is subject to the U.S. Foreign Corrupt Practices Act, or the FCPA, which generally prohibits covered entities and their intermediaries from engaging in bribery or making other prohibited payments to foreign officials for the purpose of obtaining or retaining business or other benefits. In addition, the FCPA imposes accounting standards and requirements on U.S. publicly-traded corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments and to prevent the establishment of "off books" slush funds from which such improper payments can be made. NTIC also is subject to similar anticorruption legislation implemented in Europe under the Organization for Economic Co-operation and Development's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. NTIC and its joint ventures, distributors, independent representatives, and agents operate in a number of jurisdictions that pose a high risk of potential violations of the FCPA and other anticorruption laws, based on measurements such as Transparency International's Corruption Perception Index, and NTIC utilizes a number of joint ventures, distributors, independent representatives, and agents for whose actions NTIC could be held liable under the FCPA. NTIC informs its personnel, joint ventures, distributors, independent representatives, and agents of the requirements of the FCPA and other anticorruption laws, including, but not limited to, their reporting requirements. NTIC also has developed and will continue to develop and implement systems for formalizing its contracting processes, performing due diligence on agents, and improving its recordkeeping and auditing practices regarding these regulations. However, there is no guarantee that NTIC's employees, joint ventures, distributors, independent representatives, or other agents have not or will not engage in conduct undetected by NTIC's processes and for which NTIC might be held responsible under the FCPA or other anticorruption laws.

If NTIC's employees, joint ventures, distributors, third-party sales representatives, or other agents are found to have engaged in such practices, NTIC could suffer severe penalties, including criminal and civil penalties, disgorgement, and other remedial measures, including further changes or enhancements to its procedures, policies, and controls and potential personnel changes and disciplinary actions.

Certain private and foreign companies, including some of NTIC's competitors, are not subject to prohibitions as strict as those under the FCPA or, even if subjected to strict prohibitions, such prohibitions may be laxly enforced in practice. If NTIC's competitors engage in corruption, extortion, bribery, pay-offs, theft, or other fraudulent practices, they may receive preferential treatment from personnel of some companies or from government officials, giving NTIC's competitors an advantage in securing business and putting NTIC at a disadvantage.

Fluctuations in foreign currency exchange rates could result in declines in NTIC's earnings and changes in NTIC's foreign currency translation adjustments.

Because the functional currency of NTIC's foreign operations is the applicable local currency, NTIC is exposed to foreign currency exchange rate risk arising from transactions in the normal course of business. NTIC's principal exchange rate exposure is with the Euro, the Japanese Yen, the Indian Rupee, the Chinese Renminbi, the South Korean Won, and the English Pound against the U.S. dollar. NTIC's fees for services provided to its joint ventures and dividend distributions from these foreign entities are paid in foreign currencies; thus, fluctuations in foreign currency exchange rates could result in declines in NTIC's earnings. Any changes in foreign currency exchange rates would be reflected as a foreign currency translation adjustment and would not change NTIC's equity in income from joint ventures reflected in its consolidated statements of operations. NTIC does not hedge against its foreign currency exchange rate risk.

Economic uncertainty in developing markets could adversely affect NTIC's revenue and earnings.

NTIC conducts business, or is contemplating expansion, in developing markets with economies that tend to be more volatile than those in the United States and Western Europe. The risk of doing business in developing markets such as China, Brazil, India, Russia, the United Arab Emirates, Mexico, and other economically volatile areas could adversely affect NTIC's operations and earnings. Such risks include the financial instability among customers in these regions, political instability, fraud or corruption, and other non-economic factors, such as the impact of COVID-19 and irregular trade flows that need to be managed successfully with the help of the local governments. In addition, commercial laws in some developing countries can be vague, inconsistently administered, and retroactively applied. If NTIC is deemed not to be in compliance with applicable laws in developing countries where NTIC conducts business, its prospects and business in those countries could be harmed, which could then have a material adverse impact on NTIC's operating results and financial position. NTIC's failure to successfully manage economic, political, and other risks relating to doing business in developing countries and economically and politically volatile areas could adversely affect its business.

Risks Related to NTIC's Products

NTIC faces intense competition in almost all of its product lines, including from competitors that have substantially greater resources than NTIC does. No assurance can be provided that NTIC will be able to compete effectively, which would harm its business and operating results.

NTIC's products are sold in intensely competitive markets throughout the world. This intense competition could result in pricing pressures, lower sales, reduced margins, and lower market share. With respect to its rust and corrosion inhibiting products, NTIC competes on the basis of product innovation, quality, reliability, product support, customer service, reputation, and price. With respect to its Natur-Tec® resin compounds and finished products, NTIC competes on the basis of performance, brand awareness, distribution network, product availability, product offering, shelf life, place of manufacture, and price. NTIC often competes with numerous manufacturers, many of which have substantially greater financial, marketing, and other resources than NTIC. As a result, they may be able to adapt more quickly than NTIC to new or emerging technologies, industry trends, and changes in customer requirements or to devote greater resources to the promotion and sale of their products than NTIC. In addition, competition could increase if new companies enter the markets in which NTIC competes, especially when the barriers to entry are low, which may be true with respect to NTIC's rust and corrosion prevention business, or if existing competitors expand their product lines or intensify efforts within existing product lines. NTIC's current products, products under development, and its ability to develop new and improved products may be insufficient to enable NTIC to compete effectively with its competitors. No assurance can be provided that NTIC will be able to compete effectively, which would harm its business and operating results. In particular, NTIC has experienced more intense competition with respect to many of its traditional ZERUST® rust and corrosion inhibiting products and services, which has led to decreased pricing and smaller margins for NTIC.

NTIC's ZERUST® rust and corrosion inhibiting products and services generate a significant portion of NTIC's net sales and the net sales of NTIC's joint ventures. Accordingly, if sales of these products and services were to decline, NTIC's operating results would be adversely affected.

NTIC's ZERUST® rust and corrosion inhibiting products and services generate a significant portion of NTIC's net sales and the net sales of NTIC's joint ventures. During fiscal 2023, 77.3% of NTIC's consolidated net sales were derived from sales of ZERUST® rust and corrosion inhibiting products and services. While the net sales of NTIC's joint ventures are not included in NTIC's net sales on NTIC's consolidated financial statements, NTIC's receipt of fees for services that NTIC provides to its joint ventures and NTIC's receipt of dividend distributions from its joint ventures are based primarily on the revenues and profitability of the joint ventures. Accordingly, if sales of these products and services were to decline due to increased competition, the introduction of a new disruptive technology, or otherwise, NTIC's operating results would be adversely affected.

If NTIC is unable to continue to enhance its existing products and develop and market new products that respond to customer needs and achieve market acceptance, NTIC may experience a decrease in demand for its products, and its business could suffer.

One of NTIC's strategies is to enhance its existing products and develop and market new products that respond to customer needs. NTIC may not be able to compete effectively with its competitors unless NTIC can keep up with existing or new products or alternative technologies in the markets in which it competes. Product development requires significant research and development, financial, and other resources. Although in the past NTIC has implemented lean manufacturing and other productivity improvement initiatives to provide investment funding for new products, no assurance can be provided that NTIC will be able to continue to do so in the future. Product improvements and new product introductions also require significant planning, design, development, and testing at the technological, product, and manufacturing process levels, and NTIC may not be able to timely develop product improvements or new products. NTIC's competitors' new products may beat NTIC's products to market, may be more effective or less expensive than NTIC's products, or may render NTIC's products obsolete. Any new products that NTIC may develop may not receive market acceptance or otherwise generate any meaningful net sales or profits for NTIC relative to its expectations, based on, among other things, existing and anticipated investments in manufacturing capacity and commitments to fund advertising, marketing, promotional programs, and research and development.

NTIC has invested and intends to continue to invest additional research and development and marketing efforts and resources into the application of its corrosion prevention solutions into the oil and gas industry and the continued launch of its Natur-Tec® resin compounds and finished products. No assurance can be provided, however, that NTIC's investments in these new markets and products will be successful and result in additional revenue to NTIC.

In an effort to increase net sales, NTIC has expanded the marketing of its corrosion prevention solutions into the oil and gas industry and its Natur-Tec® resin compounds and finished products. NTIC expects to continue to invest additional research and development and marketing efforts and resources into these strategic initiatives. No assurance can be provided, however, that such strategic initiatives will be successful or that NTIC will be successful in obtaining additional revenue as a result of them. The introduction of new products into new markets takes significant resources, and there can be no assurance that NTIC is dedicating a sufficient amount of resources to ensure the success of these strategic initiatives. The sale of NTIC's ZERUST® rust and corrosion inhibiting products and services into the oil and gas industry, in particular, typically involves a long sales cycle, often including a one- to multi-year trial period with each customer and a slow integration process thereafter. This long sales cycle may cause NTIC's management, stockholders, and investors to lose faith in the business opportunities for NTIC's ZERUST® rust and corrosion inhibiting products and services in the oil and gas industry. Additionally, projects NTIC completes for oil and gas industry customers typically involve short turnaround times, and failure to meet these expectations could damage NTIC's ability to successfully promote its corrosion prevention solutions into the oil and gas industry.

NTIC's strategy of expanding its corrosion prevention solutions into the oil and gas industry and continuing the expansion of its Natur-Tec® bioplastics resin compounds and finished products is risky and may not prove to be successful, which could harm NTIC's operating results and financial condition.

NTIC's strategy of expanding its corrosion prevention solutions into the oil and gas industry and continuing the expansion of its Natur-Tec® bioplastics resin compounds and finished products, either directly or indirectly through joint ventures and independent distributors and agents, is risky and subject to all of the risks inherent in the establishment of a new business enterprise, including:

- the absence of a significant operating history;
- the lack of commercialized products;
- the lack of market acceptance of new products;
- expected substantial and continual losses for such businesses for the foreseeable future;
- the lack of manufacturing experience and limited marketing experience;
- an expected reliance on third parties for the manufacture and commercialization of some of the products;
- a competitive environment characterized by numerous, well-established and well-capitalized competitors;
- insufficient capital and other resources;
- reliance on key personnel and the need to hire and train local support in a timely manner in order to support customer needs; and
- NTIC's dependence on manufacturing and logistical services provided by contractors could give rise to product defect or warranty liability.

NTIC uses third-party manufacturers to produce the majority of its products. In addition, NTIC relies upon certain contractors for logistical services. Although NTIC's arrangements with its contract manufacturers and contractors may contain provisions for warranty expense reimbursement, NTIC may remain responsible to its customers for warranty service in the event of product defects and could experience an unanticipated product defect or warranty liability. In addition, product defects could harm NTIC's reputation amongst its customers.

The commercial success of NTIC's Natur-Tec® resin compounds and finished products depends on the widespread market acceptance of products manufactured with bio-based and biodegradable resins.

Although there is a developed market for petroleum-based plastics, the market for "bioplastics" which are plastics produced with bio-based resins, which are derived from renewable resources such as corn or cellulosic/plant material or blends thereof, or plastics that are engineered to be fully biodegradable or both, is still developing. The commercial success of NTIC's Natur-Tec® resin compounds and finished products depends on the widespread market acceptance of products manufactured with bio-based and biodegradable resins, which may result, in part, from government action at the federal, state or local level. For example, in June 2022, the State of California passed a law intended to reduce single-use plastics. Internationally, the government of India announced a phased ban on the manufacture and sale of single-use plastics beginning in July 2022. Similarly, in January 2021, China implemented a ban on single-use plastic utensils, bags and certain other single-use plastic items. Despite these efforts and other measures taken at the federal, state and local levels, including policies related to the collection of organics, it is currently difficult to assess or predict with any assurance the potential size, timing, and viability of market opportunities for NTIC's Natur-Tec® resin compounds and finished products. Additionally, while legislation has helped increase demand for bioplastics, a lack of enforcement and higher costs associated with bioplastics have adversely impacted the demand anticipated to stem from such legislation.

The traditional plastics market sector is well-established with entrenched competitors with whom NTIC competes. Pricing for traditional plastics has been highly volatile in recent years, which drives, to some extent, the commercial and other support for bioplastics. While NTIC expects to be able to command a premium price for its Natur-Tec® resin compounds and finished products, a widening gap in the pricing for bioplastics versus petroleum-based plastics may reduce the size of the addressable market for NTIC's Natur-Tec® resin compounds and finished products. In addition, the growth of the market will create some pressure on price for applications today considered commodities, including in particular NTIC's current Natur-Tec® finished products.

NTIC relies on its joint ventures, distributors, manufacturer's sales representatives, and other agents to market and sell its products.

In addition to its direct sales force, NTIC relies on its joint ventures, distributors, manufacturer's sales representatives, and other agents to market and sell its products in the United States and internationally. NTIC's joint ventures, distributors, manufacturer's sales representatives, and other agents might terminate their relationship with NTIC or devote insufficient sales efforts to NTIC's products. NTIC does not control its joint ventures, distributors, manufacturer's sales representatives, and other agents, and they may not be successful in implementing NTIC's marketing plans. NTIC's failure to maintain its existing relationships with these entities, or its failure to recruit and retain additional skilled joint venture partners, distributors, manufacturer's sales representatives, and other agents, could have an adverse effect on NTIC's operations. It is anticipated that several of NTIC's joint venture partners will retire during the next several years, which will require a transition on the part of the joint venture as well as NTIC and could harm NTIC's relationship with the joint venture and NTIC's business.

NTIC may be subject to product liability claims or other claims arising out of the activities of its joint ventures, which could adversely affect NTIC and its business.

While NTIC is not aware of any specific potential risk beyond its initial investment in, and any undistributed earnings of, each of its joint ventures, there can be no assurance that NTIC will not be subject to lawsuits based on product liability claims or other claims arising out of the activities of its joint ventures. To mitigate the ramifications of such an occurrence, NTIC maintains liability insurance specifically applicable to its ownership positions in its joint venture arrangements in excess of any insurance the joint ventures may maintain. No assurance can be provided, however, that such insurance will be available or adequate in the event of a claim.

The sale of ZERUST® rust and corrosion inhibiting products into the oil and gas industry is risky in light of the hazards typically associated with such operations and the significant amount of potential liability involved, which could adversely affect NTIC's business if ZERUST® rust and corrosion inhibiting products are involved, even if the cause of such events was not related to NTIC's products.

Because NTIC sells its ZERUST® rust and corrosion inhibiting products into the oil and gas industry, NTIC is subject to some of the risks and hazards typically associated with such operations, including hazards such as fire, explosion, blowouts, cratering, unplanned gas releases, and spills, each of which could be claimed to be attributed to the failure of NTIC's products to perform as anticipated. If such events occur and NTIC's products are involved, NTIC's business and operating results may suffer, even if the cause of such events was not related to NTIC's products.

The sale of ZERUST® rust and corrosion inhibiting products into the oil and gas industry is dependent on certain macroeconomic factors, including seasonality of installations, fluctuations of crude oil prices, global events and regulatory guidelines.

Seasonality of Installations: In the past, NTIC has experienced some seasonality with respect to the sale of its ZERUST® rust and corrosion inhibiting products into the oil and gas industry, with sales during parts of the second and third fiscal quarters being adversely affected by winter in the United States. However, in fiscal 2023, this seasonality began to decrease somewhat as opportunities increased globally.

Fluctuations of Crude Oil Prices: The sale of NTIC's ZERUST® rust and corrosion inhibiting products into the oil and gas industry, particularly in the United States, has historically been hampered by low/unstable global crude oil prices. Although the price of crude oil neared an all-time high in fiscal 2022, prices receded in 2023, and low global crude oil prices have been and may in the future be caused by OPEC decisions and other macroeconomic factors affecting supply and demand. NTIC believes low global crude oil prices constrain capital improvement budgets of its existing and prospective customers and may result in personnel turnover at its oil and gas customers or prospects. The ongoing war between Russia and Ukraine has escalated tensions between Russia and other countries, some of which have imposed sanctions and taken other economic actions that contributed to high global crude oil prices in 2022 before receding in 2023 partially as a result of decreased inflationary pressures. Additional international sanctions on Russia may be imposed, which could again increase these costs. NTIC believes the ongoing war between Russia and Ukraine may create uncertainty among its existing and prospective customers, which may cause them to halt oil and gas projects or elect to decrease capital improvement budgets, either of which could harm NTIC's ability to sell its products into the oil and gas industry. NTIC believes that similar impacts may result from the war between Israel and Hamas, particularly if the war escalates and surrounding countries become involved.

Global Events: The sale of Zerust Oil & Gas solutions to Oil & Gas sector clients is impacted by events like the COVID-19 pandemic and geopolitical tensions in key oil producing regions like the Middle East. These affect the ability of the teams to have face-to-face meetings, travel for site surveys and implementations, etc., with the added effect of potential supply chain delays/impacts that could delay or postpone sales.

Regulatory Guidelines: The Oil & Gas sector is very conservative and, in addition to long-term trials on-site, client decision makers typically default to guidelines from the American Petroleum Institute (API), Association of Materials Protection and Performance (AMPP), Pipeline Hazardous Materials Safety Administration (PHMSA), European Committee for the Study of Corrosion (CEOCOR), etc. Getting a new technology/solution approach included in these guidelines typically takes years of committee lobbying, client support, field trials and lab validation. The Zerust solutions have been included in several technical reports/committees from these groups though getting full validation is likely to take a few more years.

The expansion of NTIC's corrosion prevention solutions into the oil and gas industry and the continued launch of NTIC's Natur-Tec® resin compounds and finished products may require additional capital in the future, which may not be available or may be available only on unfavorable terms. In addition, any equity financings may be dilutive to NTIC's stockholders.

The expansion of NTIC's corrosion prevention solutions into the oil and gas industry and the continued expansion of NTIC's Natur-Tec® resin compounds and finished products will continue to require resources during fiscal 2024 and beyond. To the extent that NTIC's existing capital, including amounts available under its revolving line of credit, is insufficient to meet these requirements, NTIC may raise additional capital through financings or additional borrowings. Any equity or debt financing, if available at all, may be on terms that are not favorable to NTIC, and any equity financings could result in dilution to NTIC's stockholders.

Risks Related to Governmental Regulation, Laws, and Compliance

NTIC's business, properties, and products are subject to governmental regulation and taxes, compliance with which may require NTIC to incur expenses or modify its products or operations, and which may expose NTIC to penalties for non-compliance. Governmental regulation also may adversely affect the demand for some of NTIC's products and its operating results.

NTIC's business, properties, and products are subject to a wide variety of international, federal, state, and local laws, rules, taxes, and regulations relating to the protection of the environment, natural resources, and worker health and safety and the use, management, storage, and disposal of hazardous substances, wastes, and other regulated materials. These laws, rules, and regulations may affect the way NTIC conducts its operations, and the failure to comply with these regulations could lead to fines and other penalties. These laws, rules, and regulations may be subject to change by the Biden administration, which denied a key permit in the construction of the Keystone XL Pipeline, leading to the abandonment of the project, and may in the future take action to further restrict such activities. Additionally, new environmental laws, rules, and regulations with provisions similar to those of the Inflation Reduction Act of 2022, which includes measures to reduce emissions, may be enacted, which may adversely affect NTIC's business. Further, because NTIC owns and operates real property, various environmental laws also may impose liability on NTIC for the costs of cleaning up and responding to hazardous substances that may have been released on NTIC's property, including releases unknown to NTIC. These environmental laws and regulations also could require NTIC to pay for environmental remediation and response costs at third-party locations where NTIC disposed of or recycled hazardous substances. NTIC's future costs of complying with the various environmental requirements, as they now exist or may be altered in the future, could adversely affect NTIC's financial condition and operating results. NTIC is also subject to other international, federal, and state laws, rules, and regulations, the future non-compliance with which may harm NTIC's business or may adversely affect the demand for some of its products. Changes in laws and regulations, including changes in accounting standards and taxation changes, including tax rate changes, new tax laws, including the changes to U.S. federal tax laws included in the Inflation Reduction Act of 2022, such as a 1% excise tax on stock repurchases, and revised tax law interpretations, also may adversely affect NTIC's operating results.

Fluctuations in NTIC's effective tax rate could have a significant impact on NTIC's financial position, results of operations, or cash flows.

The mix of pre-tax income or loss among the tax jurisdictions in which NTIC operates, which have varying tax rates, could impact NTIC's effective tax rate. NTIC is subject to income taxes as well as non-income based taxes in both the United States and various foreign jurisdictions. Judgment is required in determining the worldwide provision for income taxes, other tax liabilities, interest, and penalties. Future events could change management's assessment. NTIC operates within multiple taxing jurisdictions and is subject to tax audits in these jurisdictions. These audits can involve complex issues, which may require an extended period of time to resolve. NTIC also has made assumptions about the realization of deferred tax assets. Changes in these assumptions or jurisdictional regulations could result in a valuation allowance for these assets. Final determination of tax audits or tax disputes may be different from what is currently reflected by NTIC's income tax provisions and accruals.

Certain of NTIC's operations are subject to regulation by the U.S. Food and Drug Administration.

The manufacture, sale, and use of NTIC's Natur-Tec® bio-plastic resin compounds are subject to regulation by the U.S. FDA. The FDA's regulations are concerned with substances used indirectly in food packaging materials, not with specific finished food packaging products. Thus, food and beverage containers are in compliance with FDA regulations if the components used in the food and beverage containers: (i) are approved by the FDA as indirect food additives for their intended uses and comply with the applicable FDA indirect food additive regulations; or (ii) are generally recognized as safe for their intended uses and are of suitable purity for those intended uses. NTIC believes that its Natur-Tec® resin compounds comply with all FDA requirements. However, failure to comply with FDA regulations could subject NTIC to administrative, civil, or criminal penalties.

NTIC has identified a material weakness in its internal controls, and cannot provide assurances that this weakness will be effectively remediated or that additional material weaknesses will not occur in the future.

If NTIC's internal control over financial reporting or its disclosure controls and procedures are not effective, NTIC may not be able to accurately report its financial results, which may cause investors to lose confidence in NTIC's reported financial information and may lead to a decline in its stock price.

NTIC's management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rule 13a-15(f) under the Exchange Act, which is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. NTIC's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

During the preparation of NTIC's consolidated financial statements included in this annual report on Form 10-K, NTIC's management identified a material weakness in NTIC's internal control over financial reporting relating to the probability assessment associated with the recognition of income related to employee retention credits that may be available to NTIC under the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") and subsequent legislation providing numerous tax provisions and other stimulus measures, including employee retention credits, which are refundable tax credits against certain employment taxes. While NTIC is taking steps to remediate the material weakness, NTIC cannot provide any assurance that such remedial measures, or any other remedial measures NTIC takes, will be effective. If NTIC fails to maintain effective internal control over financial reporting, NTIC may not be able to accurately report its financial results, which may, among other adverse consequences, cause investors to lose confidence in NTIC's reported financial information and lead to a decline in its stock price. In addition, a material weakness will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are designed and operating effectively.

Any change in accounting principles generally accepted in the United States of America requiring NTIC to consolidate its joint ventures could adversely affect NTIC's operating results.

If there were a change in accounting rules and NTIC were required to fully consolidate its joint ventures or if NTIC's joint ventures otherwise would be required to be consolidated with NTIC, NTIC and the individual joint venture would incur significant additional costs. In addition, other accounting pronouncements issued in the future could have a material cost associated with NTIC's implementation of such new accounting pronouncements.

Risks Related to NTIC's Intellectual Property

NTIC's reliance upon patents, trademark laws, trade secrets, and contractual provisions to protect its proprietary rights may not be sufficient to protect its intellectual property from others who may sell similar products.

NTIC holds patents relating to various aspects of its products and believes that proprietary technical know-how is critical to many of its products. Proprietary rights relating to NTIC's products are protected from unauthorized use by third parties only to the extent that they are covered by valid and enforceable patents or are maintained in confidence as trade secrets. NTIC cannot be certain that it will be issued any patents from any pending or future patent applications owned by or licensed to NTIC or that the claims allowed under any issued patents will be sufficiently broad to protect its technology. In the absence of patent protection, NTIC may be vulnerable to competitors who attempt to copy NTIC's products or gain access to its trade secrets and know-how. NTIC's competitors may initiate litigation to challenge the validity of NTIC's patents, or they may use their resources to design comparable products that do not infringe NTIC's patents. NTIC may incur substantial costs if its competitors initiate litigation to challenge the validity of its patents or if it initiates any proceedings to protect its proprietary rights, and if the outcome of any such litigation is unfavorable to NTIC, its business and operating results could be materially adversely affected.

In addition, NTIC relies substantially on trade secrets and proprietary know-how that it seeks to protect, in part, by confidentiality agreements with its employees and consultants. These agreements may be breached, and NTIC may not have adequate remedies for any such breach. Even if these confidentiality agreements are not breached, NTIC's trade secrets may otherwise become known or be independently developed by competitors.

Risks Related to NTIC's Common Stock

The trading volume of NTIC's common stock is typically very low, leaving NTIC's common stock open to risk of high volatility.

The number of shares of NTIC's common stock being traded daily is often very low, and on some trading days, there is no trading volume at all. During fiscal 2023, the daily trading volume ranged from 400 shares to 340,700 shares. Any NTIC stockholder wishing to sell his, her, or its stock may cause a significant fluctuation in the trading price of NTIC's common stock. In addition, low trading volume of a stock increases the possibility that, despite rules against such activity, the price of the stock may be manipulated by persons acting in their own self-interest. NTIC may not have adequate market makers and market making activity to prevent manipulation in its common stock.

The price and trading volume of NTIC's common stock has been, and may continue to be, volatile.

The market price and trading volume of NTIC's common stock price historically has fluctuated over a wide range. During fiscal 2023, the sale price of NTIC's common stock ranged from a low of \$10.10 per share to a high of \$15.00 per share, and the daily trading volume ranged from 400 shares to 340,700 shares. It is likely that the price and trading volume of NTIC's common stock will continue to fluctuate in the future. The securities of small capitalization companies, including NTIC, from time-to-time experience significant price and volume fluctuations, often unrelated to the operating performance of these companies. Securities class action litigation is sometimes brought against a company following periods of volatility in the market price of its securities or for other reasons. NTIC may become the target of similar litigation, especially if NTIC fails to meet its annual projected financial guidance or lowers its annual projected financial guidance. Securities litigation, whether with or without merit, could result in substantial costs and divert management's attention and resources, which could harm NTIC's business, operating results, and financial condition as well as the market price of its common stock.

A large percentage of NTIC's outstanding common stock is held by insiders, and, as a result, the trading market for NTIC's common stock is not as liquid as the stock of other public companies.

As of November 10, 2023, NTIC had 9,427,599 shares of common stock outstanding, 22.4% of which were beneficially owned by directors, executive officers, principal stockholders, and their respective affiliates. The stock of companies with a substantial amount of stock held by insiders is usually not as liquid as the stock of other public companies where insider ownership is not as concentrated. Thus, the trading market for shares of NTIC's common stock may not be as liquid as the stock of other public companies.

If securities or industry analysts do not publish research or reports about NTIC's business, or if they adversely change their recommendations regarding NTIC's common stock, the market price for NTIC's common stock and trading volume could decline.

The trading market for NTIC's common stock has been influenced by research or reports that industry or securities analysts publish about NTIC or its business. If one or more analysts who cover NTIC downgrade NTIC's common stock, the market price for NTIC's common stock would likely decline. If one or more cease coverage of NTIC or fail to regularly publish reports on NTIC, NTIC could lose visibility in the financial markets, which, in turn, could cause the market price or trading volume for NTIC's common stock to decline.

One of NTIC's principal stockholders beneficially owns a significant percentage of NTIC's outstanding common stock and is affiliated with NTIC's President and Chief Executive Officer and, thus, may be able to influence matters requiring stockholder approval, including the election of directors, and could discourage or otherwise impede a transaction in which a third-party wishes to purchase NTIC's outstanding shares at a premium.

As of November 10, 2023, Inter Alia Holding Company, or Inter Alia, beneficially owned approximately 12.8% of NTIC's outstanding common stock. Inter Alia is an entity partially owned by G. Patrick Lynch, NTIC's President and Chief Executive Officer and director, as well as two other members of the Lynch family. Mr. Lynch shares voting and dispositive power of shares of NTIC's common stock held by Inter Alia with the other owners. As a result of his share ownership through Inter Alia and his position as President and Chief Executive Officer and director of NTIC, Mr. Lynch may be able to influence the affairs and actions of NTIC, including matters requiring stockholder approval, such as the election of directors and approval of significant corporate transactions. The interests of Mr. Lynch and Inter Alia may differ from the interests of NTIC's other stockholders. This concentration of ownership may have the effect of delaying, preventing, or deterring a change in control of NTIC, could deprive NTIC's stockholders of an opportunity to receive a premium for their common stock as part of a sale or merger of NTIC, and may negatively affect the market price of NTIC's common stock. Transactions that could be affected by this concentration of ownership include proxy contests, tender offers, mergers, or other purchases of common stock that could give stockholders the opportunity to realize a premium over the then-prevailing market price for shares of NTIC's common stock.

General Risk Factors

Climate change, or legal, regulatory, or market measures to address climate change, may negatively affect our business and operations.

Climate change resulting from increased concentrations of carbon dioxide and other greenhouse gases in the atmosphere may have an adverse impact on global temperatures, weather patterns and the frequency and severity of extreme weather and natural disasters, such as hurricanes, tornadoes, earthquakes, wildfires or flooding. Climate change may also cause water shortages, changes in rainfall and storm patterns, changes in sea levels and other negative weather and climate patterns. Such weather conditions could pose physical risks to our facilities and disrupt operation of our supply chain and may impact operational costs.

The increasing global focus on climate change and the need for corporate change also may lead to new regional, federal, and/or global legal and regulatory requirements to reduce or mitigate the effects of greenhouse gases. The inconsistency of regulations in the countries in which we operate may affect the costs of compliance with such legal or regulatory requirements. Additionally, in the event that such regulation is enacted and is more aggressive than the sustainability measures that we are currently undertaking to monitor our emissions and improve our energy efficiency, we may be subject to curtailment or reduced access to resources or experience significant increases in our costs of operation and delivery. As a result, climate change could negatively affect our business and operations.

In addition, public company stockholders are increasingly sensitive to the climate change impacts and mitigation efforts of companies, are increasingly seeking enhanced disclosure on the risks, challenges, governance implications, and financial impacts of climate change faced by companies and are demanding that companies take a proactive approach to addressing perceived environmental risks, including risks associated with climate change, relating to their operations. In an effort to increase climate change disclosure, the SEC proposed climate disclosure rules that would require new climate-related disclosure in SEC filings, as described below. Adverse publicity or climate-related litigation that may result from such enhanced disclosure or stockholder perception could have a negative impact on our business.

New climate disclosure rules, if adopted by the SEC, may increase our costs and litigation risks, which would materially and adversely affect our future results of operations and financial condition.

During fiscal 2022, the SEC proposed new climate disclosure rules, which if adopted, would require new climate-related disclosure in SEC filings, including certain climate-related metrics and greenhouse gas emissions data, information about climate-related targets and goals, transition plans, if any, and extensive attestation requirements. In addition to requiring filers to quantify and disclose direct emissions data, the new rules also would require disclosure of climate impact arising from the operations and uses by the filer's business partners and contractors and end-users of the filer's products and/or services. We are currently assessing the impact of the new rules, if adopted as proposed, but at this time, we cannot predict the costs of implementation or any potential adverse impacts resulting from the new rules if adopted. However, we may incur increased costs relating to the assessment and disclosure of climate-related risks and increased litigation risks related to disclosures made pursuant to the new rules, either of which could materially and adversely affect our future results of operations and financial condition.

Severe weather could have a material adverse effect on NTIC's business.

NTIC's business has been and in the future could be materially and adversely affected by severe weather. NTIC's customers, including in particular NTIC's oil and gas customers, may have operations located in parts of the southern United States or other places and may be adversely affected by hurricanes and tropical storms, resulting in reduced demand for NTIC's products and services or increased operating costs. Furthermore, NTIC's customers and raw material suppliers' operations have been and could in the future be adversely affected by such hurricanes and other extreme or seasonal weather conditions. Adverse weather can also directly impede NTIC's operations. Repercussions of severe weather conditions may include:

- curtailment of services or reduced demand for products;
- weather-related damage to facilities and equipment, resulting in suspension of operations;
- inability to deliver equipment, personnel and products to job sites in accordance with contract schedules or increased transportation or other operating costs; and
- loss of productivity.

These constraints could delay NTIC's operations and materially increase NTIC's operating and capital costs.

NTIC may grow its business through additional joint ventures, subsidiaries, alliances, and acquisitions, which could be risky and harm its business.

One of NTIC's growth strategies may be to expand its business by entering into additional joint ventures and alliances and acquiring businesses, technologies, and products that complement or augment NTIC's existing products. The benefits of a joint venture, alliance, or acquisition may take more time than expected to develop, and NTIC cannot guarantee that any future joint ventures, alliances, or acquisitions will in fact produce the intended benefits. In addition, joint ventures, alliances, and acquisitions involve a number of risks, including:

- diversion of management's attention;
- difficulties in assimilating the operations and products of a new joint venture or acquired business or in realizing projected efficiencies, cost savings, and revenue synergies;
- potential loss of key employees or customers of the new joint venture or acquired business or adverse effects on existing business relationships with suppliers and customers;

- adverse impact on overall profitability if the new joint venture or acquired business does not achieve the financial results projected in NTIC's valuation models;
- reallocation of amounts of capital from other operating initiatives and/or an increase in NTIC's leverage and debt service requirements to pay the joint venture capital contribution or the acquisition purchase price, which could in turn restrict NTIC's ability to access additional capital when needed or to pursue other important elements of NTIC's business strategy;
- inaccurate assessment of undisclosed, contingent, or other liabilities or problems and unanticipated costs associated with the new joint venture or acquisition; and
- incorrect estimates made in the accounting for acquisitions, occurrence of non-recurring charges, and write-off of significant amounts of goodwill that could adversely affect NTIC's operating results.

NTIC's ability to grow through joint ventures, alliances, and acquisitions will depend, in part, on the availability of suitable opportunities at an acceptable cost, NTIC's ability to compete effectively for these opportunities, and the availability of capital to complete such transactions.

NTIC relies on its management information systems for inventory management, distribution, and other functions. If these information systems fail to adequately perform these functions or if NTIC experiences an interruption in their operation, NTIC's business and operating results could be adversely affected.

The efficient operation of NTIC's business is dependent on its management information systems. NTIC relies on its management information systems to effectively manage accounting and financial functions; manage order entry, order fulfillment, and inventory replenishment processes; and to maintain its research and development data. The failure of management information systems to perform as anticipated could disrupt NTIC's business and product development and could result in decreased sales, causing NTIC's business and operating results to suffer. In addition, NTIC's management information systems are vulnerable to damage or interruption from natural or man-made disasters, including terrorist attacks, attacks by computer viruses or hackers, power loss to computer systems, Internet outages, and telecommunications or data network failure. Any such interruption could adversely affect NTIC's business and operating results.

NTIC's current enterprise resource planning ("ERP") system is outdated and in need of a, upgrade or conversion to a new ERP system.

NTIC intends to implement a new ERP system during the next year. Implementing new or upgraded systems carries substantial risk, including failure to operate as designed, failure to properly integrate with other systems, potential loss of data or information, cost overruns, implementation delays, and disruption of operations. Third-party vendors are also relied upon to design, program, maintain, and service the ERP system. Any failures of these vendors to properly deliver their services could have a material adverse effect on NTIC's business. NTIC plans to run parallel systems (existing system with new system) for multiple quarters, however, any disruptions or malfunctions affecting NTIC's ERP system implementation plan could cause critical information upon which NTIC relies to be delayed, defective, corrupted, inadequate, or inaccessible. NTIC may experience difficulties in its business operations, or difficulties in operating its business under these systems, either of which could disrupt its operations, including its ability to timely invoice customers, ship and track product orders, project inventory requirements, manage its supply chain, effectively manage customer accounts receivable and pay suppliers within terms and otherwise adequately service its customers, and could lead to increased costs and other difficulties. In the event NTIC experiences significant disruptions as a result of the implementation or upgrade of new systems or otherwise, it may not be able to fix its systems in an efficient and timely manner. NTIC may not realize the benefits it anticipates should all or part of the ERP system implementation process prove to be ineffective. Accordingly, such events may disrupt or reduce the efficiency of NTIC's entire operations and have a material adverse effect on its operating results and cash flows.

NTIC's business could be negatively impacted by cyber security threats.

In the ordinary course of NTIC's business, NTIC uses its management information systems to store and access proprietary business information. NTIC faces various cyber security threats, including cyber security attacks to its information technology infrastructure and attempts by others to gain access to its proprietary or sensitive information. The procedures and controls NTIC uses to monitor these threats and mitigate its exposure may not be sufficient to prevent cyber security incidents. The result of these incidents could include disrupted operations, lost opportunities, misstated financial data, liability for stolen assets or information, increased costs arising from the implementation of additional security protective measures, litigation, and reputational damage. Any remedial costs or other liabilities related to cyber security incidents may not be fully insured or indemnified by other means. Additionally, on July 26, 2023, the SEC issued final rules related to cyber security risk management and related disclosures. NTIC and its Audit Committee continue to monitor and analyze the impact these rules may have on NTIC's regulatory burden and cost of compliance related to cyber security threats.

NTIC's quarterly results are typically unpredictable and subject to variation.

NTIC's quarterly operating results vary from quarter to quarter for a variety of reasons. For example, NTIC's quarterly sales to joint ventures can be affected by individual orders to joint ventures. Because of the typical size of individual orders to joint ventures and the overall size of NTIC's net sales to joint ventures, the timing of one or more orders can materially affect NTIC's quarterly sales to joint ventures and the comparisons to prior year quarters. In addition, because of the typical size of individual orders and the overall size of NTIC's net sales derived from sales of Natur-Tec® products, the timing of one or more orders can materially affect NTIC's quarterly sales of Natur-Tec® products and the comparisons to prior year quarters. Furthermore, since ZERUST® products for the oil and gas industry typically carry higher margins than other traditional ZERUST® products, the amount of sales of ZERUST® products for the oil and gas industry typically affects NTIC's overall margins. Such variability in operating results makes the prediction of NTIC's net sales, earnings, and other operating results for each quarter difficult and increases the risk of unanticipated variations in quarterly operating results. NTIC's quarterly results have been and, in the future, may be below the expectations of public market analysts and investors.

NTIC's business is subject to a number of other miscellaneous risks that may adversely affect NTIC's operating results, financial condition, or business.

NTIC's business is subject to a number of other miscellaneous risks that may adversely affect NTIC's operating results, and financial condition, such as natural or man-made disasters, an unexpected business loss of supply due to a force majeure event or global pandemics that may result in shortages of raw materials, higher commodity costs, an increase in insurance premiums, and other adverse effects on NTIC's business; the continued threat of terrorist acts and war that may result in heightened security and higher costs for import and export shipments of components or finished goods; and the ability of NTIC's management to adapt to unplanned events.

Item 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

Item 2. PROPERTIES

NTIC's principal executive offices, production facilities, and domestic research and development operations are located at 4201 Woodland Road, Circle Pines, Minnesota 55014. NTIC also purchased the property immediately adjacent to this property, located at 4203 Woodland Road, which includes a 26,000 square foot industrial building, for \$1,200,000 in February 2023. NTIC continues to renovate this building, which will be used primarily for warehousing space and light industrial production. NTIC owns this real estate and these buildings. NTIC also owns real estate and a building in Beachwood, Ohio, which it uses for office, manufacturing, laboratory, and warehouse space. Additionally, NTIC has contract warehousing agreements in California and Indiana to hold and release stock products to customers.

Internationally, NTIC's subsidiaries in Brazil, India, Mexico, and China all lease office, warehouse, and laboratory space. In July 2021, NTIC China entered into a purchase agreement to acquire an approximately 21,000 square feet industrial building and the right to use certain real estate in the Qingpu District of Shanghai, China, which has been used as China's new corporate headquarters since February 2022. NTIC also leases office, warehouse, and laboratory space in Chennai, India.

NTIC's management considers its current properties suitable and adequate for its current and foreseeable needs.

Item 3. LEGAL PROCEEDINGS

For information regarding NTIC's legal proceedings, see Note 15 to NTIC's consolidated financial statements.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

NTIC's common stock is listed for trading on the Nasdaq Global Market under the symbol "NTIC."

Dividends

During fiscal 2023, NTIC's Board of Directors declared cash dividends on the following dates in the following amounts to holders of record of the Company's common stock as of the following record dates:

<u>Declaration Date</u>	<u>Amount</u>	<u>Record Date</u>	<u>Payable Date</u>
October 20, 2022	\$0.07	November 3, 2022	November 16, 2022
January 20, 2023	\$0.07	February 1, 2023	February 15, 2023
April 21, 2023	\$0.07	May 3, 2023	May 17, 2023
July 17, 2023	\$0.07	August 2, 2023	August 16, 2023

On October 18, 2023, NTIC's Board of Directors declared a cash dividend of \$0.07 per share of NTIC's common stock, payable on November 15, 2023 to stockholders of record on November 1, 2023. The declaration of future dividends is not guaranteed and will be determined by NTIC's Board of Directors in light of conditions then existing, including NTIC's earnings, financial condition, cash requirements, restrictions in financing agreements, business conditions, and other factors, including without limitation the effect of COVID-19 on its business, operating results, and financial condition.

Number of Record Holders

As of August 31, 2023, there were 154 record holders of NTIC's common stock. This does not include shares held in "street name" or beneficially owned.

Recent Sales of Unregistered Equity Securities

NTIC did not sell any shares of its common stock or any other equity securities of NTIC that were not registered under the Securities Act of 1933, as amended, during the fourth quarter of fiscal 2023.

Issuer Purchases of Equity Securities

NTIC did not purchase any shares of its common stock or other equity securities of NTIC during the fourth quarter of fiscal 2023. As of August 31, 2023, up to \$2,640,548 in shares of NTIC common stock remained available for repurchase under NTIC's stock repurchase program.

Item 6. [RESERVED]

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis provides material historical and prospective disclosures intended to enable investors and other users to assess NTIC's financial condition and results of operations. Statements that are not historical are forward-looking and involve risks and uncertainties discussed under the heading "Part I. Item 1. Business—Forward-Looking Statements" and under the heading "Part I. Item 1A. Risk Factors." The following discussion of the results of the operations and financial condition of NTIC should be read in conjunction with NTIC's consolidated financial statements and the related notes thereto included under "Part II. Item 8. Financial Statements and Supplementary Data."

This Management's Discussion and Analysis is organized in the following major sections:

- **Business Overview.** This section provides a brief overview description of NTIC's business, focusing in particular on developments during the most recent fiscal year.
- **NTIC's Subsidiaries and Joint Venture Network.** This section provides a brief overview of NTIC's subsidiaries and its joint venture network, the joint ventures which are considered individually significant to NTIC's consolidated assets and income, and how NTIC's joint ventures are accounted for by NTIC.
- **Financial Overview.** This section provides a brief summary of NTIC's financial results and financial condition for fiscal 2023 compared to 2022.
- **Sales and Expense Components.** This section provides a brief description of the significant line items in NTIC's consolidated statements of operations.
- **Results of Operations.** This section provides an analysis of the significant line items in NTIC's consolidated statements of operations.
- **Liquidity and Capital Resources.** This section provides an analysis of NTIC's liquidity and cash flows and a discussion of NTIC's financial condition and financial commitments.
- **Inflation and Seasonality.** This section describes the effects of inflation and seasonality, if any, on NTIC's business and operating results.
- **Market Risk.** This section describes material market risks to which NTIC is subject.
- **Related Party Transactions.** This section describes any material related party transactions to which NTIC is a party.
- **Critical Accounting Policies and Estimates.** This section discusses NTIC's critical accounting policies and estimates, which require NTIC to exercise subjective or complex judgments in their application. NTIC's significant accounting policies, including its critical accounting estimates, are summarized in Note 1 to NTIC's consolidated financial statements.
- **Recent Accounting Pronouncements.** This section references Note 2 to NTIC's consolidated financial statements, which summarizes the effect of recently issued accounting pronouncements on NTIC's results of operations and financial condition.

Business Overview

NTIC develops and markets proprietary, environmentally beneficial products and services in over 65 countries either directly or via a network of subsidiaries, joint ventures, independent distributors, and agents. NTIC's primary business is corrosion prevention marketed mainly under the ZERUST® brand. NTIC has been selling its proprietary ZERUST® products and services to the automotive, electronics, electrical, mechanical, military, and retail consumer markets for almost 50 years and, more recently, has also expanded into the oil and gas industry. Additionally, NTIC markets and sells a portfolio of proprietary bio-based and certified compostable (fully biodegradable) polymer resin compounds and finished products under the Natur-Tec® brand. These products are intended to reduce NTIC's customers' carbon footprint and provide environmentally sound waste disposal options.

NTIC's ZERUST® rust and corrosion inhibiting products include plastic and paper packaging, liquids, coatings, rust removers, cleaners, and diffusers as well as engineered solutions designed specifically for the oil and gas industry. NTIC also offers worldwide, on-site, technical consulting for rust and corrosion prevention issues. In North America, NTIC sells its ZERUST® corrosion prevention solutions through a network of independent distributors and agents supported by a direct sales force.

Internationally, NTIC sells its ZERUST® corrosion prevention solutions through its wholly-owned subsidiary in China, NTIC (Shanghai) Co., Ltd. (NTIC China), its wholly-owned subsidiary in India, HNTI Limited (Zerust India), its majority-owned joint venture holding company for NTIC's joint venture investments in the Association of Southeast Asian Nations (ASEAN) region, NTI Asean LLC (NTI Asean), and certain majority-owned and wholly-owned subsidiaries, and joint venture arrangements in North America, Europe, and Asia. NTIC also sells products directly to its European joint venture partners through its wholly-owned subsidiary in Germany, NTIC Europe GmbH (NTI Europe).

One of NTIC's strategic initiatives is to expand into and penetrate other markets for its ZERUST® corrosion prevention technologies. Consequently, for the past several years, NTIC has focused significant sales and marketing efforts on the oil and gas industry, as the infrastructure that supports that industry is typically constructed using metals that are highly susceptible to corrosion. In fiscal 2023, sales of ZERUST® corrosion prevention solutions to large customers in the oil and gas industry became more consistent, with these customers beginning to re-order products. Sales within the U.S. also stabilized, and key customer relationships have been expanded. The sale of ZERUST® corrosion prevention solutions to customers in the oil and gas industry typically involves long sales cycles, often including multi-year trial periods with each customer and a slow integration process thereafter.

With respect to NTIC's Natur-Tec® business, NTIC markets its Natur-Tec® resin compounds and finished products in North America primarily through a network of regional and national distributors as well as independent agents. NTIC continues to see significant opportunities for finished bioplastic products and, therefore, continues to strengthen and expand its North American distribution network for finished Natur-Tec® bioplastic products. Internationally, NTIC sells its Natur-Tec® resin compounds and finished products both directly and through its wholly-owned subsidiary in China and majority-owned subsidiaries in India and Sri Lanka and through distributors and certain joint ventures.

NTIC's Subsidiaries and Joint Venture Network

NTIC has ownership interests in 11 operating subsidiaries in North America, South America, Europe, and Asia, which are listed in "Part I. Item 1. Business" of this annual report on Form 10-K. The results of these subsidiaries are fully consolidated in NTIC's consolidated financial statements.

NTIC participates in 15 active joint venture arrangements in North America, Europe, and Asia, which are listed in "Part I. Item 1. Business" of this annual report on Form 10-K. NTIC has historically funded its investments in joint ventures with cash generated from operations. NTIC receives funds from its joint ventures as fees for services that NTIC provides to its joint ventures and as dividend distributions. The fees for services provided to joint ventures are determined based on either a flat fee or a percentage of sales depending on local laws and tax regulations. With respect to NTIC's joint venture in Germany (EXCOR), NTIC recognizes an agreed upon quarterly fee for services. NTIC recognizes equity income from each joint venture based on the overall profitability of the joint venture. Such profitability is subject to variability from quarter to quarter, which, in turn, subjects NTIC's earnings to variability from quarter to quarter. The profits of each joint venture are shared by the respective joint venture owners in accordance with their respective ownership percentages. NTIC typically directly or indirectly owns 50% or less of each of its joint venture entities and, thus, does not control the decisions of these entities regarding whether to pay dividends and, if paid, what amount is paid in a given year. The payment of a dividend by an entity is determined by a joint vote of the owners and is not at the sole discretion of NTIC. NTIC accounts for the investments and financial results of its joint ventures in its consolidated financial statements utilizing the equity method of accounting. NTIC considers EXCOR to be individually significant to NTIC's consolidated assets and income as of August 31, 2023 and 2022. Therefore, NTIC provides certain additional information regarding this entity in the notes to NTIC's consolidated financial statements and in this section of this report.

Financial Overview

NTIC's management, including its chief executive officer, who is NTIC's chief operating decision maker, reports and manages NTIC's operations in two reportable business segments based on products sold, customer base, and distribution center: ZERUST® products and services and Natur-Tec® products.

Highlights of NTIC's financial results for fiscal 2023 include the following, with increases or decreases in each case as compared to fiscal 2022:

- NTIC's consolidated net sales increased 7.7% primarily as a result of an increase in sales of and demand for both ZERUST® and Natur-Tec® products. 77.3% of NTIC's consolidated net sales were derived from sales of ZERUST® products and services, which increased 7.4%, and 22.7% of NTIC's consolidated net sales were derived from sales of Natur-Tec®, which increased 8.8%.
- Cost of goods sold as a percentage of net sales decreased to 65.2% compared to 68.9% during fiscal 2022 primarily as a result of lower raw material prices overall and increased sales made to customers in the oil and gas industry, which products carry higher margins than ZERUST® industrial products and Natur-Tec® products.
- NTIC's total joint venture operations increased 10.9% to \$11,641,904 compared to \$10,493,600 during fiscal 2022. The increase was reflective of the one-time gain on the liquidation of previously written-off investment in Tianjin Zerust of \$1,986,027, offset by decreases in equity income and fees for services correlating to the decrease in sales at the joint ventures. Net sales at the joint ventures decreased 3.3% to \$100,682,316 compared to \$104,077,748 during fiscal 2022.
- NTIC's total operating expenses increased 17.6% to \$33,425,089 compared to \$28,414,117 during fiscal 2022. This increase was primarily due to increased personnel expenses, including new hires, benefits and travel, sales commissions, and expenses incurred during the current fiscal year periods in connection with Zerust Taiwan, a new indirect, majority owned subsidiary, formed to assume the operations of a former joint venture in Taiwan.
- NTIC incurred net income attributable to NTIC of \$2,912,276, or \$0.30 per diluted common share, compared to \$6,324,700, or \$0.66 per diluted common share, for fiscal 2022. During fiscal 2022, \$3,951,550, or \$0.41 per diluted common share, was due to the gain from the Zerust India acquisition.

Sales and Expense Components

The following is a description of the primary components of net sales and expenses:

Net Sales, Excluding Joint Ventures. NTIC derives net sales from the sale of its ZERUST® products and services and its Natur-Tec® products. NTIC sells its ZERUST® products and services and its Natur-Tec® products either directly, through its subsidiaries, or via a network of joint ventures, independent distributors, and agents. Net sales, excluding joint ventures represents net sales by NTIC either directly to end users or to distributors worldwide, but not sales to NTIC's joint ventures and not sales by NTIC's joint ventures. NTIC recognizes revenue from the sale of its products primarily upon shipment of the products.

Net Sales, To Joint Ventures. Net sales, to joint ventures represents net sales by NTIC to NTIC's joint ventures, but not sales by NTIC either directly to end users or to distributors or sales by NTIC's joint ventures. NTIC's revenue recognition policy for sales to its joint ventures is the same as NTIC's policy for sales to unaffiliated customers. NTIC recognizes revenue from the sale of its products to joint ventures primarily upon shipment of the products.

Cost of Goods Sold. Most of NTIC's products are manufactured by third parties, and its cost of goods sold for those products consists primarily of the price invoiced by its third-party vendors. For the portion of products that NTIC manufactures, NTIC's cost of goods sold for those products consists primarily of direct labor, allocated manufacturing overhead, raw materials, and components. NTIC's margins on its Natur-Tec® resin compounds and finished products are generally smaller than its margins on its ZERUST® products and services, and NTIC's margins on its ZERUST® products and services sold into the oil and gas industry are generally greater than its margins on its traditional ZERUST® products and services.

Equity in Income from Joint Ventures. NTIC's equity in income from joint ventures consists of NTIC's share of equity in income from each joint venture based on the overall profitability of the joint ventures. Such profitability is subject to variability from quarter to quarter, which, in turn, subjects NTIC's earnings to variability from quarter to quarter. Traditionally, a portion of the equity income recorded in a given fiscal year is paid to the owners of the joint venture entity during the following fiscal year through a dividend. The payment of a dividend by a joint venture entity is determined by a vote of the joint venture owners and is not at the sole discretion of NTIC. NTIC typically owns only 50% or less of its joint venture entities and, thus, does not control the decisions of these entities regarding whether to pay dividends and, if paid, how much they should be in a given year.

Fees for Services Provided to Joint Ventures. NTIC provides certain services to its joint ventures, including consulting, legal, travel, insurance, technical, and marketing services based on licensing or other agreements with its joint ventures. NTIC receives fees for these services it provides to its joint ventures based primarily on the net sales by NTIC's joint ventures, the latter of which are not included in NTIC's net sales reflected on NTIC's consolidated statements of operations. The fees for services received by NTIC from its joint ventures are generally determined based on either a flat fee or a percentage of net sales by NTIC's joint ventures depending on local laws and tax regulations. With respect to EXCOR, NTIC receives an agreed upon fixed quarterly fee for such services. Under NTIC's agreements with its joint ventures in which the fees for services are described, amounts are earned when product is shipped from joint venture facilities, at which point a sale is deemed to have occurred and results in obligation of the joint venture to pay the royalty and recognition of the fee by NTIC.

Selling Expenses. Selling expenses consist primarily of sales commissions and support costs for NTIC's direct sale and distribution system and marketing costs.

General and Administrative Expenses. General and administrative expenses consist primarily of salaries and benefits and other costs for NTIC's executives, accounting, stock-based compensation, finance, legal, information technology, and human resources functions.

Research and Development Expenses. Research and development expenses include costs associated with the design, development, market analysis, lab testing, and field trials and enhancements of NTIC's products and services. NTIC expenses all costs related to product research and development as incurred. Research and development expenses reflect the net amount after being reduced by reimbursements related to certain research and development contracts. With respect to such research and development contracts, NTIC accrues proceeds received under the contracts and offsets research and development expenses incurred in equal installments over the timelines associated with completion of the contracts' specific objectives and milestones.

Remeasurement Gain on Acquisition of Equity Method Investee. Remeasurement gain on acquisition of equity method investee consists of the gain resulting from the acquisition of the remaining 50% ownership interest of Zerust India.

Interest Income. Interest income consists of interest earned on investments, which typically consist of investment-grade, interest-bearing securities and money market accounts.

Interest Expense. Interest expense results primarily from interest associated with any borrowings under NTIC's line of credit with JPM.

Income Tax Expense. Income tax expense includes federal income taxes, foreign withholding taxes, income tax of consolidated entities in foreign jurisdictions, state income tax, and changes to NTIC's deferred tax valuation allowance. NTIC utilizes the asset and liability method of accounting for income taxes, which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed annually for differences between the financial statement and tax basis of assets and liabilities that will result in taxable or deductible amounts in the future, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. NTIC records a tax valuation allowance when it is more likely than not that some portion or all of its deferred tax assets will not be realized. NTIC makes this determination based on all available evidence, including historical data and projections of future results. Income tax expense is the tax payable or refundable for the period plus or minus the change during the period in deferred tax assets and liabilities.

Results of Operations

Fiscal Year 2023 Compared to Fiscal Year 2022

The following table sets forth NTIC's results of operations for fiscal 2023 and fiscal 2022.

	Fiscal 2023	% of Net Sales	Fiscal 2022	% of Net Sales	\$ Change	% Change
Net sales	\$ 79,902,952	100.0%	\$ 74,158,890	100.0%	\$ 5,744,062	7.7%
Cost of goods sold	52,099,121	65.2%	51,090,298	68.9%	1,008,823	2.0%
Equity in income from joint ventures	6,452,719	8.1%	4,725,918	6.4%	1,726,801	36.5%
Fees for services provided to joint ventures	5,189,185	6.5%	5,767,682	7.8%	(578,497)	(10.0%)
Selling expenses	15,290,897	19.1%	13,038,180	17.6%	2,252,717	17.3%
General and administrative expenses	13,166,270	16.5%	10,600,603	14.3%	2,565,667	24.2%
Research and development expenses	4,967,922	6.2%	4,775,334	6.4%	192,588	4.0%

Net Sales. NTIC's consolidated net sales increased 7.7% to \$79,902,952 during fiscal 2023 compared to \$74,158,890 during fiscal 2022. This increase was primarily a result of increased demand across all market segments, including ZERUST® oil and gas.

The following table sets forth NTIC's net sales by product segment for fiscal 2023 and fiscal 2022:

	Fiscal 2023	Fiscal 2022	\$ Change	% Change
Total ZERUST® sales	\$ 61,728,364	\$ 57,459,382	\$ 4,268,982	7.4%
Total Natur-Tec® sales	18,174,588	16,699,508	1,475,080	8.8%
Total net sales	\$ 79,902,952	\$ 74,158,890	\$ 5,744,062	7.7%

During fiscal 2023, 77.3% of NTIC's consolidated net sales were derived from sales of ZERUST® products and services, which increased 7.4% to \$61,728,364 compared to \$57,459,382 during fiscal 2022. This increase was primarily a result of increased demand in North America.

The following table sets forth NTIC's net sales of ZERUST® products for fiscal 2023 and fiscal 2022:

	Fiscal 2023	Fiscal 2022	\$ Change	% Change
ZERUST® industrial net sales	\$ 51,690,273	\$ 49,883,060	\$ 1,807,213	3.6%
ZERUST® joint venture net sales	2,236,105	2,968,090	(731,985)	(24.7%)
ZERUST® oil & gas net sales	7,801,986	4,608,232	3,193,754	69.3%
Total ZERUST® net sales	\$ 61,728,364	\$ 57,459,382	\$ 4,268,982	7.4%

NTIC's total ZERUST® net sales increased during fiscal 2023 compared to fiscal 2022 primarily due to increased demand in North American ZERUST industrial business and sales to new and existing oil and gas customers. Overall, demand for ZERUST® products and services depends heavily on the overall health of the markets in which NTIC sells its products, including the automotive, oil and gas, agriculture, and mining markets in particular.

ZERUST® oil and gas net sales increased 69.3% during fiscal 2023 compared to fiscal 2022 primarily as a result of new opportunities with new and existing customers. NTIC anticipates that its sales of ZERUST® products and services into the oil and gas industry will continue to remain subject to significant volatility from quarter to quarter as sales are recognized, specifically due to the volatility of oil prices. Demand for oil and gas products around the world depends primarily on market acceptance and the reach of NTIC's distribution network. Because of the typical size of individual orders and overall size of NTIC's net sales derived from sales of oil and gas products, the timing of one or more orders can materially affect NTIC's quarterly sales compared to prior fiscal year quarters.

During fiscal 2023, 22.7% of NTIC's consolidated net sales were derived from sales of Natur-Tec® products, compared to 22.5% during fiscal 2022. Sales of Natur-Tec® products increased 8.8% to \$18,174,588 during fiscal 2023 compared to \$16,699,508 during fiscal 2022 as a result of increased global demand. The demand for Natur-Tec® products in most markets has returned to pre-pandemic levels; however, there are lingering effects of COVID-19 in the apparel industry, as well as corporate office complexes.

Cost of Goods Sold. Cost of goods sold increased 2.0% in fiscal 2023 compared to fiscal 2022 primarily as a result of the increase in net sales, as described above. Cost of goods sold as a percentage of net sales decreased to 65.2% during fiscal 2023 compared to 68.9% during fiscal 2022 primarily as a result of lower raw material prices and increased sales made to customers in the ZERUST® oil and gas industry, which products carry higher margins than our ZERUST® industrial products and a reallocation of certain personnel expenses from the cost of goods sold to general and administrative expense. NTIC has taken certain actions to address inflationary pressures and pass on related cost increases to its customers and some improvements from these actions, as well as some improvements in gross margin, were realized during fiscal 2023.

Equity in Income from Joint Ventures. NTIC's equity in income from joint ventures increased 36.5% to \$6,452,719 during fiscal 2023 compared to \$4,725,918 during fiscal 2022. The increase was reflective of the one-time gain on the liquidation of previously written-off investment in Tianjin Zerust of \$1,986,027, partially offset by decreases in equity income correlating to the decrease in sales at the joint ventures. NTIC's equity in income from joint ventures fluctuates based on net sales and profitability of the joint ventures during the respective periods. Of the total equity in income from joint ventures, NTIC had equity in income from joint ventures of \$2,852,229 attributable to EXCOR during fiscal 2023. NTIC had equity in income of all other joint ventures of \$3,600,493 during fiscal 2023 primarily due to the \$1,986,027 one-time gain noted above related to Tianjin Zerust.

Fees for Services Provided to Joint Ventures. NTIC recognized fee income for services provided to joint ventures of \$5,189,185 during fiscal 2023 compared to \$5,767,682 during fiscal 2022, representing a decrease of 10.0%. Fee income for services provided to joint ventures is traditionally a function of the sales made by NTIC's joint ventures; however, at various joint ventures, the fee income for services is a fixed amount that does not fluctuate with the change in sales experienced by certain joint ventures. Net sales at the joint ventures decreased 3.3% to \$100,682,316 during fiscal 2023 compared to \$104,077,748 during fiscal 2022. This decrease was primarily a result of decreased demand during fiscal 2023 due in part to geopolitical uncertainty. Net sales of NTIC's joint ventures are not included in NTIC's product sales and are not included in NTIC's consolidated financial statements. Of the total fee income for services provided to joint ventures, fees of \$816,089 were attributable to EXCOR during fiscal 2023 compared to \$834,725 attributable to EXCOR during fiscal 2022.

Selling Expenses. NTIC's selling expenses increased 17.3% in fiscal 2023 compared to fiscal 2022 primarily due to an increase in personnel expense in fiscal 2023 compared to fiscal 2022, as well as expenses incurred in fiscal 2023 in connection with the startup of a new indirect, majority owned subsidiary formed to assume the operations of a former joint venture in Taiwan and increased selling commissions. Selling expenses as a percentage of net sales increased to 19.1% for fiscal 2023 compared to 17.6% in fiscal 2022 primarily due to increased selling expenses, as noted above.

General and Administrative Expenses. NTIC's general and administrative expenses increased 24.2% in fiscal 2023 compared to fiscal 2022 primarily due to increased professional services and travel and personnel expenses during fiscal 2023 compared to fiscal 2022, as well as expenses incurred during fiscal 2023 in connection with the startup of a new indirect, majority owned subsidiary formed to assume the operations of a former joint venture in Taiwan, a reallocation of certain personnel expenses from cost of good sold to general and administrative expense and increased stock option expense. As a percentage of net sales, general and administrative expenses increased to 16.5% for fiscal 2023 from 14.3% for fiscal 2022 primarily due to the increase in general and administrative expenses, as noted above.

Research and Development Expenses. NTIC's research and development expenses increased 4.0% in fiscal 2023 compared to fiscal 2022 primarily due to the timing of expenses incurred and an increase in expenses associated with development efforts.

Interest Income. NTIC's interest income decreased to \$28,490 in fiscal 2023 compared to \$49,241 in fiscal 2022 primarily due to changes to the invested cash balances.

Interest Expense. NTIC's interest expense increased to \$461,805 in fiscal 2023 compared to \$89,096 in fiscal 2022 primarily due to increased outstanding borrowings under the line of credit, new term loans incurred by NTIC's subsidiary in China, and increased average interest rates during fiscal 2023.

Remeasurement Gain on Acquisition of Equity Method Investee. Authoritative guidance on accounting for business combinations requires that an acquirer re-measure its previously held equity interest in the acquisition at its acquisition date fair value and recognize the resulting gain or loss in earnings. As such, since NTIC acquired the remaining 50% ownership interest of Zerust India effective September 1, 2021, NTIC recognized a gain of \$3,951,550 during fiscal 2022. This gain is included in “Remeasurement gain on acquisition of equity method investee” on NTIC’s consolidated statements of operations for fiscal 2022. There was no comparable gain during fiscal 2023.

Income Before Income Tax Expense. NTIC had income before income tax expense of \$5,587,331 for fiscal 2023 compared to income before income tax expense of \$9,059,770 for fiscal 2022.

Income Tax Expense. Income tax expense was \$1,349,600 during fiscal 2023 compared to \$1,873,836 during fiscal 2022 for an effective tax rate of 24.2% and 20.7% during both fiscal 2023 and 2022, respectively.

NTIC considers the earnings of certain foreign joint ventures to be indefinitely invested outside the United States on the basis of estimates that NTIC’s future domestic cash generation will be sufficient to meet future domestic cash needs. As a result, U.S. income and foreign withholding taxes have not been recognized on the cumulative undistributed earnings of \$20,493,861 and \$21,256,923 as of August 31, 2023 and August 31, 2022, respectively. To the extent undistributed earnings of NTIC’s joint ventures are distributed in the future, they are not expected to result in any material additional income tax liability after the application of foreign tax credits.

Net Income Attributable to NTIC. Net income attributable to NTIC decreased to \$2,912,276, or \$0.30 per diluted common share, for fiscal 2023 compared to \$6,324,700, or \$0.66 per diluted common share, for fiscal 2022. This decrease was a primarily due to the \$3,951,550 remeasurement gain on acquisition of equity method investee recognized during fiscal 2022, which did not repeat in fiscal 2023, and to a lesser extent, the increase in operating expenses, partially offset by the increase in gross profit.

NTIC anticipates that its earnings will continue to be adversely affected to some extent by inflation and worldwide supply chain disruptions, among other factors. Additionally, NTIC anticipates that its quarterly net income will continue to remain subject to significant volatility primarily due to the financial performance of its subsidiaries and joint ventures, sales of its ZERUST® products and services into the oil and gas industry, and sales of its Natur-Tec® bioplastics products, which sales fluctuate more on a quarterly basis than the traditional ZERUST® business.

Other Comprehensive Income – Foreign Currency Translations Adjustment. The changes in the foreign currency translations adjustment were due to the fluctuation of the U.S. dollar compared to the Euro and other foreign currencies during fiscal 2023 compared to fiscal 2022.

Liquidity and Capital Resources

Sources of Cash and Working Capital

NTIC’s working capital, defined as current assets less current liabilities, was \$22,950,184 as of August 31, 2023, including \$5,406,173 in cash and cash equivalents, compared to \$23,169,480 as of August 31, 2022, including \$5,333,890 in cash and cash equivalents and \$5,590 in available for sale securities.

NTIC believes that a combination of its existing cash and cash equivalents, available for sale securities, forecasted cash flows from future operations, anticipated distributions of earnings, anticipated fees to NTIC for services provided to its joint ventures, and funds available through existing or anticipated financing arrangements will be adequate to fund its existing operations, investments in new or existing joint ventures or subsidiaries, capital expenditures, debt repayments, cash dividends, and any stock repurchases for at least the next 12 months. In fiscal 2024, NTIC expects to continue to invest through its use of working capital in Zerust India, NTIC China, NTI Europe, its joint ventures, research and development, marketing efforts, resources for the application of its corrosion prevention technology in the oil and gas industry, and its Natur-Tec® bio-plastics business, although the amounts of these various investments are not known at this time.

NTIC also expects to use some of its capital resources to continue to transition some of its joint ventures as needed or appropriate, which may include additional acquisitions by NTIC of the remaining ownership interests of joint ventures not owned by NTIC, the formation of one or more new subsidiaries to assume the operations of a joint venture, and dissolutions or liquidations of one or more of its joint ventures. Some of these joint venture transactions may materially impact NTIC’s results of operations for a particular reporting period. For example, the formation of a new indirect, majority owned subsidiary of NTIC to assume the operations of a former joint venture increased NTIC’s operating expenses during fiscal 2023.

NTIC traditionally has used the cash generated from its operations, distributions of earnings from joint ventures and fees for services provided to its joint ventures to fund NTIC's new technology investments and capital contributions to new and existing subsidiaries and joint ventures. NTIC's joint ventures traditionally have operated with little or no debt and have been self-financed with minimal initial capital investment and minimal additional capital investment from their respective owners. Therefore, NTIC believes there is limited exposure by NTIC's joint ventures that could materially impact their respective operations and/or liquidity.

In order to take advantage of new product and market opportunities to expand its business and increase its revenues and assist with joint venture transitions, NTIC may decide to finance such opportunities by additional borrowings under its revolving line of credit or raising additional financing through the issuance of debt or equity securities. There is no assurance that any financing transaction will be available on terms acceptable to NTIC or at all or that any financing transaction will not be dilutive to NTIC's current stockholders.

Credit Agreement with JPMorgan Chase Bank, N.A.

On January 6, 2023, NTIC entered into a Credit Agreement (the "Credit Agreement") with JPMorgan Chase Bank, N.A. ("JPM"), which provides NTIC with a senior secured revolving line of credit (the "Credit Facility") of up to \$10.0 million, and replaced NTIC's prior loan agreement with PNC Bank, National Association. The Credit Facility includes a \$5.0 million sublimit for standby letters of credit. Borrowings of \$3,600,000 were outstanding under the Credit Facility as of August 31, 2023. Unless terminated earlier, the Credit Facility will mature on January 6, 2024, and the principal amount thereunder, together with all accrued unpaid interest and other amounts owing thereunder, if any, will be payable in full on such date. Borrowings under the Credit Agreement bear interest at a floating rate, at the option of NTIC, equal to either the CB Floating Rate or the Adjusted SOFR Rate. The term "CB Floating Rate" means the greater of the Prime Rate in the United States or 2.50%. The term "Adjusted SOFR Rate" means the term secured overnight financing rate for either one, three or six months (depending on the interest period selected by NTIC) plus 0.10% per annum. With respect to any borrowings using an Adjusted SOFR Rate, there is an applicable margin of 2.15% applied per annum. There is no applicable margin with respect to borrowings using a CB Floating Rate. To secure the Credit Agreement, the Company assigned to JPM a continuing security interest in all of its right, title and interested in collateral made up for the assets of the Company.

The Credit Agreement contains customary affirmative and negative covenants, including, among other matters, limitations on NTIC's ability to incur additional debt, grant liens, engage in certain business operations and transactions, make certain investments, modify its organizational documents or form any new subsidiaries, subject to certain exceptions. Further, the Credit Agreement contains a negative covenant that restricts the ability of NTIC to redeem or repurchase its common stock or pay dividends if the result of which would cause an event of default under the Credit Agreement. The Credit Agreement also requires the Company to maintain a Fixed Charge Coverage Ratio of at least 1.25 to 1.00. The term "Fixed Charge Coverage Ratio" means the ratio, computed for the NTIC on a consolidated basis, of net income plus income tax expense, plus amortization expense, plus depreciation expense, plus interest expense, and plus dividends received from joint ventures, minus unfinanced capital expenditures and equity in income from joint ventures, all computed for the twelve month period then ending, to scheduled principal payments made, plus scheduled finance lease payments made, plus interest expense paid, plus income tax expense paid, and plus cash distributions and dividends paid, all computed for the same twelve month period then ending. The Credit Agreement also contains customary events of default, including, without limitation, payment defaults, material inaccuracy of representations and warranties, covenant defaults, bankruptcy and insolvency proceedings, cross-defaults to certain other agreements, breach of any financial covenant and change of control. Upon the occurrence and during the continuance of any event of default, JPM may accelerate the payment of the obligations thereunder and exercise various other customary default remedies. As of August 31, 2023, NTIC was in compliance with all debt covenants under the Credit Agreement.

Other Credit Arrangements

On each of April 10, 2023 and May 30, 2023, the Company's wholly-owned subsidiary in China, NTIC China, entered into a loan agreement with China Construction Bank Corporation. Each term loan provided NTIC China with a RMB 10,000,000 (USD \$1.45 million). Each of the term loans matures after one year with the principal due at that time, after which an extension of the loan agreement is required. Both term loans have an annual interest rate of 3.25% with interest due monthly. Both term loans are secured by an office building owned by NTIC China and the loan agreements contain certain financial and other covenants. NTIC was in compliance with the covenants as of August 31, 2023. The current outstanding balance as of August 31, 2023 for both term loans is USD \$2,757,176.

Uses of Cash and Cash Flow

Net cash provided by operating activities during fiscal 2023 was \$5,541,219, which resulted principally from NTIC's net income, dividends received from joint ventures, depreciation and amortization expense, stock-based compensation and a decrease in inventory, partially offset by deferred income tax and equity in income from joint ventures and an increase in accounts receivable and a decrease in accounts payable. Net cash provided by operating activities during fiscal 2022 was \$1,146,078, which resulted principally from NTIC's net income, dividends received from joint ventures, depreciation and amortization expense, stock-based compensation and increases in accounts payable, partially offset by the remeasurement gain on acquisition of equity method investee, deferred income tax and equity in income from joint ventures and an increase in accounts receivable and inventory.

NTIC's cash flows from operations are impacted by significant changes in certain components of NTIC's working capital, including inventory turnover and changes in receivables and payables. NTIC considers internal and external factors when assessing the use of its available working capital, specifically when determining inventory levels and credit terms of customers. Key internal factors include existing inventory levels, stock reorder points, customer forecasts and customer requested payment terms. Key external factors include the availability of primary raw materials and sub-contractor production lead times. NTIC's typical contractual terms for trade receivables, excluding joint ventures, are traditionally 30 days and 90 days for trade receivables from its joint ventures. Before extending unsecured credit to customers, excluding NTIC's joint ventures, NTIC reviews customers' credit histories and will establish an allowance for uncollectible accounts based upon factors surrounding the credit risk of specific customers and other information. Accounts receivable over 30 days are considered past due for most customers. NTIC does not accrue interest on past due accounts receivable. If accounts receivable in excess of the provided allowance are determined uncollectible, they are charged to selling expense in the period that the determination is made. Accounts receivable are deemed uncollectible based on NTIC exhausting reasonable efforts to collect. NTIC's typical contractual terms for receivables for services provided to its joint ventures are 90 days. NTIC records receivables for services provided to its joint ventures on an accrual basis, unless circumstances exist that make the collection of the balance uncertain, in which case the fee income will be recorded on a cash basis until there is consistency in payments. This determination is handled on a case-by-case basis.

NTIC experienced an increase in trade receivables and a decrease in inventory as of August 31, 2023 compared to August 31, 2022. Trade receivables, excluding joint ventures, as of August 31, 2023 increased \$1,508,200 compared to August 31, 2022, primarily related to a correlating increase in sales and timing differences.

Outstanding trade receivables, excluding joint ventures balances, increased by an average of 8 days to an average of 80 days from balances outstanding from these customers as of August 31, 2023 from an average of 72 days as of August 31, 2022.

Outstanding trade receivables from joint ventures as of August 31, 2023 decreased \$509,949 compared to August 31, 2022 primarily due to the timing of payments. Outstanding balances from trade receivables from joint ventures decreased an average of 66 days to an average of 20 days from balances outstanding from these customers as of August 31, 2023 from an average of 86 days as of August 31, 2022. The average days outstanding of trade receivables from joint ventures as of August 31, 2023 were primarily due to the receivables balances at Zerust Consumer Products and South Korea.

Outstanding receivables for services provided to joint ventures as of August 31, 2023 decreased \$468,523 compared to August 31, 2022, and the average days to pay decreased an average of 21 days to an average of 191 days from an average of 112 days as of August 31, 2022.

Net cash used in investing activities during fiscal 2023 was \$3,343,124, which was primarily the result of the purchase of property and equipment, and investments in patents. Net cash used in investing activities during fiscal 2022 was \$7,108,174, which was primarily the result of the purchase of the remaining 50% ownership interest in Zerust India, purchases of property and equipment, an investment in joint venture, and investments in patents.

Net cash provided by financing activities for fiscal 2023 was \$2,053,798, which resulted from borrowings under the term loan and proceeds from the exercise of stock options and NTIC's employee stock purchase plan, partially offset by repayments on the line of credit, dividends paid on NTIC common stock and dividends received by non-controlling interest. Net cash provided by financing activities for fiscal 2022 was \$3,188,377, which resulted from borrowings under the line of credit and proceeds from the exercise of stock options and NTIC's employee stock purchase plan, partially offset by dividends paid on NTIC common stock and dividends received by non-controlling interest.

Stock Repurchase Program

On January 15, 2015, NTIC's Board of Directors authorized the repurchase of up to \$3,000,000 in shares of NTIC common stock through open market purchases or unsolicited or solicited privately negotiated transactions. This program has no expiration date but may be terminated by NTIC's Board of Directors at any time. As of August 31, 2023, up to \$2,640,548 in shares of NTIC common stock remained available for repurchase under NTIC's stock repurchase program. No repurchases occurred during fiscal 2023 or fiscal 2022.

Cash Dividends

During fiscal 2023, NTIC's Board of Directors declared cash dividends on the following dates in the following amounts to holders of record of NTIC common stock as of the following record dates:

Declaration Date	Amount	Record Date	Payable Date
October 20, 2022	\$0.07	November 3, 2022	November 16, 2022
January 20, 2023	\$0.07	February 1, 2023	February 15, 2023
April 21, 2023	\$0.07	May 3, 2023	May 17, 2023
July 17, 2023	\$0.07	August 2, 2023	August 16, 2023

The declaration of future dividends is not guaranteed and will be determined by NTIC's Board of Directors in light of conditions then existing, including NTIC's earnings, financial condition, cash requirements, restrictions in financing agreements, business conditions, and other factors, including without limitation the effect of COVID-19 on NTIC's business, operating results and financial condition.

Capital Expenditures and Commitments

NTIC spent \$3,247,652 on capital expenditures during fiscal 2023, which related primarily to a new warehouse facility, equipment and facility improvements, including the purchase of the property immediately adjacent to NTIC's headquarters in Circle Pines, Minnesota, which includes a 26,000 square foot industrial building, and related renovations. The building will be used primarily for warehousing space and light industrial production. NTIC expects to spend an aggregate of approximately \$1,600,000 to \$2,100,000 on capital expenditures during fiscal 2024, which it expects will relate primarily to the installation of new Enterprise Resource Planning (ERP) software system and the purchase of new equipment and facility improvements.

Inflation and Seasonality

Although inflation in the United States and abroad historically has had little effect on NTIC, inflationary pressures adversely affected NTIC's gross margins during fiscal 2023. NTIC believes there is some seasonality in its business. NTIC's net sales in the second fiscal quarter were adversely affected by the long Chinese New Year, the North American holiday season, and overall less corrosion taking place at lower winter temperatures worldwide.

Market Risk

NTIC is exposed to some market risk stemming from changes in foreign currency exchange rates, commodity prices and interest rates.

Because the functional currency of NTIC's foreign operations and investments in its foreign joint ventures is the applicable local currency, NTIC is exposed to foreign currency exchange rate risk arising from transactions in the normal course of business. NTIC's principal exchange rate exposure is with the Euro, the Japanese Yen, the Indian Rupee, the Chinese Renminbi, the South Korean Won, and the English Pound against the U.S. Dollar. NTIC's fees for services provided to joint ventures and dividend distributions from these foreign entities are paid in foreign currencies and, thus, fluctuations in foreign currency exchange rates could result in declines in NTIC's reported net income. Since NTIC's investments in its joint ventures are accounted for using the equity method, any changes in foreign currency exchange rates would be reflected as a foreign currency translation adjustment and would not change NTIC's equity in income from joint ventures reflected in its consolidated statements of operations. NTIC does not hedge against its foreign currency exchange rate risk.

Some raw materials used in NTIC's products are exposed to commodity price changes. The primary commodity price exposures are with a variety of plastic and bioplastic resins.

Any outstanding advances under NTIC's Credit Facility with JPM bear interest at a floating rate, at the option of NTIC, equal to either the CB Floating Rate or the Adjusted SOFR Rate, as defined above. Borrowings of \$3,600,000 were outstanding under the Credit Facility as of August 31, 2023.

Both term loans undertaken by NTIC China with China Construction Bank Corporation have an annual interest rate of 3.25% with interest due monthly. The current outstanding balance as of August 31, 2023 for both term loans is USD \$2,757,176.

Related Party Transactions

Since NTIC's joint ventures are considered related parties, NTIC recorded sales to its joint ventures as a separate line item on the face of NTIC's consolidated statements of operations and recorded fees for services provided to its joint ventures as separate line items on the face of NTIC's consolidated statements of operations. NTIC also records trade receivables from joint ventures, receivables for fees for services provided to joint ventures, and NTIC's investments in joint ventures as separate line items on its consolidated balance sheets.

NTIC established its joint venture network approximately 30 years ago as a method to increase its worldwide distribution network for ZERUST® rust and corrosion inhibiting products and services. NTIC participates, either directly or indirectly, in 16 active joint venture arrangements in North America, Europe, and Asia. Each of these joint ventures generally manufactures and markets finished products in the geographic territory to which it is assigned. NTIC's joint venture partners are knowledgeable in the applicable environmental, labor, tax, and other requisite regulations and laws of the respective foreign countries in which they operate, as well as the local customs and business practices. NTIC's revenue recognition policy for sales to its joint ventures is the same as its policy for sales to unaffiliated customers.

The fees for services provided to joint ventures are determined based on either a flat fee or a percentage of sales depending on local laws and tax regulations. With respect to NTIC's joint venture in Germany, EXCOR, NTIC recognizes an agreed upon quarterly fee for such services. NTIC records revenue related to fees for services provided to joint ventures when earned, amounts are determinable, and collectability is reasonably assured. Under NTIC's agreements with its joint ventures, fee amounts are earned when product is shipped from joint venture facilities. NTIC reviews the financial situation of each joint venture to assist in the likelihood of collections on amounts earned. From time to time, NTIC elects to account for such fees on a cash basis for certain joint ventures when uncertainty exists surrounding the collections of such fees. There are no fees being accounted for in this manner at present. The expenses incurred in support of its joint ventures are direct expenses that NTIC incurs related to its joint ventures and include such items as employee compensation and benefit expenses, travel expense, insurance, consulting expense, legal expense, and lab supplies and testing expense.

See Note 13 to NTIC's consolidated financial statements for other related party transaction disclosures.

Critical Accounting Policies and Estimates

The preparation of NTIC's consolidated financial statements requires management to make estimates and judgments that affect the reported amount of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. The Securities and Exchange Commission has defined a company's most critical accounting policies as those that are most important to the portrayal of its financial condition and results of operations and those which require the company to make its most difficult and subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain. Based on this definition, NTIC has identified the following critical accounting policies. Although NTIC believes that its estimates and assumptions are reasonable, they are based upon information available when they are made. Actual results may differ significantly from these estimates under different assumptions or conditions.

Principles of Consolidation

NTIC evaluates its voting and variable interests in entities on a qualitative and quantitative basis. NTIC consolidates entities in which it concludes it has the power to direct the activities that most significantly impact an entity's economic success and has the obligation to absorb losses or the right to receive benefits that could be significant to the entity. All such relationships are evaluated on an ongoing basis. The consolidated financial statements included in this report include the accounts of Northern Technologies International Corporation, its wholly-owned subsidiaries, Northern Technologies Holding Company, LLC, NTIC (Shanghai) Co., Ltd., NTIC Europe GmbH ZERUST-EXCOR MEXICO, S. de R.L. de C.V., and HNTI Limited, NTIC's majority-owned subsidiary in Brazil, Zerust Prevenção de Corrosão S.A., NTIC's majority-owned holding company, NTI Asean LLC, and NTIC's majority-owned subsidiary in India, Natur-Tec India Private Limited, Natur-Tec Lanka, Zerust Singapore Pte Ltd (Zerust Singapore), Zerust Vietnam Co. Ltd (Zerust Vietnam) and Zerust Taiwan Co. Ltd (Zerust Taiwan). NTIC's consolidated financial statements do not include the accounts of any of its joint ventures.

Investments in Joint Ventures and Recoverability of Investments in Joint Ventures

NTIC's investments in its joint ventures are accounted for using the equity method. NTIC assesses its joint ventures for impairment on an annual basis as of August 31 of each year as part of its fiscal year end analysis. In addition to the annual review for impairment, NTIC reviews the operating results of each joint venture on a quarterly basis in comparison to its historical operating results and its accrual for fees for services provided to joint ventures. If the operating results of a joint venture do not meet NTIC's financial performance expectations, an additional evaluation is performed on the joint venture. In addition to the annual assessments for impairment, non-periodic assessments for impairment may occur if cash remittances are less than accrued balances, a joint venture's management requests capital, or other events occur suggesting anything other than temporary decline in value. If an investment were determined to be impaired, then a reserve would be created to reflect the impairment on the financial results of NTIC. NTIC's evaluation of its investments in joint ventures requires NTIC to make assumptions about future cash flows of its joint ventures. These assumptions require significant judgment, and actual results may differ from assumed or estimated amounts.

Investments at Carrying Value

If NTIC is no longer able to exercise significant influence over operating and financial policy of a joint venture previously accounted for under the equity method, it maintains the investment at the carrying value as of the date that significant influence no longer exists and discontinues accruing the proportionate earnings or losses of the investment.

Investments are considered to be impaired when a decline in fair value is judged to be other-than-temporary. Fair value is calculated based on publicly available market information or other estimates determined by management. NTIC employs a systematic methodology on a quarterly basis that considers available quantitative and qualitative evidence in evaluating potential impairment of its investments. If the cost of an investment exceeds its fair value, NTIC evaluates, among other factors, general market conditions, credit quality of debt instrument issuers, the duration and extent to which the fair value is less than cost, and for equity securities, its intent and ability to hold, or plans to sell, the investment. NTIC also considers specific adverse conditions related to the financial health of and business outlook for the investee, including industry and sector performance, changes in technology, and operational and financing cash flow factors. Once a decline in fair value is determined to be other-than-temporary, an impairment charge is recorded to other income (expense), and a new cost basis in the investment is established.

Revenue Recognition

Revenue is measured based on consideration specified in the contract with a customer, adjusted for any applicable estimates of variable consideration and other factors affecting the transaction price, including noncash consideration, consideration paid or payable to customers, and significant financing components. While most of NTIC's revenue is contracted with customers through one-time purchase orders and short-term contracts, NTIC does have long-term arrangements with certain customers. Revenue from all customers is recognized when a performance obligation is satisfied by transferring control of a distinct good or service to a customer. The transaction price for NTIC's products is the invoiced amount. Revenue is recognized when transfer of control occurs as defined by the terms in the customer agreement, generally upon shipment of product.

With respect to recording revenue related to fees earned for services provided to NTIC's joint ventures, amounts are earned when product is shipped from joint venture facilities, at which point a sale is deemed to have occurred and results in obligation for the joint venture to pay the royalty and recognition of the fee by NTIC. The support and services NTIC provides its joint ventures include consulting, travel, insurance, technical and marketing services to existing joint ventures, legal fees incurred in the establishment of new joint ventures, registration and promotion and legal defense of worldwide trademarks, and legal fees incurred in connection with the filing of patent applications based on licensing or other agreements with its joint ventures. NTIC receives fees for the services it provides to its joint ventures based primarily on the net sales by NTIC's joint ventures. The fees for support services received by NTIC from its joint ventures are generally determined based on either a flat fee or a percentage of net sales by NTIC's joint ventures depending on local laws and tax regulations. Under NTIC's agreements with its joint ventures, amounts are earned when product is shipped from joint venture facilities. NTIC reviews the financial situation of each of its joint ventures to assist in the likelihood of collections on amounts earned. NTIC elects to account for these fees on a cash basis for certain joint ventures when uncertainty exists surrounding the collections of such fees.

Accounts Receivable

Trade receivables arise from sales of NTIC's products and services to NTIC's joint ventures and to unaffiliated customers. Trade receivables from joint ventures arise from sales NTIC makes to its joint ventures of products and the essential additives required to make ZERUST® industrial corrosion inhibiting products functional. Receivables for services to NTIC's joint ventures are contractually based primarily on a percentage of the sales of the joint ventures and are intended to compensate NTIC for services NTIC provides to its joint ventures, including consulting, legal, travel, insurance, technical, and marketing services.

Payment terms for NTIC's unaffiliated customers are determined based on credit risk and vary by customer. NTIC typically offers standard payment terms of net 30 days to unaffiliated customers. Payment terms for NTIC's joint ventures also are determined based on credit risk; however, additional consideration is given to the individual joint venture due to the transportation time associated with ocean delivery of most products and certain other factors. NTIC typically offers payment terms to joint ventures of net 90 days. NTIC does not accrue interest on past due accounts receivable. NTIC reviews the credit histories of its customers, including its joint ventures, before extending unsecured credit. NTIC values accounts and notes receivable net of an allowance for doubtful accounts. Each quarter, NTIC prepares an analysis of its ability to collect outstanding receivables that provides a basis for an allowance estimate for doubtful accounts. In doing so, NTIC evaluates the age of its receivables, past collection history, current financial conditions of key customers and its joint ventures, and economic conditions. Based on this evaluation, NTIC establishes a reserve for specific accounts and notes receivable that it believes are uncollectible, as well as an estimate of uncollectible receivables not specifically known. Deterioration in the financial condition of any key customer or joint venture or a significant slowdown in the economy could have a material negative impact on NTIC's ability to collect a portion or all of the accounts and notes receivable. NTIC believes that an analysis of historical trends and its current knowledge of potential collection problems provide NTIC with sufficient information to establish a reasonable estimate for an allowance for doubtful accounts. However, since NTIC cannot predict with certainty future changes in the financial stability of its customers or joint ventures, NTIC's actual future losses from uncollectible accounts may differ from its estimates. In the event NTIC determined that a smaller or larger uncollectible accounts reserve is appropriate, NTIC would record a credit or charge to selling expense in the period that it made such a determination.

Goodwill Impairment

Goodwill represents the excess purchase price over the fair value of tangible net assets acquired in acquisitions after amounts have been allocated to intangible assets. Goodwill is tested for impairment annually (at August 31), or more frequently when events or changes in circumstances indicate that the asset might be impaired. Examples of such events or circumstances include, but are not limited to, a significant adverse change in legal or business climate, an adverse regulatory action or unanticipated competition.

Recoverability of Long-Lived Assets

NTIC reviews its long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets may not be recoverable and determines potential impairment by comparing the carrying value of the assets with expected net cash flows expected to be provided by operating activities of the business or related products. If the sum of the expected undiscounted future net cash flows were less than the carrying value, NTIC would determine whether an impairment loss should be recognized. An impairment loss would be measured by comparing the amount by which the carrying value exceeds the fair value of the asset.

Foreign Currency Translation (Accumulated Other Comprehensive Loss)

The functional currency of each international joint venture and subsidiary is the applicable local currency. The translation of the applicable foreign currencies into U.S. dollars is performed for balance sheet accounts using exchange rates in effect at the balance sheet date and for revenue and expense accounts using an average monthly exchange rate. Translation gains or losses are reported as an element of accumulated other comprehensive income (loss).

NTIC (excluding NTIC China, Zerust Brazil, Natur-Tec India, Natur-Tec Lanka, NTI Asean, Zerust Singapore, Zerust Vietnam, Zerust Taiwan, Zerust Mexico, Zerust India, NTI Europe, and NTIC's joint ventures) conducts all foreign transactions based on the U.S. dollar. Since NTIC's investments in its joint ventures are accounted for using the equity method, any changes in foreign currency exchange rates would be reflected as a foreign currency translation adjustment and would not change the equity in income from joint ventures reflected in NTIC's consolidated statements of operations.

Stock-Based Compensation

NTIC recognizes compensation cost relating to share-based payment transactions, including grants of employee stock options and transactions under NTIC's employee stock purchase plan, in its consolidated financial statements. That cost is measured based on the fair value of the equity or liability instruments issued. NTIC measures the cost of employee services received in exchange for stock options or other stock-based awards based on the grant-date fair value of the award and recognizes the cost over the period the employee is required to provide services for the award.

Inventory Valuation

NTIC's inventories consist primarily of production materials and finished goods. NTIC purchases production materials and finished goods based on forecasted demand and records inventory at the lower of cost or net realizable value. Cost is determined by the first-in, first-out (FIFO) method. Management regularly assesses inventory valuation based on current and forecasted usage, demand and pricing, shelf life, customer inventory-related contractual obligations, and other considerations. If actual results differ from management estimates with respect to the actual or projected selling of inventories at amounts less than their carrying amounts, NTIC would adjust its inventory balances accordingly.

Income Taxes

NTIC utilizes the asset and liability method of accounting for income taxes, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Deferred income tax assets and liabilities are determined based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in operations in the period that includes the enactment date.

NTIC records net deferred tax assets to the extent NTIC believes these assets will more likely than not be realized. In making such a determination, NTIC considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations, including the prior three-year history. In the event NTIC determines that it would be able to realize its deferred tax assets in the future in excess of their net recorded amount, NTIC makes an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

Recent Accounting Pronouncements

See Note 2 to NTIC's consolidated financial statements for a discussion of recent accounting pronouncements.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

NTIC is exposed to some market risk stemming from changes in foreign currency exchange rates, commodity prices and interest rates.

Because the functional currency of NTIC's foreign operations and investments in its foreign joint ventures is the applicable local currency, NTIC is exposed to foreign currency exchange rate risk arising from transactions in the normal course of business. NTIC's principal exchange rate exposure is with the Euro, the Japanese Yen, the Indian Rupee, the Chinese Renminbi, the South Korean Won, and the English Pound against the U.S. Dollar. NTIC's fees for services provided to joint ventures and dividend distributions from these foreign entities are paid in foreign currencies, and, thus, fluctuations in foreign currency exchange rates could result in declines in NTIC's reported net income. Since NTIC's investments in its joint ventures are accounted for using the equity method, any changes in foreign currency exchange rates would be reflected as a foreign currency translation adjustment and would not change NTIC's equity in income from joint ventures reflected in its consolidated statements of operations. NTIC does not hedge against its foreign currency exchange rate risk.

Some raw materials used in NTIC's products are exposed to commodity price changes. The primary commodity price exposures are with a variety of plastic resins.

With respect to interest rate risk, any outstanding advances under NTIC's Credit Facility with JPM bear interest at a floating rate, at the option of NTIC, equal to either the CB Floating Rate or the Adjusted SOFR Rate, as defined above. Borrowings of \$3,600,000 were outstanding under the Credit Facility as of August 31, 2023. Both term loans undertaken by NTIC China with China Construction Bank Corporation have an annual interest rate of 3.25% with interest due monthly. The current outstanding balance as of August 31, 2023 for both term loans is USD \$2,757,176.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

The following items are included herein:

	<u>Page</u>
<u>Report of Independent Registered Public Accounting Firm (PCAOB Firm ID # 23)</u>	<u>55</u>
<u>Consolidated Balance Sheets as of August 31, 2023 and 2022</u>	<u>56</u>
<u>Consolidated Statements of Operations for the years ended August 31, 2023 and 2022</u>	<u>57</u>
<u>Consolidated Statements of Comprehensive Income for the years ended August 31, 2023 and 2022</u>	<u>58</u>
<u>Consolidated Statements of Equity for the years ended August 31, 2023 and 2022</u>	<u>59</u>
<u>Consolidated Statements of Cash Flows for the years ended August 31, 2023 and 2022</u>	<u>60</u>
<u>Notes to Consolidated Financial Statements</u>	<u>61 - 80</u>

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the board of directors of
Northern Technologies International Corporation and Subsidiaries:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Northern Technologies International Corporation and Subsidiaries (the "Company") as of August 31, 2023 and 2022, the related consolidated statements of operations, comprehensive income, equity, and cash flows, for each of the two years in the period ended August 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of August 31, 2023 and 2022, and the results of its operations and its cash flows for each of the two years in the period ended August 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which they relate.

Employee Retention Credit

Critical Audit Matter Description

As described in Note 1 to the consolidated financial statements, the Company applied for the Employee Retention Credit (ERC) in fiscal 2023. The Company qualified for ERCs based on qualified wages paid in the first and second quarters of 2021 and filed for credits of \$573,751 and \$566,006, for each of those quarters respectively, and recognized income related to these credits in the second and third fiscal quarters of fiscal 2023. In connection with the preparation of its consolidated financial statements for the fiscal year ended August 31, 2023, the Company concluded in accordance with International Accounting Standard (IAS) 20, Accounting for Government Grants and Disclosure of Government Assistance ("IAS 20"), as U.S. GAAP does not provide for the accounting of government grants, the associated income was inappropriately recognized. Pursuant to IAS 20, the Company cannot recognize income from the grant until it is "reasonably assured" (similar to the "probable" threshold in U.S. GAAP) that the grant conditions will be met and that the grant will be received, at which time grant income is recorded on a systematic basis over the periods in which the Company recognizes the payroll expenses for which the grant is intended to compensate. As a result, the Company restated the previously issued unaudited condensed consolidated financial statements for the three- and six-months ended February 28, 2023 and three- and nine-months ended May 31, 2023.

We identified the accounting for the ERCs under IAS 20 and the related assessment of the realizability of the ERCs as a critical audit matter. The evaluation of the realizability of the ERCs was complex due to the judgment required to evaluate management's estimates and assumptions.

How We Addressed the Matter in Our Audit

The primary procedures we performed to address this critical audit matter included:

- Testing the design and implementation of internal controls surrounding accounting for significant or complex accounting transactions.
- Testing management's process for determining the likelihood of the ERCs being granted. This included gaining an understanding of qualifications and the work of management's specialist.
- Utilizing an internal tax specialist with specialized knowledge and skill in tax credits to assist in testing the Company's evaluation surrounding the eligibility for the ERC, calculation of the credit amounts and the related probability assessment to recognize the related credit in earnings.
- Evaluating the adequacy of the Company's disclosure of these circumstances in the consolidated financial statements.

We have served as the Company's auditor since 2004.

Minneapolis, Minnesota

November 21, 2023

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**

CONSOLIDATED BALANCE SHEETS - AUGUST 31, 2023 AND 2022

	<u>August 31, 2023</u>	<u>August 31, 2022</u>
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 5,406,173	\$ 5,333,890
Available for sale securities	-	5,590
Receivables:		
Trade excluding joint ventures, less allowance for doubtful accounts of \$533,000 and \$439,000 as of August 31, 2023 and 2022, respectively	15,645,130	14,136,930
Trade, joint ventures	187,912	697,861
Fees for services provided to joint ventures	1,296,594	1,765,117
Dividend receivable from joint venture	1,986,027	-
Income taxes	34,202	-
Inventories	13,096,489	16,341,729
Prepaid expenses	2,019,029	1,953,764
Total current assets	<u>39,671,556</u>	<u>40,234,881</u>
PROPERTY AND EQUIPMENT, NET	<u>14,065,354</u>	<u>12,170,493</u>
OTHER ASSETS:		
Investments in joint ventures	23,705,714	21,814,754
Deferred income tax, net	530,944	-
Intangible asset, net	5,500,733	5,923,867
Goodwill	4,782,376	4,782,376
Patents and trademarks, net	658,752	710,011
Operating lease right of use assets	428,874	557,571
Total other assets	<u>35,607,393</u>	<u>33,788,579</u>
Total assets	<u>\$ 89,344,303</u>	<u>\$ 86,193,953</u>
LIABILITIES AND EQUITY		
CURRENT LIABILITIES:		
Line of credit	\$ 3,600,000	\$ 5,900,000
Term loan	2,757,176	-
Accounts payable	6,056,329	7,796,494
Income taxes payable	13,053	30,742
Accrued liabilities:		
Payroll and related benefits	2,305,400	2,297,543
Other	1,648,615	667,292
Current portion of operating leases	340,799	373,330
Total current liabilities	<u>16,721,372</u>	<u>17,065,401</u>
LONG-TERM LIABILITIES:		
Deferred income tax, net	1,836,059	1,700,015
Operating leases, less current portion	88,075	184,241
Total long-term liabilities	<u>1,924,134</u>	<u>1,884,256</u>
COMMITMENTS AND CONTINGENCIES (Note 15)		
EQUITY:		
Preferred stock, no par value; authorized 10,000 shares; none issued and outstanding	-	-
Common stock, \$0.02 par value per share; authorized 15,000,000 shares; issued and outstanding 9,424,101 and 9,232,483, respectively	188,482	184,650
Additional paid-in capital	21,986,767	19,939,131
Retained earnings	51,004,427	50,716,613
Accumulated other comprehensive loss	(6,823,403)	(7,245,132)
Stockholders' equity	<u>66,356,273</u>	<u>63,595,262</u>
Non-controlling interests	4,342,524	3,649,034
Total equity	<u>70,698,797</u>	<u>67,244,296</u>
Total liabilities and equity	<u>\$ 89,344,303</u>	<u>\$ 86,193,953</u>

See notes to consolidated financial statements.

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**
CONSOLIDATED STATEMENTS OF OPERATIONS
YEARS ENDED AUGUST 31, 2023 AND 2022

	2023	2022
NET SALES:		
Net sales	\$ 79,902,952	\$ 74,158,890
Cost of goods sold	52,099,121	51,090,298
Gross profit	27,803,831	23,068,592
JOINT VENTURE OPERATIONS:		
Equity in income from joint ventures	6,452,719	4,725,918
Fees for services provided to joint ventures	5,189,185	5,767,682
Total joint venture operations	11,641,904	10,493,600
OPERATING EXPENSES:		
Selling expenses	15,290,897	13,038,180
General and administrative expenses	13,166,270	10,600,603
Research and development expenses	4,967,922	4,775,334
Total operating expenses	33,425,089	28,414,117
OPERATING INCOME	6,020,646	5,148,075
REMEASUREMENT GAIN ON ACQUISITION OF EQUITY METHOD INVESTEE	-	3,951,550
INTEREST INCOME	28,490	49,241
INTEREST EXPENSE	(461,805)	(89,096)
INCOME BEFORE INCOME TAX EXPENSE	5,587,331	9,059,770
INCOME TAX EXPENSE	1,349,600	1,873,836
NET INCOME	4,237,731	7,185,934
NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	1,325,455	861,234
NET INCOME ATTRIBUTABLE TO NTIC	\$ 2,912,276	\$ 6,324,700
NET INCOME ATTRIBUTABLE TO NTIC PER COMMON SHARE:		
Basic	\$ 0.31	\$ 0.69
Diluted	\$ 0.30	\$ 0.66
WEIGHTED AVERAGE COMMON SHARES ASSUMED OUTSTANDING:		
Basic	9,359,504	9,216,216
Diluted	9,693,482	9,635,028
CASH DIVIDENDS DECLARED PER COMMON SHARE	\$ 0.28	\$ 0.28

See notes to consolidated financial statements.

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
YEARS ENDED AUGUST 31, 2023 AND 2022

	2023	2022
NET INCOME	\$ 4,237,731	\$ 7,185,934
OTHER COMPREHENSIVE INCOME (LOSS) – FOREIGN CURRENCY TRANSLATION ADJUSTMENT	445,338	(3,912,128)
COMPREHENSIVE INCOME	4,683,069	3,273,806
LESS: COMPREHENSIVE LOSS ATTRIBUTABLE TO NON-CONTROLLING INTERESTS	(1,349,064)	(669,208)
COMPREHENSIVE INCOME ATTRIBUTABLE TO NTIC	<u>\$ 3,334,005</u>	<u>\$ 2,604,598</u>

See notes to consolidated financial statements.

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**
CONSOLIDATED STATEMENTS OF EQUITY
YEARS ENDED AUGUST 31, 2023 AND 2022

	STOCKHOLDERS' EQUITY						Non-Controlling Interests	Total Equity
	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss			
	Shares	Amount						
BALANCE AT AUGUST 31, 2021	9,184,811	\$ 183,696	\$18,736,268	\$46,973,092	\$ (3,525,030)	\$ 3,382,555	\$65,750,581	
Stock options exercised	42,071	842	197,798	—	—	—	198,640	
Stock issued for employee stock purchase plan	5,601	112	73,533	—	—	—	73,645	
Stock option expense	—	—	931,532	—	—	—	931,532	
Dividends paid to stockholders	—	—	—	(2,581,179)	—	—	(2,581,179)	
Dividend received by non-controlling interest	—	—	—	—	—	(402,729)	(402,729)	
Net income	—	—	—	6,324,700	—	861,234	7,185,934	
Other comprehensive loss	—	—	—	—	(3,720,102)	(192,026)	(3,912,128)	
BALANCE AT AUGUST 31, 2022	9,232,483	\$ 184,650	\$19,939,131	\$50,716,613	\$ (7,245,132)	\$ 3,649,034	\$67,244,296	
Stock options exercised	184,432	3,689	634,581	—	—	—	638,270	
Stock issued for employee stock purchase plan	7,186	143	75,321	—	—	—	75,464	
Stock option expense	—	—	1,337,734	—	—	—	1,337,734	
Dividends paid to stockholders	—	—	—	(2,624,462)	—	—	(2,624,462)	
Dividend received by non-controlling interest	—	—	—	—	—	(655,574)	(655,574)	
Net income	—	—	—	2,912,276	—	1,325,455	4,237,731	
Other comprehensive gain	—	—	—	—	421,729	23,609	445,338	
BALANCE AT AUGUST 31, 2023	9,424,101	\$ 188,482	\$21,986,767	\$51,004,427	\$ (6,823,403)	\$ 4,342,524	\$70,698,797	

See notes to consolidated financial statements.

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED AUGUST 31, 2023 AND 2022

	2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 4,237,731	\$ 7,185,934
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation	1,337,734	931,532
Depreciation expense	1,042,505	938,489
Amortization expense	588,454	629,843
Loss on disposal of property and equipment	(8,534)	-
Remeasurement gain on acquisition of equity method investee	-	(3,951,550)
Change in allowance for doubtful accounts	94,000	57,000
Equity in income from joint ventures	(6,452,719)	(4,725,918)
Dividends received from joint ventures	5,639,198	5,723,176
Deferred income taxes	(395,001)	(81,500)
Changes in current assets and liabilities:		
Receivables:		
Trade, excluding joint ventures	(1,956,234)	(2,091,353)
Trade, joint ventures	509,949	(73,053)
Fees for services provided to joint ventures	468,523	(259,550)
Dividends receivable from joint venture	(1,986,027)	-
Income taxes	(34,202)	284,025
Inventories	3,030,665	(4,818,860)
Prepaid expenses and other	(3,061)	3,111
Accounts payable	(1,509,226)	3,010,526
Income tax payable	(16,077)	(493,091)
Accrued liabilities	953,541	(1,122,683)
Net cash provided by operating activities	5,541,219	1,146,078
CASH FLOWS FROM INVESTING ACTIVITIES:		
Acquisition of Zerust India business, net of cash acquired	-	(5,062,003)
Proceeds from the sale of available for sale securities	5,590	(956)
Investment in joint venture	-	(341,392)
Purchases of property and equipment	(3,247,652)	(1,496,674)
Proceeds from sale of property and equipment	13,000	-
Investments in patents	(114,062)	(207,149)
Net cash used in investing activities	(3,343,124)	(7,108,174)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Dividend received by non-controlling interest	(655,574)	(402,729)
Repayments on the line of credit	(2,300,000)	-
Proceeds from line of credit	-	5,900,000
Proceeds from term loan	2,812,504	-
Dividends paid on NTIC common stock	(2,624,462)	(2,581,179)
Proceeds from employee stock purchase plan	75,464	73,645
Proceeds from exercise of stock options	638,270	198,640
Net cash (used in) provided by financing activities	(2,053,798)	3,188,377
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(72,014)	426,968
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	72,283	(2,346,751)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	5,333,890	7,680,641
CASH AND CASH EQUIVALENTS AT END OF YEAR	\$ 5,406,173	\$ 5,333,890

See notes to consolidated financial statements.

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
AND SUBSIDIARIES**
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
YEARS ENDED AUGUST 31, 2023 AND 2022

1. NATURE OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

Nature of Business – Northern Technologies International Corporation and its Subsidiaries (collectively, the Company) develop and market proprietary environmentally beneficial products and services in over 65 countries either directly or via a network of subsidiaries, joint ventures, independent distributors, and agents. The Company’s primary business is corrosion prevention marketed mainly under the ZERUST® brand. The Company has been selling its proprietary ZERUST® products and services to the automotive, electronics, electrical, mechanical, military, and retail consumer markets for almost 50 years and, more recently, has also expanded into the oil and gas industry. Additionally, the Company markets and sells a portfolio of proprietary bio-based and certified compostable (fully biodegradable) polymer resin compounds and finished products under the Natur-Tec® brand. These products are intended to reduce the Company’s customers’ carbon footprint and provide environmentally sound waste disposal options. The Company’s two operating segments are ZERUST and Natur-Tec.

The Company participates, either directly or indirectly, in 15 active joint venture arrangements in North America, Europe, and Asia. Each of these joint ventures generally manufactures and markets products in the geographic territory to which it is assigned. While most of the Company’s joint ventures exclusively sell rust and corrosion inhibiting products, some of the joint ventures also sell the Company’s Natur-Tec® resin compounds and finished products. The profits of joint ventures are shared by the respective joint venture owners in accordance with their respective ownership percentages. The Company typically owns 50% or less of its joint venture entities and does not control the decisions of these entities, including dividend declaration or amount in any given year.

Impact of COVID-19 – As a result of the novel coronavirus (COVID-19) and related government mandated restrictions on the Company’s business, as well as the businesses of its joint ventures, customers and suppliers, disruption to the Company’s business and the manufacture and sale of its products and services continued to occur during fiscal 2023, including in particular in China. While demand in China improved during the third quarter of fiscal 2023 as a result of government restrictions that were lifted, the Company continued to experience softened demand for its products in China during the remainder of fiscal 2023. The Company may continue to experience softened demand into fiscal 2024 as the result of novel strains of COVID-19.

Principles of Consolidation – NTIC evaluates its voting and variable interests in entities on a qualitative and quantitative basis. NTIC consolidates entities in which it concludes it has the power to direct the activities that most significantly impact an entity’s economic success and has the obligation to absorb losses or the right to receive benefits that could be significant to the entity. The consolidated financial statements include the accounts of Northern Technologies International Corporation, its wholly owned subsidiaries, Northern Technologies Holding Company, LLC, NTIC (Shanghai) Co., Ltd. (NTIC China), ZERUST-EXCOR MEXICO, S. de R.L. de C.V (Zerust Mexico), NTIC Europe GmbH (NTI Europe), and HNTI Limited (Zerust India), NTIC’s majority-owned subsidiary in India, Natur-Tec India Private Limited (Natur-Tec India), NTIC’s majority-owned subsidiary in Brazil, Zerust Prevenção de Corrosão S.A. (Zerust Brazil), NTIC’s majority-owned subsidiary in Sri Lanka, Natur Tec Lanka (Pvt) Ltd (Natur Tec Lanka), and NTIC’s majority-owned holding company, NTI Asean LLC (NTI Asean), and its wholly owned subsidiaries Zerust Singapore Pte Ltd (Zerust Singapore), Zerust Vietnam Co. Ltd (Zerust Vietnam) and Zerust Taiwan Co. Ltd (Zerust Taiwan). NTIC’s consolidated financial statements do not include the accounts of any of its joint ventures.

Non-Controlling Interests – The Company owns 75% of Natur-Tec India, 75% of Natur Tec Lanka, 85% of Zerust Brazil, 60% of NTI Asean, Zerust Singapore Pte Ltd, Zerust Vietnam Co Ltd and Zerust Taiwan Co Ltd. The remaining ownership of the consolidated entities are accounted for as non-controlling interests and reported as part of equity in the consolidated financial statements. The Company allocates gains and losses to the non-controlling interest even when such allocation results in a deficit balance, reducing the losses attributed to the controlling interest. Changes in ownership interests are treated as equity transactions if the Company maintains control.

Net Sales – The Company includes net sales to its joint ventures and net sales to unaffiliated customers as separate line items on its consolidated statements of operations. There are no sales originating from the Company’s joint ventures included in the amount, as the Company’s investments in its joint ventures are accounted for using the equity method.

When determining recognition of revenue arrangements the Company performs the following five steps: (1) identify the contracts with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when or as the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods it transfers to, or services it performs for, the customer.

Generally, the Company’s performance obligations are satisfied when the customers take possession of the products, which normally occurs at the shipping point or destination depending on the terms of the contracts. The Company’s services are generally sold based upon quotes or contracts with customers that include a fixed or determinable price, and sales arrangements do not contain any significant financing component for its customers. The Company does not recognize revenue related to product warranties, nor does the Company incur significant contract costs. Customer arrangements do not generate contract assets or liabilities.

Revenue Recognition – Revenue is measured based on consideration specified in the contract with a customer, adjusted for any applicable estimates of variable consideration and other factors affecting the transaction price, including noncash consideration, consideration paid or payable to customers, and significant financing components. Revenue from all customers is recognized when a performance obligation is satisfied by transferring control of a distinct good or service to a customer.

Individually promised goods and services in a contract are considered a distinct performance obligation and accounted for separately if the customer can benefit from the individual good or service on its own or with other resources that are readily available to the customer and the good or service is separately identifiable from other promises in the arrangement. When an arrangement includes multiple performance obligations, the consideration is allocated between the performance obligations in proportion to their estimated standalone selling price. Costs related to products delivered are recognized in the period incurred, unless criteria for capitalization of costs are met. Costs of revenues consist primarily of direct labor, manufacturing overhead, materials, and components. The Company does not incur significant upfront costs to obtain a contract. If costs to obtain a contract were to become material, the costs would be recorded as an asset and amortized to expense in a manner consistent with the related recognition of revenue.

The Company excludes government assessed and imposed taxes on revenue generating transactions that are invoiced to customers from revenue. The Company includes freight billed to customers in revenue. Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment cost and are included in cost of goods sold.

The timing of revenue recognition, billing, and cash collections results in accounts receivable on the consolidated balance sheet.

Performance Obligations – A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract’s transaction price is allocated to each distinct performance obligation in proportion to its standalone selling price and recognized as revenue when, or as, the performance obligation is satisfied. The Company’s various performance obligations and the timing or method of revenue recognition are discussed below. The Company’s technical service consultants work directly with the end users of NTIC’s ZERUST® rust and corrosion inhibiting products to analyze their specific needs and develop systems to meet their performance requirements.

The Company sells its products to both distributors and end-users. Each unit of product delivered under a customer order represents a distinct and separate performance obligation, as the customer can benefit from each unit on its own or with other resources that are readily available to the customer, and each unit of product is separately identifiable from other products in the arrangement.

The transaction price for the Company's products is the invoiced amount. The Company does not have variable consideration in the form of refunds, credits, rebates, price concessions, pricing incentives, or other items impacting transaction price. The purchase order pricing in arrangements with customers is deemed to approximate standalone selling price; therefore, the Company does not need to allocate proceeds on a relative standalone selling price allocation between performance obligations. The Company applies the practical expedient in paragraph 606-10-50-14 and does not disclose information about remaining performance obligations that have original expected durations of one year or less. There are no material obligations that extend beyond one year.

Revenue is recognized when transfer of control occurs, as defined by the terms in the customer agreement. The Company immediately recognizes incidental items that are immaterial in the context of the contract. The Company has applied the practical expedient in paragraph 606-10-25-16A and does not assess if immaterial items are promised goods or services. The Company has also applied the practical expedient in paragraph 606-10-32-18 regarding the adjustment of the promised amount of consideration for the effects of a significant financing component when the customer pays for that good or service within one year or less, as the Company does not have any significant financing components in its customer arrangements since payment is received at or shortly after the point of sale, generally thirty to ninety days.

The Company estimates returns based on an analysis of historical experience if the right to return products is granted to its customers. The Company does not record a return asset, as non-conforming products are generally not returned. The Company's return policy does not vary by geography. The customer has no rotation or price protection rights, and the Company is not under a warranty obligation.

Sales Commissions – Sales commissions paid to sales representatives are eligible for capitalization, as they are incremental costs that would not have been incurred without entering into a specific sales arrangement and are recoverable through the expected margin on the transaction. The Company has elected to apply the practical expedient provided by ASC 340-40-25-4 and recognize the incremental costs of obtaining contracts as an expense when incurred, as the amortization period of the assets that would have otherwise been recognized is one year or less. The Company records these costs as a selling expense.

Product Warranty – The Company offers warranties on various products and services. These warranties are assurance type warranties that are not sold on a standalone basis; therefore, they are not considered distinct performance obligations. The Company estimates the costs that may be incurred under its warranties and records a liability in the amount of such costs at the time the revenue is recognized for the product sale.

International Revenue – The Company markets its products to numerous countries in North America, Europe, Latin America, Asia, and other parts of the world. See Note 11, Segment and Geographic Information, for information regarding revenue disaggregation by geography.

Trade Receivables – Payment terms for the Company's unaffiliated customers are determined based on credit risk and vary by customer. The Company typically offers standard payment terms to unaffiliated customers of net 30 days. The Company does not accrue interest on past due accounts receivable. The Company reviews the credit histories of its customers before extending unsecured credit. The Company presents accounts and notes receivable net of an allowance for doubtful accounts. Each quarter, the Company prepares an analysis of its ability to collect outstanding receivables that provides a basis for an allowance estimate for doubtful accounts. In doing so, the Company evaluates the age of its receivables, past collection history, current financial conditions of key customers and its joint ventures, and economic conditions. Based on this evaluation, the Company establishes a reserve for specific accounts and notes receivable that it believes are uncollectible, as well as an estimate of uncollectible receivables not specifically known. The Company believes that an analysis of historical trends and its current knowledge of potential collection problems provide the Company with sufficient information to establish a reasonable estimate for an allowance for doubtful accounts. In the event the Company determines that a smaller or larger uncollectible accounts reserve is appropriate, the Company records a credit or charge to selling expense in the period that it made such determination. Accounts receivable have been reduced by an allowance for uncollectible accounts of \$533,000 and \$439,000 as of August 31, 2023 and 2022, respectively. Accounts are considered past due based on terms agreed upon between the Company and the customer. Accounts receivable are written-off only after all collection attempts have failed and are based on individual credit evaluation and specific circumstances of the customer.

Trade Receivables from Joint Ventures – Trade receivables from joint ventures arise from sales of products the Company makes to its joint ventures. Payment terms for the Company’s joint ventures also are determined based on credit risk; however, additional consideration is given to the individual joint venture due to the transportation time associated with ocean delivery of most products and certain other factors. Generally, accounts receivable from the Company’s joint ventures unpaid after 90 days are considered past due. The Company does not accrue interest on past due balances. The Company periodically reviews amounts due from its joint ventures for collectability and, based on past experience and continuous review of the balances due, determined that an allowance for doubtful accounts related to its joint venture receivables was not necessary as of August 31, 2023 or 2022.

Employee Retention Credit (ERC) and Payroll Tax Deferral - On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) was signed into law providing numerous tax provisions and other stimulus measures, including an employee retention credit (“ERC”), which is a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the ERC.

The Company engaged tax advisors of a Big 4 accounting firm which determined the Company qualified for ERCs. The Company then applied for the ERC in fiscal 2023 for the second and third quarters of that year of \$573,751 and \$566,006, respectively. The Company has elected to account for the credit as a government grant. U.S. GAAP does not include grant accounting guidance for for-profit entities, therefore, the Company has elected to follow the grant accounting model in International Accounting Standard (IAS) 20, Accounting for Government Grants and Disclosure of Government Assistance. In accordance with IAS 20, the Company cannot recognize any income from the grant until there is reasonable assurance (similar to the “probable” threshold in U.S. GAAP) that any conditions attached to the grant will be met and that the grant will be received. Once it is reasonably assured that the grant conditions will be met and that the grant will be received, grant income is recorded on a systematic basis over the periods in which the Company recognizes the payroll expenses for which the grant is intended to compensate. No income was recognized in fiscal 2023 for the ERC. Income from the grant can be presented as either other income or as a reduction in the expenses for which the grant was intended to compensate.

Fees for Services Provided to Joint Ventures – The Company provides services to its joint ventures including consulting, legal, travel, insurance, technical, and marketing services based on licensing or other agreements with its joint ventures. The Company receives fees for the services it provides to its joint ventures. The fees for services received by the Company from its joint ventures are generally based on either a flat fee or a percentage of net sales by the Company’s joint ventures depending on local laws and tax regulations. Under the Company’s agreements with its joint ventures, amounts are earned when product is shipped from joint venture facilities, at which point a sale is deemed to have occurred and results in obligation for the joint venture to pay the royalty and recognition of the fee by the Company. The Company reviews the financial situation of each of its joint ventures to assist in the likelihood of collections on amounts earned. The Company accounts for these fees on a cash basis if uncertainty exists surrounding the collection of such fees.

Cash and Cash Equivalents – The Company includes as cash and cash equivalents highly liquid, short-term investments with maturity of three months or less when purchased, which are readily convertible into known amounts of cash. The Company maintains its cash in high quality financial institutions. The balances, at times, may exceed federally insured limits.

Available for Sale Securities – Available for sale securities are recorded at fair value. Unrealized holding gains and losses on available for sale securities are not significant.

Inventories – Inventories are recorded at the lower of cost (first-in, first-out basis) or net realizable value.

Property and Depreciation – Property and equipment are stated at cost. Depreciation is computed using the straight-line method based on the estimated service lives of the various assets as follows:

Buildings and improvements	5-30 years
Machinery and equipment	3-10 years

Patents and Trademarks – Patents and trademarks, including acquisition costs, are stated at cost, less accumulated amortization. Amortization is computed using the straight-line method over the estimated useful lives of the respective assets. Upon retirement, the cost of assets disposed and the related accumulated amortization are removed from the accounts, and any resulting gain or loss is credited or charged to operations.

Investments in Joint Ventures – Investments in the Company’s joint ventures are accounted for using the equity method. Under the equity method, investments are initially recorded at cost and are adjusted for dividends, distributed and undistributed earnings and losses, changes in foreign currency exchange rates, and additional investments. In the event the Company’s share of a joint venture’s cumulative losses exceeds the Company’s investment balance, the balance is reported at zero value until proportionate income exceeds the losses. The Company assesses its joint ventures for impairment on an annual basis as of August 31 of each year as part of its fiscal year end analysis. In addition to the annual review for impairment, the Company reviews the operating results of each joint venture on a quarterly basis in comparison to its historical operating results and its accrual of fees for services provided to joint ventures. If the operating results of a joint venture do not meet financial performance expectations, an additional evaluation is performed on the joint venture. The Company’s evaluation of its investments in joint ventures requires the Company to make assumptions about future cash flows of its joint ventures. These assumptions require significant judgment, and actual results may differ from assumed or estimated amounts. All investments in joint ventures had positive equity as of August 31, 2023 and 2022. The Company considers any of its joint ventures to be significant and discloses entity specific financial information if the joint venture’s income or assets make up more than 20% of the Company’s total assets or income.

The Company classifies distributions received from its joint ventures based on the nature of the distributions, generally, in operating activities on the consolidated statements of cash flows.

If the Company is no longer able to exercise significant influence over operating and financial policy of a joint venture previously accounted for under the equity method, it maintains the investment at the carrying value as of the date that significant influence no longer exists and discontinues accruing the proportionate earnings or losses of the investment.

Investments are considered to be impaired when a decline in fair value is judged to be other-than-temporary. Fair value is calculated based on publicly available market information or other estimates determined by management. The Company employs a systematic methodology on a quarterly basis that considers available quantitative and qualitative evidence in evaluating potential impairment of our investments. If the cost of an investment exceeds its fair value, the Company evaluates, among other factors, general market conditions, credit quality, the duration and extent to which the fair value is less than cost, and for equity securities, the Company’s intent and ability to hold, or plans to sell, the investment. The Company also considers specific adverse conditions related to the financial health of and business outlook for the investee, including industry and sector performance, changes in technology, and operational and financing cash flow factors. Once a decline in fair value is determined to be other-than-temporary, an impairment charge is recorded to other income (expense), and a new cost basis in the investment is established. The Company determined that there was no impairment of investments in joint ventures as of August 31, 2023.

Recoverability of Long-Lived Assets – The Company reviews its long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets may not be recoverable. The Company determines potential impairment by comparing the carrying value of the assets with expected net cash flows expected to be provided by operating activities of the business or related products. If the sum of the expected undiscounted future net cash flows is less than the carrying value, the Company evaluates whether an impairment loss should be recognized. An impairment loss is measured by comparing the amount by which the carrying value exceeds the fair value of the asset. When evaluating assets for impairment, the Company groups long-lived assets with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The Company determined that there were no indications that the carrying value of long-lived assets was not recoverable as of August 31, 2023.

Acquisitions of Businesses - Business combinations are accounted for under the acquisition method. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. Determining the fair value of assets acquired and liabilities and contingent liabilities assumed requires management’s judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, probabilities of success, discount rates, and asset lives, among other items. The excess of the fair value of the consideration transferred over the fair value of the Company’s share of the identifiable net assets acquired is recorded as goodwill. Acquisition-related expenses are recognized separately from the business combination and are recognized as general and administrative expense as incurred. The Company evaluates the materiality of required disclosures related to our business combinations using quantitative and qualitative measures.

Goodwill and Other Intangible Assets- Goodwill represents the excess purchase price over the fair value of tangible net assets acquired in acquisitions after amounts have been allocated to intangible assets. Goodwill is tested for impairment annually (at August 31), or more frequently when events or changes in circumstances indicate that the asset might be impaired. Examples of such events or circumstances include, but are not limited to, a significant adverse change in legal or business climate, an adverse regulatory action or unanticipated competition.

The Company estimates the useful life of patents to be 17 years and customer relationships to be 15 years. This estimate is based on a combination of factors, including the expected duration of patent protection, technological obsolescence, and market conditions. Amortization of intangible assets is recorded using the straight-line method over their estimated useful lives.

The Company assesses qualitative factors to determine whether the existence of events or circumstances would indicate that it is more likely than not that the fair value of the reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, the Company were to determine that it is more likely than not that the fair value of the reporting unit is less than its carrying amount, then the Company would perform a quantitative test that compares the fair value to its carrying value to determine the amount of any impairment. The Company has determined there was no goodwill impairment as of August 31, 2023.

Income Taxes – The Company utilizes the asset and liability method of accounting for income taxes, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Deferred income tax assets and liabilities are determined based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in operations in the period that includes the enactment date.

The Company records net deferred tax assets to the extent the Company believes these assets will more likely than not be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. In the event the Company determines that it would be able to realize its deferred assets in the future in excess of their net recorded amount, the Company makes an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions on the basis of a two-step process whereby the Company determines whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position and those tax positions that meet the more-likely-than-not recognition threshold. The Company recognizes the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

Foreign Currency Translation (Accumulated Other Comprehensive Income (Loss)) – The functional currency of NTIC China, Zerust Brazil, Natur-Tec India, Natur Tec Lanka, Zerust Mexico, Zerust India, Zerust Singapore, Zerust Vietnam, Zerust Taiwan, NTI Europe, and each unconsolidated international joint venture is the applicable local currency. The translation of the applicable foreign currencies into U.S. dollars is performed for balance sheet accounts using exchange rates in effect at the balance sheet date and for revenue and expense accounts using an average monthly exchange rate. Translation gains or losses are reported as an element of other comprehensive income (loss).

The Company (excluding NTIC China, Zerust Brazil, Natur-Tec India, Natur Tec Lanka, Zerust India, Zerust Singapore, Zerust Vietnam, Zerust Taiwan, NTI Asean, Zerust Mexico, NTI Europe, and NTIC's joint ventures) conducts all foreign transactions based on the U.S. dollar. Since investments in joint ventures are accounted for using the equity method, any changes in foreign currency exchange rates are reflected as a foreign currency translation adjustment and do not change the equity in income from joint ventures reflected in the Company's consolidated statements of operations.

Fair Value of Financial Instruments – The carrying value of cash and cash equivalents, available for sale securities, short-term accounts and notes receivable, notes payable, trade accounts payables, and other accrued expenses approximate fair value because of the short maturity of those instruments.

Shipping and Handling – The Company records all amounts billed to customers in a sales transaction related to shipping and handling as sales. The Company records costs related to shipping and handling in cost of goods sold.

Research and Development – The Company expenses all costs related to product research and development as incurred.

Common Stock – The Company issues authorized but unissued shares of common stock upon the exercise of stock options.

Stock-Based Compensation – The Company recognizes compensation cost relating to share-based payment transactions, including grants of employee stock options and transactions under the Company’s employee stock purchase plan, in its consolidated financial statements. That cost is measured based on the fair value of the equity or liability instruments issued. The Company measures the cost of employee services received in exchange for stock options and other stock-based awards based on the grant-date fair value of the award and recognizes the cost over the period the employee is required to provide services for the award (generally the vesting term).

Subsequent Events – The Company has evaluated events occurring after the date of the consolidated financial statements for events requiring disclosure in the consolidated financial statements.

Use of Estimates – The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

2. ACCOUNTING PRONOUNCEMENTS

In June 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-13, *Measurement of Credit Losses on Financial Instruments*, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19 and in April 2019, issued ASU No. 2019-04 and in May 2019, issued ASU No. 2019-05, and in November 2019, issued ASU No. 2019-11, which amended the standard. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Entities are required to apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company does not believe this accounting pronouncement will have a material impact on the Company’s consolidated financial position or operating results.

Although there are several other new accounting pronouncements issued or proposed by the FASB, which the Company has adopted or will adopt, as applicable, the Company does not believe any of these accounting pronouncements has had or will have a material impact on the Company’s consolidated financial position or operating results.

3. INVENTORIES

Inventories consisted of the following:

	August 31, 2023	August 31, 2022
Production materials	\$ 4,960,355	\$ 6,496,656
Finished goods	8,136,134	9,845,073
	<u>\$ 13,096,489</u>	<u>\$ 16,341,729</u>

4. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of the following:

	August 31, 2023	August 31, 2022
Land	\$ 496,965	\$ 310,365
Buildings and improvements	17,250,392	14,778,759
Machinery and equipment	5,984,364	5,643,320
	<u>23,731,721</u>	<u>20,732,444</u>
Less accumulated depreciation	<u>(9,666,367)</u>	<u>(8,561,951)</u>
	<u>\$ 14,065,354</u>	<u>\$ 12,170,493</u>

On February 28, 2023, the Company purchased the property immediately adjacent to NTIC's headquarters in Circle Pines, Minnesota, which includes a 26,000 square foot industrial building, for \$1,200,000. The building will be used primarily for warehousing space and light industrial production. Depreciation expense was \$1,042,505 for fiscal 2023 compared to \$938,489 in fiscal 2022.

5. INTANGIBLE ASSETS, NET

Intangible assets, net consisted of the following:

	As of August 31, 2023		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and trademarks	\$ 3,339,717	\$ (2,680,965)	\$ 658,752
Customer relationships	6,347,000	(846,267)	5,500,733
Total intangible assets, net	<u>\$ 9,686,717</u>	<u>\$ (3,527,232)</u>	<u>\$ 6,159,485</u>

	As of August 31, 2022		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents and trademarks	\$ 3,225,655	\$ (2,515,644)	\$ 710,011
Customer relationships	6,347,000	(423,133)	5,923,867
Total intangible assets, net	<u>\$ 9,572,655</u>	<u>\$ (2,938,777)</u>	<u>\$ 6,633,878</u>

Amortization expense related to intangible assets was \$558,454 for fiscal 2023 compared to \$629,843 for fiscal 2022.

As of August 31, 2023, future amortization expense related to intangible assets for each of the next five fiscal years and thereafter is estimated as follows:

Fiscal 2024	\$ 642,951
Fiscal 2025	543,721
Fiscal 2026	517,990
Fiscal 2027	492,221
Fiscal 2028	479,012
Thereafter	3,483,589
Total	<u>\$ 6,159,485</u>

6. INVESTMENTS IN JOINT VENTURES

The consolidated financial statements of the Company's foreign joint ventures are initially prepared using the accounting principles accepted in the respective joint ventures' countries of domicile. Amounts related to foreign joint ventures reported in the below tables and the accompanying consolidated financial statements have subsequently been adjusted to conform with U.S. GAAP in all material respects. All material profits on sales recorded that remain on the consolidated balance sheet from the Company to its joint ventures and from joint ventures to other joint ventures have been eliminated for financial reporting purposes.

Financial information from the audited and unaudited financial statements of the Company's joint venture in Germany, Excior Korrosionsschutz – Technologien und Produkte GmbH (EXCOR), and all the Company's other joint ventures are summarized as follows:

	As of August 31, 2023		
	Total	EXCOR	OTHER
Current assets	\$ 55,339,662	\$ 27,862,458	\$ 27,477,204
Total assets	59,729,348	30,054,277	29,675,071
Current liabilities	11,464,247	2,687,064	8,777,183
Noncurrent liabilities	323,762	-	323,762
Joint ventures' equity	47,941,339	27,367,213	20,574,126
Northern Technologies International Corporation's share of joint ventures' equity	23,705,714	13,683,608	10,022,106
Northern Technologies International Corporation's share of joint ventures' undistributed earnings	20,493,861	12,075,524	8,418,337

	Fiscal Year Ended August 31, 2023		
	Total	EXCOR	OTHER
Net sales	\$ 100,682,316	\$ 39,642,380	\$ 61,039,936
Gross profit	40,096,561	19,016,389	21,080,172
Net income	8,934,198	5,730,311	3,203,887
Northern Technologies International Corporation's share of equity in income of joint ventures	6,452,719	2,852,229	3,600,490
Northern Technologies International Corporation's dividends received from joint ventures	5,639,198	2,459,500	3,179,698

	As of August 31, 2022		
	Total	EXCOR	OTHER
Current assets	\$ 52,428,831	\$ 26,047,914	\$ 26,380,917
Total assets	55,854,457	27,932,532	27,921,925
Current liabilities	10,981,833	2,943,895	8,037,938
Noncurrent liabilities	1,138,980	-	1,138,980
Joint ventures' equity	43,733,644	24,988,637	18,745,007
Northern Technologies International Corporation's share of joint ventures' equity	21,814,754	12,494,320	9,320,434
Northern Technologies International Corporation's share of joint ventures' undistributed earnings	21,256,923	12,463,415	8,793,508

	Fiscal Year Ended August 31, 2022		
	Total	EXCOR	OTHER
Net sales	\$ 104,077,748	\$ 42,853,162	\$ 61,224,586
Gross profit	41,030,647	20,312,400	20,718,247
Net income	9,302,237	6,487,855	2,814,382
Northern Technologies International Corporation's share of equity in income of joint ventures	4,725,918	3,236,989	1,488,929
Northern Technologies International Corporation's dividends received from joint ventures	5,723,176	4,255,200	1,467,976

In August 2023, Tianjin Zerust (NTI ASEAN's previously written-off joint venture in China) was deregistered and the remaining cash was cleared by the Chinese authorities to be paid out to be shareholders. Subsequent to year end, NTI Asean received a final liquidation of its ownership interest in the former joint venture of \$1,986,027. This one-time equity gain on the liquidation of previously written-off investment in Tianjin Zerust is included in joint venture operations. The final liquidation payment was subject to withholding tax of \$198,603 and minority income of \$676,614 as NTIC owns 60% of NTI ASEAN. The transaction also resulted in legal fees of \$95,890, and a management bonus expense of \$250,000.

7. CORPORATE DEBT

On January 6, 2023, the Company entered into a Credit Agreement (the “Credit Agreement”) with JPMorgan Chase Bank, N.A. (“JPM”), which provides the Company with a senior secured revolving line of credit (the “Credit Facility”) of up to \$10.0 million, which includes a \$5.0 million sublimit for standby letters of credit. Borrowings of \$3,600,000 under the new Credit Agreement were outstanding August 31, 2023. Borrowings of \$5,900,000 were outstanding as of August 31, 2022 under the previous credit agreement.

Unless terminated earlier, the Credit Facility will mature on January 6, 2024, and the principal amount thereunder, together with all accrued unpaid interest and other amounts owing thereunder, if any, will be payable in full on such date. Borrowings under the Credit Agreement bear interest at a floating rate, at the option of the Company, equal to either the CB Floating Rate or the Adjusted SOFR Rate. The term “CB Floating Rate” means the greater of the Prime Rate in the United States or 2.50%. The term “Adjusted SOFR Rate” means the term secured overnight financing rate for either one, three or six months (depending on the interest period selected by the Company) plus 0.10% per annum. With respect to any borrowings using an Adjusted SOFR Rate, there is an applicable margin of 2.15% applied per annum. There is no applicable margin with respect to borrowings using a CB Floating Rate. The weighted average interest rate was 6.27 and 2.74 for fiscal 2023 and 2022, respectively.

To secure the Credit Agreement, the Company assigned JPM a continuing security interest in all of its right, title and interested in collateral made up for the assets of the Company.

The Credit Agreement contains customary affirmative and negative covenants, including, among other matters, limitations on the Company’s ability to incur additional debt, grant liens, engage in certain business operations and transactions, make certain investments, modify its organizational documents or form any new subsidiaries, subject to certain exceptions. Further, the Credit Agreement contains a negative covenant that restricts the ability of the Company to redeem or repurchase its common stock or pay dividends if the result of which would cause an event of default under the Credit Agreement. The Credit Agreement also requires the Company to maintain a Fixed Charge Coverage Ratio of at least 1.25 to 1.00. The term “Fixed Charge Coverage Ratio” means the ratio, computed for the Company on a consolidated basis, of net income plus income tax expense, plus amortization expense, plus depreciation expense, plus interest expense, and plus dividends received from joint ventures, minus unfinanced capital expenditures and equity in income from joint ventures, all computed for the twelve month period then ending, to scheduled principal payments made, plus scheduled finance lease payments made, plus interest expense paid, plus income tax expense paid, and plus cash distributions and dividends paid, all computed for the same twelve month period then ending. The Company was in compliance with all covenants as of August 31, 2023 and 2022.

The Credit Agreement also contains customary events of default, including, without limitation, payment defaults, material inaccuracy of representations and warranties, covenant defaults, bankruptcy and insolvency proceedings, cross-defaults to certain other agreements, breach of any financial covenant and change of control. Upon the occurrence and during the continuance of any event of default, JPM may accelerate the payment of the obligations thereunder and exercise various other customary default remedies.

In connection with the execution of the Credit Agreement described above, on January 6, 2023, the Amended and Restated Loan Agreement dated August 31, 2021 between Northern Technologies International Corporation and PNC Bank, National Association was terminated.

In accordance with ASC Topic No. 470, “Debt – Modifications and Extinguishments” (Topic 470), the transactions noted above were determined to be a modification of the existing debt.

On each of April 10, 2023 and May 30, 2023, the Company’s wholly-owned subsidiary in China, NTIC China, entered into a loan agreement with China Construction Bank Corporation. Each term loan provided NTIC China with a RMB 10,000,000 (USD \$1.45 million). Each of the term loans matures after one year with the principal due at that time, after which an extension of the loan agreement is required. Both term loans have an annual interest rate of 3.25% with interest due monthly. Both term loans are secured by an office building owned by NTIC China and the loan agreements contain certain financial and other covenants. The Company was in compliance with the covenants as of August 31, 2023. The current outstanding balance as of August 31, 2023 for both term loans was USD \$2,757,176.

8. STOCKHOLDERS' EQUITY

During fiscal 2023, NTIC's Board of Directors declared cash dividends on the following dates in the following amounts to holders of record of NTIC common stock as of the following record dates:

Declaration Date	Amount	Record Date	Payable Date
October 20, 2022	\$0.07	November 3, 2022	November 16, 2022
January 20, 2023	\$0.07	February 1, 2023	February 15, 2023
April 21, 2023	\$0.07	May 3, 2023	May 17, 2023
July 17, 2023	\$0.07	August 2, 2023	August 16, 2023

During fiscal 2022, NTIC's Board of Directors declared cash dividends on the following dates in the following amounts to holders of record of NTIC common stock as of the following record dates:

Declaration Date	Amount	Record Date	Payable Date
October 20, 2021	\$0.07	November 3, 2021	November 17, 2021
January 21, 2022	\$0.07	February 2, 2022	February 16, 2022
April 22, 2022	\$0.07	May 4, 2022	May 18, 2022
July 20, 2022	\$0.07	August 3, 2022	August 17, 2022

During fiscal 2023 and fiscal 2022, the Company repurchased no shares of its common stock.

During fiscal 2023, the Company granted stock options under the Northern Technologies International Corporation 2019 Stock Incentive Plan (as amended, the 2019 Plan) to purchase an aggregate of 277,613 shares of its common stock to various employees and directors. The weighted average per share exercise price of the stock options is \$11.41. The exercise price of the stock options is equal to the fair market value of the Company's common stock on the date of grant. During fiscal 2023, stock options to purchase an aggregate of 265,209 shares of common stock were exercised at a weighted average exercise price of \$6.46 per share, resulting in the net issuance of 184,432 shares of common stock since some of the options were exercised on a net cashless exercise basis.

During fiscal 2022, the Company granted stock options under the Northern Technologies International Corporation 2019 Stock Incentive Plan (as amended, the 2019 Plan) to purchase an aggregate of 174,840 shares of its common stock to various employees and directors. The weighted average per share exercise price of the stock options is \$16.97. The exercise price of the stock options is equal to the fair market value of the Company's common stock on the date of grant. During fiscal 2022, stock options to purchase an aggregate of 51,218 shares of common stock were exercised at a weighted average exercise price of \$6.60 per share, resulting in the net issuance of 42,071 shares of common stock since some of the options were exercised on a net cashless exercise basis.

The Company issued 3,620 and 2,636 shares of common stock on September 1, 2022 and 2021, respectively, under the Northern Technologies International Corporation Employee Stock Purchase Plan (ESPP). The Company issued 3,566 and 2,966 shares of common stock on March 1, 2023 and 2022, respectively, under the ESPP. The ESPP is compensatory for financial reporting purposes. As of August 31, 2023, 62,035 shares of common stock remained available for sale under the ESPP.

9. NET INCOME PER COMMON SHARE

Basic net income per common share is computed by dividing net income by the weighted average number of common shares outstanding. Diluted net income per share assumes the exercise of stock options using the treasury stock method, if dilutive.

The following is a reconciliation of the net income per share computation for fiscal 2023 and fiscal 2022:

Numerator:	August 31, 2023	August 31, 2022
Net income attributable to NTIC	\$ 2,912,276	\$ 6,324,700
Denominator:		
Basic-weighted shares outstanding	9,359,504	9,216,216
Weighted shares assumed upon exercise of stock options	333,978	418,812
Diluted – weighted shares outstanding	9,693,482	9,635,028
Basic net income per share:	\$ 0.31	\$ 0.69
Diluted net income per share:	\$ 0.30	\$ 0.66

The dilutive impact summarized above relates to the periods when the average market price of the Company's common stock exceeded the exercise price of the potentially dilutive option securities granted. Net income per common share was based on the weighted average number of common shares outstanding during the periods when computing the basic net income per share. When dilutive, stock options are included as equivalents using the treasury stock market method when computing the diluted net income per share. Excluded from the computation of diluted net income per share as of August 31, 2023 were options outstanding to purchase 322,246 shares of common stock. Excluded from the computation of diluted net income per share as of August 31, 2022 were options outstanding to purchase 600,094 shares of common stock.

10. STOCK-BASED COMPENSATION

The Company has three stock-based compensation plans under which stock options or other stock-based awards have been granted: the Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan, the Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan (the 2007 Plan) and the Northern Technologies International Corporation Employee Stock Purchase Plan. The 2019 Plan replaced the 2007 Plan with respect to future grants; and, therefore, no further awards may be made under the 2007 Plan. The Compensation Committee of the Board of Directors and the Board of Directors administer these plans.

The 2019 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, stock unit awards, performance awards, and stock bonuses to eligible recipients to enable the Company and its subsidiaries to attract and retain qualified individuals through opportunities for equity participation in the Company and to reward those individuals who contribute to the achievement of the Company's economic objectives. On January 15, 2021, the Company's stockholders approved certain amendments to the 2019 Plan, including an increase in the number of shares of common stock available for issuance under the plan by an additional 800,000 shares. Subject to adjustment as provided in the 2019 Plan, up to a maximum of 1,600,000 shares of the Company's common stock are issuable under the 2019 Plan. Options granted generally have a term of ten years and become exercisable over a one- or three- year period beginning on the one-year anniversary of the date of grant. Options are granted at per share exercise prices equal to the market value of the Company's common stock on the date of grant. The Company issues new shares upon the exercise of options. As of August 31, 2023, options to purchase an aggregate of 1,117,570 shares of the Company's common stock were outstanding under the 2019 Plan and 426,904 shares of the Company's common stock remain available for grant under the 2019 Plan. As of August 31, 2023, options to purchase an aggregate of 439,560 shares of the Company's common stock were outstanding under the 2007 Plan.

The Company granted options to purchase an aggregate of 277,613 and 174,840 shares of its common stock during fiscal 2023 and 2022, respectively. The fair value of option grants is determined at the date of grant using the Black-Scholes option pricing model with the assumptions listed below. The Company recognized compensation expense of \$1,337,734 during fiscal 2023 and compensation expense of \$931,532 during fiscal 2022 related to the options that vested during such time period. As of August 31, 2023, the total compensation cost for non-vested options not yet recognized in the Company's consolidated statements of operations was \$1,019,291. Stock-based compensation expense of \$682,724 is expected during fiscal 2024 and \$336,567 is expected to be recognized during fiscal 2025, based on outstanding options as of August 31, 2023. Future option grants will impact the compensation expense recognized. Stock-based compensation expense is included in general and administrative expense on the consolidated statements of operations.

The fair value of each option grant is estimated on the grant date using the Black-Scholes option pricing model with the following assumptions and results for the grants:

	Fiscal Year 2023	Fiscal Year 2022
Dividend yield	2.44%	1.65%
Expected volatility	45.2%	45.4%
Expected life of option (years)	10	10
Weighted average risk-free interest rate	3.31%	0.77%

Stock option activity during the periods indicated was as follows:

	Number of Shares (#)	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding at August 31, 2021	1,426,651	\$ 9.30	
Options granted	174,840	16.97	
Options exercised	(51,218)	6.60	
Options terminated	(5,546)	18.23	
Outstanding at August 31, 2022	1,544,727	\$ 10.23	
Options granted	277,613	11.41	
Options exercised	(265,209)	6.46	
Options terminated	-	-	
Outstanding at August 31, 2023	<u>1,557,130</u>	<u>\$ 11.08</u>	\$ 4,240,525
Exercisable at August 31, 2023	<u>1,079,897</u>	<u>\$ 10.77</u>	\$ 3,329,061

The weighted average per share fair value of options granted during fiscal 2023 and fiscal 2022 was \$11.41 and \$16.97, respectively. The weighted average remaining contractual life of the options outstanding as of August 31, 2023 and 2022 was 6.25 years and 5.76 years, respectively.

11. SEGMENT AND GEOGRAPHIC INFORMATION

Segment Information

The Company's chief operating decision maker is its Chief Executive Officer. The Company's business is organized into two reportable segments: ZERUST® and Natur-Tec®. The Company has been selling its proprietary ZERUST® rust and corrosion inhibiting products and services to the automotive, electronics, electrical, mechanical, military, and retail consumer markets for almost 50 years and, more recently, has also expanded into the oil and gas industry. The Company also sells a portfolio of proprietary bio-based and compostable (fully biodegradable) polymer resins and finished products under the Natur-Tec® brand.

The following tables present the Company's business segment information:

	Fiscal 2023	Fiscal 2022
ZERUST® net sales	\$ 61,728,364	\$ 57,459,382
Natur-Tec® net sales	18,174,588	16,699,508
Total net sales	<u>\$ 79,902,952</u>	<u>\$ 74,158,890</u>

The following table sets forth the Company's cost of goods sold by segment:

	Fiscal 2023	Fiscal 2022
Direct cost of goods sold		
ZERUST®	\$ 35,297,352	\$ 34,673,146
Natur-Tec®	13,645,992	12,859,343
Indirect cost of goods sold	3,155,777	3,557,809
Total net cost of goods sold	<u>\$ 52,099,121</u>	<u>\$ 51,090,298</u>

The Company utilizes product net sales and direct and indirect cost of goods sold for each product in reviewing the financial performance of a product type. Further allocation of Company expenses or assets, aside from amounts presented in the tables above, is not utilized in evaluating product performance, nor does such allocation occur for internal financial reporting.

Sales to the Company's joint ventures are included in the foregoing geographic and segment information, however, sales by the Company's joint ventures to other parties are not included. The foregoing geographic and segment information represents only sales and cost of goods sold recognized directly by the Company.

All joint venture operations, including equity in income, fees for services, and related dividends, are related to ZERUST® products and services.

Geographic Information

Net sales by geographic location for fiscal 2023 and fiscal 2022 were as follows:

	Fiscal Year Ended August 31,	
	2023	2022
Inside the U.S.A. to unaffiliated customers	\$ 28,554,354	\$ 25,301,067
Outside the U.S.A. to:		
Joint ventures in which the Company is a shareholder directly and indirectly	3,401,910	2,968,089
Unaffiliated customers	47,946,688	45,889,734
	<u>\$ 79,902,952</u>	<u>\$ 74,158,890</u>

Net sales by geographic location are based on the location of the customer.

Fees for services provided to joint ventures by geographic location as a percentage of total fees for services provided to joint ventures during fiscal 2023 and fiscal 2022, respectively, were as follows:

	% of Total Fees for Services Provided to Joint Ventures		% of Total Fees for Services Provided to Joint Ventures	
	Fiscal 2023	Fiscal 2022	Fiscal 2023	Fiscal 2022
Germany	\$ 816,089	15.7%	\$ 834,725	14.5%
Poland	810,977	15.6%	730,523	12.7%
Japan	658,934	12.7%	669,371	11.6%
Sweden	498,463	9.6%	447,441	7.8%
France	479,515	9.2%	448,579	7.8%
Finland	388,627	7.5%	340,783	5.9%
Czech Republic	365,018	7.0%	300,257	5.2%
Thailand	340,657	6.6%	344,649	6.0%
United Kingdom	283,418	5.5%	342,488	5.9%
South Korea	266,562	5.1%	270,309	4.7%
Indonesia	130,081	2.5%	156,476	2.7%
Other	150,844	3.0%	882,081	15.2%
	<u>\$ 5,189,185</u>	<u>100.0%</u>	<u>\$ 5,767,682</u>	<u>100.0%</u>

Sales to the Company's joint ventures are included in the foregoing segment and geographic information; however, sales by the Company's joint ventures to other parties are not included. The foregoing segment and geographic information represents only sales recognized directly by the Company and sold in that geographic territory.

See Note 6 for additional details on geographical information regarding equity in income from joint ventures.

The geographical distribution of total property and equipment and net sales is as follows:

	At August 31, 2023	At August 31, 2022
China	\$ 5,729,080	\$ 5,826,898
Other	745,469	565,022
United States	7,590,805	5,778,573
Total property and equipment	<u>\$ 14,065,354</u>	<u>\$ 12,170,493</u>
	Fiscal Year Ended August 31, 2023	Fiscal Year Ended August 31, 2022
China	\$ 13,469,075	\$ 15,754,051
Brazil	5,969,314	5,160,572
India	19,916,834	18,555,603
Other	11,993,375	9,387,597
United States	28,554,354	25,301,067
Total net sales	<u>\$ 79,902,952</u>	<u>\$ 74,158,890</u>

Long-lived assets consist of property and equipment. These assets are periodically reviewed to assure the net realizable value from the estimated future production based on forecasted sales exceeds the carrying value of the assets.

Sales to the Company's joint ventures are included in the foregoing segment and geographic information; however, sales by the Company's joint ventures to other parties are not included. The foregoing segment and geographic information represents only sales recognized directly by the Company and sold in that geographic territory.

All joint venture operations, including equity in income, fees for services and related dividends, are primarily related to ZERUST® products and services.

12. EMPLOYEE RETENTION CREDIT

The Company engaged tax advisors of a Big 4 accounting firm which determined the Company qualified for Employee Retention Credits. The Company qualified for Employee Retention Credits on qualified wages paid in the first and second quarters of 2021 and filed for credits in the second and third quarters of fiscal 2023, respectively. The Company recognizes government grants for which there is a reasonable assurance of compliance with grant conditions and receipt of credits. In 2023, the Company filed for \$1,139,756 in Employee Retention Credits, but did not recognize the credits on the Company's financial statements as there was not reasonable assurances that the Company would receive the credits.

13. RETIREMENT PLAN

The Company has a 401(k) employee savings plan. Employees who meet certain age and service requirements may elect to contribute up to 15% of their salaries. The Company typically contributes the lesser of 50% of the participant's contributions or 3.5% of the employee's salary. The Company recognized expense for the savings plan of \$289,235 and \$272,257 for fiscal 2023 and fiscal 2022, respectively.

14. RELATED PARTY TRANSACTIONS

During both fiscal 2023 and fiscal 2022, the Company made consulting payments of \$144,000 to Bioplastic Polymers LLC, an entity owned by Ramani Narayan, Ph.D., a director of the Company. Dr. Narayan provides certain consulting services to the Company relating to the Natur-Tec® business and bioplastics program.

15. INCOME TAXES

The provision for income taxes for the fiscal years ended August 31, 2023 and 2022 was approximately as follows:

	Fiscal Year Ended August 31,	
	2023	2022
Current:		
Federal	\$ —	\$ —
State	26,000	98,000
Foreign	1,857,000	1,894,000
	<u>1,883,000</u>	<u>1,992,000</u>
Deferred:		
Federal	—	—
State	—	—
Foreign	(533,400)	(118,164)
	<u>(533,400)</u>	<u>(118,164)</u>
	<u>\$ 1,349,600</u>	<u>\$ 1,873,836</u>

Reconciliations of the expected federal income tax at the statutory rate of 21.0% with the provisions for income taxes for the fiscal years ended August 31, 2023 and 2022 were approximately as follows:

	Fiscal Year Ended August 31,	
	2023	2022
Tax computed at statutory rates	\$ 1,352,000	\$ 1,780,000
State income tax, net of federal benefit	(20,000)	34,000
Tax effect on equity in income of international joint ventures	(1,354,000)	(988,000)
Tax effect of foreign operations	1,005,000	1,004,000
Deemed repatriation	—	10,000
Foreign tax credit	783,000	—
Research and development credit	(710,000)	(244,000)
Valuation allowance	354,000	133,000
Stock based compensation	31,000	67,000
Non-controlling interest	(59,000)	(72,000)
Prior year true-up	(51,000)	—
Other	18,600	149,836
	<u>\$ 1,349,600</u>	<u>\$ 1,873,836</u>

The Company has not provided U.S. income taxes or foreign withholding taxes with respect to its portion of the cumulative undistributed earnings of certain foreign subsidiaries and joint ventures that are essentially permanent in duration. As a result of the 2017 tax law changes, U.S. federal income taxes on dividends received from the Company's foreign subsidiaries and joint ventures after December 31, 2017 have been generally eliminated. However, the Company continues to be subject to foreign withholding taxes upon repatriation of any undistributed earnings that are not essentially permanent in duration. The Company recorded a tax expense of approximately \$51,600 and \$8,000 during fiscal 2023 and fiscal 2022, respectively, representing changes in the deferred tax liability for foreign withholding taxes to be paid with respect to the portion of the cumulative undistributed earnings of foreign subsidiaries and joint ventures that the Company determined were not essentially permanent in duration.

The Company measures deferred tax assets and liabilities using enacted tax rates that will apply in the years in which the temporary differences are expected to be recovered or paid. The tax effect of the temporary differences and tax carryforwards comprising the net deferred taxes shown on the consolidated balance sheets as of August 31, 2023 and 2022 was approximately as follows:

	August 31,	
	2023	2022
Stock-based compensation	\$ 556,700	\$ 547,200
Foreign tax credit carryforward	4,036,000	4,892,100
Capitalized research and experimentation	1,106,000	—
Other credit and loss carryforward	6,034,000	5,455,500
Other	1,048,800	1,095,300
Total deferred tax assets	12,781,500	11,990,100
Valuation allowance	(11,933,700)	(11,592,900)
Total deferred tax assets after valuation allowance	847,800	397,200
Right-of-use asset	(66,200)	(98,300)
Intangible assets	(1,670,700)	(1,777,200)
Unremitted foreign earnings	(214,800)	(163,200)
Other	(201,215)	(58,500)
Total deferred tax liabilities	(2,152,915)	(2,097,200)
Net deferred tax liabilities	\$ (1,305,115)	\$ (1,700,000)

As of August 31, 2023, the Company has foreign tax credit carryforwards of \$4,036,000. This amount begins to expire to the extent not utilized by August 31, 2024. In addition, the Company had federal and state tax credit carryforwards of \$4,503,600 as of August 31, 2023, which begin to expire in fiscal 2024. These federal and state tax credit carryforwards consist primarily of federal and Minnesota research and development credit carryforwards. The Company also has a deferred tax asset of \$748,000 for federal net operating loss carryforwards and \$290,000 for state net operating loss carryforwards as of August 31, 2023. The federal net operating loss carryforward has an indefinite carryforward period. The state net operating loss carryforward will begin to expire to the extent not utilized by August 31, 2024. The Company has a deferred tax asset of \$492,500 for foreign net operating loss carryforwards, which will begin to expire to the extent not utilized by August 31, 2023.

The Company records a tax valuation allowance to reduce deferred tax assets to the amount expected to be realized when it is more likely than not that some portion or all of its deferred tax assets will not be realized.

The Company determined based on all available evidence, including historical data and projections of future results, that it is more likely than not that its domestic deferred tax assets will not be realized due to the absence of objectively verifiable sources of taxable income. On the basis of this evaluation, the Company has recorded a valuation allowance of \$11,933,700 and \$11,592,900 as of August 31, 2023 and 2022, respectively, to recognize only the portion of the deferred tax assets that is more likely than not to be realized. The net deferred tax asset as of August 31, 2023 and 2022 relates entirely to non-US deferred tax assets which are expected to be realized offset by deferred tax liability for withholding tax on cumulative undistributed earnings in foreign subsidiaries and joint ventures that the Company determined were not essentially permanent. The change in the valuation allowance totaled an increase of \$340,800 and \$145,400 for the years ended August 31, 2023 and 2022, respectively.

The following is a tabular reconciliation of the total amounts of approximated unrecognized tax benefits:

	Fiscal Year Ended August 31,	
	2023	2022
Gross unrecognized tax benefits – beginning balance	\$ 319,000	\$ 297,600
Gross increases – prior period tax positions	100	3,400
Gross increases – current period tax positions	42,100	18,000
Gross unrecognized tax benefits – ending balance	\$ 361,200	\$ 319,000

The entire amount of unrecognized tax benefits would affect the effective tax rate if recognized. It is not expected that the amount of unrecognized tax benefits will change significantly in the next 12 months.

The Company recognizes interest related to unrecognized tax benefits and penalties as income tax expense. Accrued interest and penalties are included within the related tax liability line in the consolidated balance sheet. There was no liability for the payment of interest and penalties as of both August 31, 2023 and August 31, 2022.

On August 16, 2022, the Inflation Reduction Act (“IRA”) was signed into law in the United States. Among other provisions, the IRA includes a 15% corporate minimum tax rate applied to certain large corporations and a 1% excise tax on corporate stock repurchases made after December 31, 2022. The IRA has not had a material impact on our consolidated financial statements.

The Company is subject to taxation in the United States and various states and foreign jurisdictions. With few exceptions, as of August 31, 2023, the Company is no longer subject to federal, state, local, or foreign examinations by tax authorities for years prior to August 31, 2020.

16. COMMITMENTS AND CONTINGENCIES

Operating Leases

The Company currently has operating leases for various buildings, equipment and vehicles. These leases are under non-cancelable operating lease agreements with expiration dates between September 30, 2022 and May 31, 2028. The Company has the option to extend certain leases to five or ten-year term(s) and has the right of first refusal on any sale.

The Company records lease liabilities within current liabilities or long-term liabilities based upon the length of time associated with the lease payments. The Company records its long-term operating leases as right-of-use assets. Upon initial adoption, using the modified retrospective transition approach, no leases with terms less than 12 months have been capitalized to the consolidated balance sheet consistent with ASC 842. Instead, these leases are recognized in the consolidated statement of operations on a straight-line expense throughout the lives of the leases. None of the Company’s leases contain common area maintenance or security agreements.

The Company has made certain assumptions and judgments when applying ASC 842, the most significant of which is that the Company elected the package of practical expedients available for transition that allow the Company to not reassess whether expired or existing contracts contain leases under the new definition of a lease, lease classification for expired or existing leases and whether previously capitalized initial direct costs would qualify for capitalization under ASC 842. Additionally, the Company did not elect to use hindsight when considering judgments and estimates such as assessments of lessee options to extend or terminate a lease or purchase the underlying asset. The Company has no contingent rent agreements.

Present Value of Leases

	<u>August 31, 2023</u>	<u>August 31, 2022</u>
Right-of-use assets, net	\$ 428,874	\$ 557,571
Current portion of lease liability	340,799	373,330
Lease liability, less current portion	88,075	184,241
Total lease liability	<u>\$ 428,874</u>	<u>\$ 557,571</u>

As of August 31, 2023, the weighted-average remaining lease term was 1.21 years. The Company’s lease agreements do not provide a readily determinable implicit rate nor is it available to the Company from its lessors. Instead, as of August 31, 2023, the Company estimates the weighted-average discount rate for its operating leases to be 7.6% to present value based on the incremental borrowing rate.

Future minimum payments as of August 31, 2023 under these long-term operating leases are as follows (in thousands):

Fiscal 2024	\$ 340,799
Fiscal 2025	93,568
Fiscal 2026	11,166
Thereafter	9,639
Total future minimum lease payments	455,172
Less amount representing interest	(26,298)
Present value of obligations under operating leases	428,874
Less current portion	(340,799)
Long-term operating lease obligations	<u>\$ 88,075</u>

Operating lease cost under these leases was approximately \$373,330 and \$272,336 as of August 31, 2023 and 2022, respectively.

Annual Bonus Plan

On August 28, 2023, the Compensation Committee of the Board of Directors of the Company approved the material terms of an annual bonus plan for the Company's executive officers as well as certain officers and employees for the fiscal year ending August 31, 2024. For fiscal 2024, as in past years, the total amount available under the bonus plan for all plan participants, including executive officers, is dependent upon the Company's earnings before interest, taxes, and other income (EBITOI), as adjusted to take into account amounts to be paid under the bonus plan and certain other adjustments (Adjusted EBITOI). Each plan participant's percentage of the overall bonus pool is based upon the number of plan participants, the individual's annual base salary, and the individual's position and level of responsibility within the Company. In the case of each of the Company's executive officer participants, 75% of the amount of their individual bonus payout will be determined based upon the Company's actual EBITOI for fiscal 2024 compared to a pre-established target EBITOI for fiscal 2024, and 25% of the payout will be determined based upon such executive officer's achievement of certain pre-established individual performance objectives. The payment of bonuses under the plan is discretionary, and bonuses may be paid to executive officer participants in both cash and shares of the Company's common stock, the exact amount and percentages of which are determined by the Company's Board of Directors, upon recommendation of the Compensation Committee, after the completion of the Company's consolidated financial statements for fiscal 2024.

On August 26, 2022, the Compensation Committee of the Board of Directors of the Company approved the material terms of an annual bonus plan for the Company's executive officers as well as certain officers and employees for the fiscal year ending August 31, 2023. \$2,000,000 was recognized for bonuses for the fiscal year ended August 31, 2023, \$800,000 of the bonus is comprised of stock options granted to management on September 1, 2022 that will be expensed over three years and \$1,200,000 will be paid out in cash and profit sharing subsequent to year end. This is compared to \$1,733,336 recognized for bonuses for the fiscal year ended August 31, 2022, \$533,336 of the bonus comprised of stock options granted to management on September 1, 2021 and \$1,200,000 was paid out in cash and profit sharing subsequent to year end.

Concentrations

Two joint ventures (consisting of the Company's joint ventures in United States and South Korea) accounted for 40.1% of the Company's trade joint venture receivables as of August 31, 2023, and two joint ventures (consisting of the Company's joint ventures in South Korea and Thailand) accounted for 46.6% of the Company's trade joint venture receivables as of August 31, 2022.

Legal Matters

From time to time, the Company is subject to various other claims and legal actions in the ordinary course of its business. The Company records a liability in its consolidated financial statements for costs related to claims, including future legal costs, settlements and judgments, where the Company has assessed that a loss is probable and an amount could be reasonably estimated. If the reasonable estimate of a probable loss is a range, the Company records the most probable estimate of the loss or the minimum amount when no amount within the range is a better estimate than any other amount. The Company discloses a contingent liability even if the liability is not probable or the amount is not estimable, or both, if there is a reasonable possibility that material loss may have been incurred. In the opinion of management, as of August 31, 2023, the amount of liability, if any, with respect to these matters, individually or in the aggregate, will not materially affect the Company's consolidated results of operations, financial position, or cash flows.

17. SUPPLEMENTAL CASH FLOW INFORMATION

Supplemental disclosures of cash flow information consisted of:

	Fiscal Year Ended August 31,	
	2023	2022
Cash paid for income tax	\$ 1,064,894	\$ 1,218,467
Cash paid for interest	461,805	89,096
Cash paid for operating leases	373,330	272,336

18. FAIR VALUE MEASUREMENTS

Assets and liabilities that are measured at fair value on a recurring basis primarily relate to marketable equity securities. These items are marked-to-market at each reporting period, and the Company estimates that market value approximates costs.

The following tables provide information by level for assets and liabilities that are measured at fair value on a recurring basis:

	Fair value as of August 31, 2022	Fair Value Measurements Using Inputs Considered as		
		Level 1	Level 2	Level 3
Available for sale securities	\$ 5,590	\$ 5,590	\$ —	\$ —

There were no transfers between Level 1, Level 2, or Level 3 during the fiscal year ended August 31, 2023 or 2022.

19. SUBSEQUENT EVENTS

On October 18, 2023, the Company's Board of Directors declared a cash dividend of \$0.07 per share of the Company's common stock, payable on November 15, 2023 to stockholders of record on November 1, 2023. The declaration of future dividends is not guaranteed and will be determined by the Company's Board of Directors in light of conditions then existing, including the Company's earnings, financial condition, cash requirements, restrictions in financing agreements, business conditions, and other factors, including without limitation the effect of COVID-19 on its business, operating results, and financial condition.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

NTIC maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) that are designed to provide reasonable assurance that information required to be disclosed by NTIC in the reports it files or submits under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to NTIC's management, including NTIC's principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. NTIC's management evaluated, with the participation of its Chief Executive Officer and its Chief Financial Officer, the effectiveness of the design and operation of NTIC's disclosure controls and procedures as of the end of the period covered in this report. Based on that evaluation, and because of a material weakness in NTIC's control over the financial reporting as described below, NTIC's Chief Executive Officer and Chief Financial Officer concluded that NTIC's disclosure controls and procedures were not effective as of the end of such period to provide reasonable assurance that information required to be disclosed in the reports that NTIC files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to NTIC's management, including NTIC's Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

NTIC's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f), for Northern Technologies International Corporation and its subsidiaries. This system is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

NTIC's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements, and even when determined to be effective, can only provide reasonable assurance with respect to financial statement preparation and presentation. In addition, projection of any evaluation of the effectiveness of internal control over financial reporting to future periods is subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Management, with the participation of NTIC's President and Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of NTIC's internal control over financial reporting as of August 31, 2023. In making this evaluation, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control – Integrated Framework (2013). Based on this assessment, and because of the material weakness in NTIC's control over the financial reporting as described below, management concluded that the Company's internal control over financial reporting was not effective as of August 31, 2023.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) was signed into law providing numerous tax provisions and other stimulus measures, including an employee retention credit, which is a refundable tax credit against certain employment taxes. The Taxpayer Certainty and Disaster Tax Relief Act of 2020 and the American Rescue Plan Act of 2021 extended and expanded the availability of the employee retention credit. NTIC engaged tax advisors of a Big 4 accounting firm which determined NTIC qualified for ERCs. NTIC qualified for employee retention credits on qualified wages paid in the first and second quarters of 2021 and filed for and recognized income from the employee retention credits in the second and third quarters of fiscal 2023. In connection with the preparation of its consolidated financial statements for the fiscal year ended August 31, 2023 included in this report, NTIC concluded that it should have accounted for the employee retention credits as government grants in accordance with International Accounting Standard (IAS) 20, Accounting for Government Grants and Disclosure of Government Assistance (“IAS 20”) since U.S. Generally Accepted Accounting Principles (“U.S. GAAP”) do not provide for the accounting of government grants. Pursuant to IAS 20, NTIC cannot recognize any income from the grant until it is “reasonably assured” that the grant conditions will be met and that the grant will be received, at which time grant income is recorded on a systematic basis over the periods in which NTIC recognizes the payroll expenses for which the grant is intended to compensate. In connection with the preparation of its consolidated financial statements for the fiscal year ended August 31, 2023 included in this report, NTIC determined that it was not yet reasonably assured that the grant conditions will be met, requiring the restatement of its previously issued consolidated financial statements for the three and six months ended February 28, 2023 and three and nine months ended May 31, 2023. This control deficiency resulted in the restatement of NTIC’s consolidated financial statements for the three and six months ended February 28, 2023 and the three and nine months ended May 31, 2023. Accordingly, management determined that this control deficiency constitutes a material weakness in NTIC’s internal control over financial reporting.

NTIC’s management is taking steps to remediate the material weakness in its internal control over financial reporting relating to the proper accounting treatment of the employee retention credits. These steps will include the preparation of a technical accounting memorandum for any material unusual transactions including careful evaluation of any probability assessments or other areas of judgement involved, such as the employee retention credits, to determine the correct accounting treatment for such transactions. Management believes the additional control procedures designed, and when implemented, will fully remediate the material weakness.

This report does not include an attestation report of NTIC’s independent registered public accounting firm regarding internal control over financial reporting. Management’s report was not subject to attestation by NTIC’s independent registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit NTIC to provide only management’s report in this report.

Changes in Internal Control over Financial Reporting

There was no change in NTIC’s internal control over financial reporting that occurred during the quarter ended August 31, 2023 that has materially affected or is reasonably likely to materially affect NTIC’s internal control over financial reporting.

Item 9B. OTHER INFORMATION

Not applicable.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors

The information in the “Proposal One – Election of Directors” section of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

Executive Officers

Information concerning NTIC’s executive officers and officers is included in this annual report on Form 10-K under Part I under the heading “Executive Officers of the Registrant.”

Code of Ethics

NTIC has adopted a code of ethics that applies to its principal executive officer, principal financial officer, principal accounting officer, or controller or persons performing similar functions, as well as other employees and NTIC’s directors and meets the requirements of the SEC and the Nasdaq Global Market. A copy of NTIC’s Code of Ethics is filed as an exhibit to this report. NTIC intends to satisfy the disclosure requirements of Item 5.05 of Form 8-K regarding amendments to or waivers from any provision of its code of ethics by posting such information on its corporate website at www.ntic.com.

Changes to Nomination Procedures

During the fourth quarter of fiscal 2023, there were no material changes to the procedures by which stockholders may recommend nominees to NTIC’s Board of Directors, as described in NTIC’s most recent proxy statement.

Audit Committee Matters

The information in the “Corporate Governance—Audit Committee” section of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

Item 11. EXECUTIVE COMPENSATION

The information in the “Director Compensation” and “Executive Compensation” sections of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTER

Stock Ownership

The information in the “Stock Ownership—Beneficial Ownership of Significant Stockholders and Management” section of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

Securities Authorized for Issuance under Equity Compensation Plans

The following table summarizes outstanding options and other awards under NTIC's equity compensation plans as of August 31, 2023. NTIC's equity compensation plans as of August 31, 2023 were the Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan, the Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan, and the Northern Technologies International Corporation Employee Stock Purchase Plan. Except for automatic annual grants of \$50,000 in options to purchase shares of NTIC common stock to NTIC's directors in consideration for their services as directors of NTIC and an automatic annual grant of \$10,000 in options to purchase shares of NTIC common stock to NTIC's Chair of the Board in consideration for his services as Chair, in each case on the first day of each fiscal year, and automatic initial pro rata grants of \$50,000 in options to purchase shares of NTIC common stock to NTIC's new directors in consideration for their services as directors of NTIC on the first date of their appointment as directors, options and other awards granted in the future under the Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan are within the discretion of the Board of Directors and the Compensation Committee of the Board of Directors and, therefore, cannot be ascertained at this time. No future grants of options or other stock awards will be made under the Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	(1) 1,557,130(2)	\$ 11.08	488,939(3)
Equity compensation plans not approved by security holders	—	—	—
Total	(1) 1,557,130(2)	\$ 11.08	488,939(3)

- (1) Amount includes 439,560 shares of NTIC common stock issuable upon the exercise of stock options outstanding as of August 31, 2023 under the Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan and 1,117,570 shares of NTIC common stock issuable upon the exercise of stock options outstanding as of August 31, 2023 under the Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan.
- (2) Excludes employee stock purchase rights accruing under the Northern Technologies International Corporation Employee Stock Purchase Plan. Under such plan, each eligible employee may purchase up to 2,000 shares of NTIC common stock at semi-annual intervals on February 28th or 29th (as the case may be) and August 31st each year at a purchase price per share equal to 90% of the lower of (i) the closing sales price per share of NTIC common stock on the first day of the offering period or (ii) the closing sales price per share of NTIC common stock on the last day of the offering period.
- (3) Amount includes 426,904 shares available as of August 31, 2023 for future issuance under Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan and 62,035 shares available at August 31, 2023 for future issuance under the Northern Technologies International Corporation Employee Stock Purchase Plan.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information in the “Related Person Relationships and Transactions” and “Corporate Governance—Director Independence” sections of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information in the “Proposal Three—Ratification of Selection of Independent Registered Public Accounting Firm—Audit, Audit-Related, Tax and Other Fees” and “Proposal Three—Ratification of Selection of Independent Registered Public Accounting Firm—Audit Committee Pre-Approval Policies and Procedures” sections of NTIC’s definitive proxy statement to be filed with the Securities and Exchange Commission with respect to NTIC’s next annual meeting of stockholders, which involves the election of directors, is incorporated in this annual report on Form 10-K by reference.

PART IV

Item 15. EXHIBIT AND FINANCIAL STATEMENT SCHEDULES

Financial Statements

NTIC's consolidated financial statements are included in Item 8 of Part III of this report.

Financial Statement Schedules

All financial statement schedules are omitted because they are inapplicable since NTIC is a smaller reporting company.

Exhibits

The exhibits being filed or furnished with this report are listed below. Each management contract or compensatory plan or arrangement required to be filed as an exhibit to this report is asterisked below.

A copy of any exhibits listed or referred to herein will be furnished at a reasonable cost to any person who is a stockholder upon receipt from any such person of a written request for any such exhibit. Such request should be sent to: Mr. Matthew Wolsfeld, Corporate Secretary, Northern Technologies International Corporation, 4201 Woodland Road, P.O. Box 69, Circle Pines, Minnesota 55014 Attn: Stockholder Information.

<u>Item No.</u>	<u>Item</u>	<u>Method of Filing</u>
3.1	Restated Certificate of Incorporation of Northern Technologies International Corporation	Incorporated by reference to Exhibit 3.1 to NTIC's Quarterly Report on Form 10-Q for the fiscal quarter ended February 28, 2023 (File No. 001-11038)
3.2	Second Amended and Restated Bylaws of Northern Technologies International Corporation	Incorporated by reference to Exhibit 3.1 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on November 21, 2022 (File No. 001-11038)
4.1	Specimen Stock Certificate Representing Common Stock of Northern Technologies International Corporation	Incorporated by reference to Exhibit 4.1 to NTIC's Registration Statement on Form 10 (File No. 001-19331) (Filed on paper - hyperlink is not required pursuant to Rule 105 of Regulation S-T)
4.2	Description of Common Stock of Northern Technologies International Corporation	Filed herewith
10.1	Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan*	Incorporated by reference to Exhibit 10.1 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 15, 2021 (File No. 001-11038)
10.2	Form of Incentive Stock Option Agreement for Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan*	Incorporated by reference to Exhibit 10.2 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 25, 2019 (File No. 001-11038)

10.3	Form of Non-Statutory Stock Option Agreement for Northern Technologies International Corporation Amended and Restated 2019 Stock Incentive Plan*	<u>Incorporated by reference to Exhibit 10.3 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 25, 2019 (File No. 001-11038)</u>
10.4	Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan*	<u>Incorporated by reference to Exhibit 10.1 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 24, 2011 (File No. 001-11038)</u>
10.5	Form of Incentive Stock Option Agreement for Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan*	<u>Incorporated by reference to Exhibit 10.2 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 24, 2011 (File No. 001-11038)</u>
10.6	Form of Non-Statutory Stock Option Agreement for Northern Technologies International Corporation Amended and Restated 2007 Stock Incentive Plan*	<u>Incorporated by reference to Exhibit 10.3 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 24, 2011 (File No. 001-11038)</u>
10.7	Northern Technologies International Corporation Employee Stock Purchase Plan*	<u>Incorporated by reference to Exhibit 10.11 to NTIC's Annual Report on Form 10-KSB for the fiscal year ended August 31, 2006 (File No. 001-11038)</u>
10.8	Material Terms of Northern Technologies International Corporation Annual Bonus Plan*	<u>Incorporated by reference to Exhibit 10.6 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2015 (File No. 001-11038)</u>
10.9	Form of Indemnification Agreement between Northern Technologies International Corporation and its Directors and Officers*	<u>Incorporated by reference to Exhibit 10.1 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on October 23, 2019 (File No. 001-11038)</u>
10.10	Executive Employment Agreement dated as of November 18, 2011 between Northern Technologies International Corporation and G. Patrick Lynch*	<u>Incorporated by reference to Exhibit 10.13 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2011 (File No. 001-11038)</u>
10.11	Confidential Information, Inventions Assignment, Noncompetition and Non-Solicitation Agreement dated as of November 18, 2011 between Northern Technologies International Corporation and G. Patrick Lynch*	<u>Incorporated by reference to Exhibit 10.14 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2011 (File No. 001-11038)</u>
10.12	Executive Employment Agreement dated as of November 18, 2011 between Northern Technologies International Corporation and Matthew C. Wolsfeld*	<u>Incorporated by reference to Exhibit 10.15 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2011 (File No. 001-11038)</u>

10.13	Confidential Information, Inventions Assignment, Noncompetition and Non-Solicitation Agreement dated as of November 18, 2011 between Northern Technologies International Corporation and Matthew C. Wolsfeld*	<u>Incorporated by reference to Exhibit 10.16 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2011 (File No. 001-11038)</u>
10.14	Credit Agreement between JPMorgan Chase Bank, N.A. and Northern Technologies International Corporation, dated December 19, 2022	<u>Incorporated by reference to Exhibit 10.1 to NTIC's Quarterly Report on Form 10-Q for the fiscal quarter ended February 28, 2023 (File No. 001-11038)</u>
10.15	Consulting Agreement dated January 11, 2017 by and among Northern Technologies International Corporation, BioPlastic Polymers LLC, and Ramani Narayan, Ph.D.	<u>Incorporated by reference to Exhibit 10.2 to NTIC's Quarterly Report on Form 10-Q for the fiscal quarter ended November 30, 2016 (File No. 001-11038)</u>
10.16	Amendment to Consulting Agreement effective January 11, 2022 by and among Northern Technologies International Corporation, BioPlastic Polymers LLC, and Ramani Narayan, Ph.D.	<u>Incorporated by reference to Exhibit 10.24 to NTIC's Annual Report on Form 10-K for the fiscal year ended August 31, 2022 (File No. 001-11038)</u>
10.17	Real Estate Purchase and Sales Contract dated July 7, 2021 between NTIC (Shanghai) Co., Ltd. And Shanghai FASTO Investment Group Limited Company (Official Chinese Version)	<u>Incorporated by reference to Exhibit 10.1 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on July 8, 2021 (File No. 001-11038)</u>
10.18	Unofficial English Summary of Real Estate Purchase and Sales Contract dated July 7, 2021 between NTIC (Shanghai) Co., Ltd. and Shanghai FASTO Investment Group Limited Company	<u>Incorporated by reference to Exhibit 10.2 to NTIC's Current Report on Form 8-K as filed with the Securities and Exchange Commission on July 8, 2021 (File No. 001-11038)</u>
14.1	Code of Ethics	<u>Incorporated by reference to Exhibit 14.1 to NTIC's Annual Report on Form 10-KSB for the fiscal year ended August 31, 2004 (File No. 001-11038)</u>
21.1	Subsidiaries of the Registrant	<u>Filed herewith</u>
23.1	Consent of Baker Tilly US, LLP	<u>Filed herewith</u>
31.1	Certification of President and Chief Executive Officer Pursuant to SEC Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	<u>Filed herewith</u>
31.2	Certification of Chief Financial Officer Pursuant to SEC Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	<u>Filed herewith</u>

32.1	Certification of President and Chief Executive Officer Pursuant to Rule 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Furnished herewith
32.2	Certification of Chief Financial Officer Pursuant to Rule 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Furnished herewith
97.1	Northern Technologies International Corporation Clawback Policy	Filed herewith
101	The following materials from Northern Technologies International Corporation's Annual Report on Form 10-K for the fiscal year ended August 31, 2023, formatted in Inline XBRL (Extensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Comprehensive Income, (iv) the Consolidated Statements of Equity, (v) the Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements	Filed herewith
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	Contained in Exhibit 101

* A management contract or compensatory plan or arrangement.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION

November 21, 2023

By: /s/ G. Patrick Lynch
G. Patrick Lynch
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ G. Patrick Lynch</u> G. Patrick Lynch	President and Chief Executive Officer and Director (principal executive officer)	November 21, 2023
<u>/s/ Matthew C. Wolsfeld, CPA</u> Matthew C. Wolsfeld, CPA	Chief Financial Officer and Corporate Secretary (principal financial and accounting officer)	November 21, 2023
<u>/s/ Richard J. Nigon</u> Richard J. Nigon	Chairman of the Board	November 21, 2023
<u>/s/ Nancy E. Calderon</u> Nancy E. Calderon	Director	November 21, 2023
<u>/s/ Sarah E. Kemp</u> Sarah E. Kemp	Director	November 21, 2023
<u>/s/ Sunggyu Lee, Ph.D.</u> Sunggyu Lee, Ph.D.	Director	November 21, 2023
<u>/s/ Ramani Narayan, Ph. D.</u> Ramani Narayan, Ph.D.	Director	November 21, 2023
<u>/s/ Cristina Pinho</u> Cristina Pinho	Director	November 21, 2023
<u>/s/ Konstantin von Falkenhausen</u> Konstantin von Falkenhausen	Director	November 21, 2023

NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
DESCRIPTION OF SECURITIES REGISTERED PURSUANT TO SECTION 12 OF
THE SECURITIES EXCHANGE ACT OF 1934

Northern Technologies International Corporation, a Delaware corporation (referred to as NTIC, we, us and our), has only one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: common stock, par value \$0.02 per share (common stock).

The following description of our common stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Restated Certificate of Incorporation (Charter) and our Second Amended and Restated Bylaws (Bylaws), which are filed as exhibits to our most recent Annual Report on Form 10-K and are incorporated by reference herein. We encourage you to read our Charter, our Bylaws and the applicable provisions of the General Corporation Law of the State of Delaware (DGCL) for additional information.

Authorized Shares

Our Charter authorizes the issuance of up to 15,010,000 shares of capital stock, consisting of:

- 15,000,000 shares of common stock; and
- 10,000 shares of preferred stock, no par value per share (preferred stock).

We may amend from time to time our Charter to increase the number of authorized shares of common stock or preferred stock. Any such amendment would require the approval of the holders of a majority of the voting power of the shares entitled to vote thereon.

Voting Rights

Each holder of our common stock is entitled to one vote per share registered in the holder's name on our books on all matters submitted to a vote of stockholders. Our common stock does not have cumulative voting rights. Our Bylaws provide that, in all matters, other than the election of directors and except as otherwise required by law, the Charter, or the Bylaws, the affirmative vote of a majority of the voting power of the shares present or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

Dividend Rights

Subject to applicable law and the rights, if any, of the holders of outstanding shares of any series of preferred stock we may designate and issue in the future, holders of our common stock are entitled to receive ratably the dividends, if any, at such times and in such amounts as may be declared by the Board. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Charter. Before payment of any dividend, there may be set aside out of any funds of NTIC available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of NTIC, or for such other purpose as the directors think is in the best interest of NTIC, and the directors may modify or abolish any such reserve in the manner in which it was created.

Liquidation Rights

If there is a liquidation, dissolution or winding up of NTIC, subject to applicable law and the rights, if any, of the holders of outstanding shares of any series of preferred stock we may designate and issue in the future, holders of our common stock are entitled to share ratably in all the assets that remain after we pay our liabilities.

Other Rights and Preferences

Holders of our common stock do not have preemptive or subscription rights, and they have no right to convert their common stock into any other securities, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences, and privileges of common stockholders are subject to the rights of the stockholders of any series of preferred stock which we may designate in the future. Our Charter and Bylaws do not restrict the ability of a holder of common stock to transfer his or her shares of common stock. All currently outstanding shares of our common stock are fully paid and nonassessable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Financial Services.

Exchange Listing

Our common stock is listed on the Nasdaq Global Market under the symbol “NTIC.”

Anti-Takeover Effects of Certain Provisions of our Charter and Bylaws and the DGCL

Our Charter and Bylaws and the DGCL contain provisions that may have the anti-takeover effect of delaying, deferring or preventing a change in control of NTIC.

Anti-Takeover Provisions in our Charter and Bylaws

Our Charter and Bylaws contain the following anti-takeover provisions that may have the anti-takeover effect of delaying, deferring or preventing a change in control of NTIC:

- We have shares of common stock and preferred stock available for future issuance without stockholder approval. The existence of unissued and unreserved common stock and preferred stock may enable the Board of Directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management.
 - The Board of Directors may adopt, amend or repeal our Bylaws, subject to the reserved power of the stockholders to adopt, amend or repeal our Bylaws.
 - Special meetings of our stockholders may be called only by our Chair of the Board, Chief Executive Officer or President at the request in writing of stockholders owning a majority in the amount of the entire capital stock of NTIC issued and outstanding and entitled to vote.
 - Stockholders must follow advance notice procedures to submit proposals for business to be brought before an annual meeting of stockholders. Additionally, stockholders must follow advance notice procedures to propose nominees for election to our Board of Directors at an annual meeting of stockholders, including director election contests subject to the Securities and Exchange Commission’s universal proxy rules.
 - Subject to the rights, if any, of the holders of any series of preferred stock then outstanding, vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office though less than a quorum, and each director so chosen shall hold office until the next annual election or until a successor is duly elected and qualified or until his or her earlier death, resignation or removal as hereinafter provided.
 - Unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, in the event that the Court of Chancery of the State of Delaware does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (a) any derivative action, suit or proceeding brought on our behalf, (b) any action, suit or proceeding asserting a claim of or for breach of a fiduciary duty owed by any current or former director, officer, other employee or stockholder of NTIC to NTIC or to our stockholders (including any claim alleging aiding and abetting of such breach of fiduciary duty), (c) any action, suit or proceeding asserting a claim against NTIC or against any director or officer or other employee of NTIC arising pursuant to any provision of the DGCL, the Charter or the Bylaws (as either may be amended from time to time), or (d) any action, suit or proceeding asserting a claim against NTIC or against any director or officer or other employee of NTIC governed by the internal affairs doctrine.
-

Delaware Business Combination Statute

We are a Delaware corporation and are subject to Section 203 of the DGCL, known as the Delaware Business Combination Statute. In general, Section 203 of the DGCL prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the time at which the stockholder became an interested stockholder, unless:

- Prior to the time the stockholder became an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- Upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, exclusive of shares owned by directors who are also officers and by certain employee stock plans; or
- At or subsequent to such time, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholder by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Generally, for purposes of the Delaware Business Combination Statute, a “business combination” includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder, and an “interested stockholder” is a person who owns, individually or through other persons, 15% or more of the corporation’s outstanding voting stock at any time within the three-year period immediately before the date of determination.

SUBSIDIARIES OF THE REGISTRANT

Name of Subsidiary	State or Other Jurisdiction of Incorporation or Organization	Ownership Interest	Names Under Which Subsidiary Does Business
NTI ASEAN LLC	Nevada	60%	Same
Northern Technologies Holding Company, LLC	Minnesota	100%	Same
Natur-Tec India Private Limited	India	75%	Same
Natur Tec Lanka (Pvt) Ltd	Sri Lanka ⁽¹⁾	75%	Same
Zerust Prevenção de Corrosão S.A.	Brazil	85%	Same
NTIC (Shanghai) Co., Ltd.	China	100%	Same
ZERUST-EXCOR MEXICO, S. de R.L. de C.V	Mexico	100%	Same
NTIC Europe GmbH	Germany	100%	Same
Zerust Singapore Pte Ltd	Singapore ⁽²⁾	60%	Same
Zerust Vietnam Co. Ltd	Vietnam ⁽³⁾	60%	Same
Zerust Taiwan Co. Ltd	Taiwan ⁽⁴⁾	60%	Same
HNTI Limited	India	100%	Same

(1) Natur Tec Lanka (Pvt) Ltd. is 100% owned by Natur-Tec India Private Limited and, therefore, indirectly owned by Northern Technologies International Corporation.

(2) Zerust Singapore Pte Ltd is 100% owned by NTI Asean LLC and, therefore, indirectly owned by Northern Technologies International Corporation.

(3) Zerust Vietnam Co. Ltd is 100% owned by Zerust Singapore Pte Ltd and, therefore, indirectly owned by Northern Technologies International Corporation.

(4) Zerust Taiwan Co. Ltd is 100% owned by Zerust Singapore Pte Ltd and, therefore, indirectly owned by Northern Technologies International Corporation.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements on Form S-8 (File No. 333-140244, 333-140245, 333-171828, 333-229391, and 333-252197) of Northern Technologies International Corporation and Subsidiaries of our report dated November 21, 2023, relating to the consolidated financial statements, which appears on page 53 of this annual report on Form 10-K for the year ended August 31, 2023.

/s/ Baker Tilly US, LLP

Minneapolis, Minnesota
November 21, 2023

CERTIFICATION PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, G. Patrick Lynch, certify that:

1. I have reviewed this annual report on Form 10-K of Northern Technologies International Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 21, 2023

/s/ G. Patrick Lynch
G. Patrick Lynch
President and Chief Executive Officer
(principal executive officer)

CERTIFICATION PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew C. Wolsfeld, certify that:

1. I have reviewed this annual report on Form 10-K of Northern Technologies International Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 21, 2023

/s/ Matthew C. Wolsfeld, CPA
Matthew C. Wolsfeld, CPA
Chief Financial Officer and Corporate Secretary
(principal financial officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT
TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Northern Technologies International Corporation (the "Company") for the fiscal year ended August 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, G. Patrick Lynch, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge and belief:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ G. Patrick Lynch
G. Patrick Lynch
President and Chief Executive Officer
(principal executive officer)

Circle Pines, Minnesota
November 21, 2023

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT
TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Northern Technologies International Corporation (the "Company") for the fiscal year ended August 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Matthew C. Wolsfeld, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge and belief:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Matthew C. Wolsfeld, CPA
Matthew C. Wolsfeld, CPA
Chief Financial Officer and Corporate Secretary
(principal financial officer and principal accounting officer)

Circle Pines, Minnesota
November 21, 2023

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
CLAWBACK POLICY**

Purpose

Northern Technologies International Corporation (the “Company”) is committed to conducting business with integrity in accordance with high ethical standards and in compliance with all applicable laws, rules and regulations, including those applicable to the presentation of the Company’s financial information to the public. As a result, the Board of Directors of the Company (the “Board”) has adopted this Clawback Policy (this “Policy”), which provides for the recovery of certain executive officer incentive compensation in the event of financial errors, including an accounting restatement, or other executive egregious misconduct that has a substantial detrimental effect on the Company or its subsidiaries or its results of operations.

This Policy is adopted pursuant to and intended to comply with Listing Rule 5608 of the Nasdaq Stock Market LLC (“Nasdaq”) so long as the Company’s securities are listed on Nasdaq.

Administration

This Policy will be administered by the Compensation Committee of the Board of Directors or, in the absence of such a committee, a majority of the “independent directors” (within the meaning of Nasdaq Listing Rule 5605(a)(2)) serving on the Board (the “Committee”). Except as limited by law, the Committee will have full power, authority, and sole and exclusive discretion to construe, interpret and administer this Policy. The Committee will interpret this Policy consistent with Nasdaq Listing Rule 5608 and any Nasdaq guidance issued thereunder, the rules and regulations of the Securities and Exchange Commission (the “SEC”), and any other applicable laws, rules or regulations governing the mandatory recovery of compensation, as such laws, rules or regulations may change, be interpreted or evolve from time to time. Any determinations made by the Committee will be made in its sole discretion and will be final, conclusive and binding on all affected individuals.

In the event of any change in any federal or state law, rule or regulation, or rule, regulation, policy or listing standard of the SEC or any securities exchange on which the Company’s securities are listed, which requires the Company to recover certain compensation from a Covered Executive (as defined below), the Committee will be required to seek recovery under this Policy to the fullest extent required by such laws, rules, regulations or listing standards.

Covered Executives

This Policy will cover the Company’s current and former Executive Officers (as defined below) as determined by the Board from time to time in accordance with Rule 16a-1 under the Securities Exchange Act of 1934, as amended, and will include the Company’s president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice president of the Company in charge of a principal business unit, division or function (such as sales, administration or finance), any other officer that performs a policy making function for the Company, any other person who performs similar policy-making functions for the Company and Executive Officers of the Company’s parents or subsidiaries if such individuals perform such policy-making functions for the Company, and any other officer whose compensation is determined by the Committee per authorization granted by the Board (collectively, the “Covered Executives” and each, a “Covered Executive”).

Policy-making function is not intended to include policy-making functions that are not significant.

Identification of an Executive Officer for purposes of this Policy would include at a minimum executive officers identified by the Company pursuant to Item 401(b) of SEC Regulation S-K.

For the avoidance of doubt, this Policy will cover the Company's current and former Executive Officers who Received Erroneously Awarded Compensation (in each case, as such terms are defined below) regardless of whether the Executive Officer committed misconduct or contributed to the error.

Compensation Covered

This Policy will apply to all incentive compensation paid, granted, earned, vested or otherwise awarded to a Covered Executive, including annual bonuses and other short and long term cash incentive awards, stock options and other equity-based awards ("Incentive Compensation").

Notwithstanding the generality of and in addition to the foregoing, as required under Nasdaq Listing Rule 5608, this Policy will apply to all Incentive-Based Compensation Received by a person (in each case, as such terms are defined below):

- After beginning service as an Executive Officer of the Company and who served as an Executive Officer at any time during the performance period for that Incentive-Based Compensation;
- While the Company has a class of securities listed on Nasdaq or another national securities exchange or a national securities association; and
- During the three completed fiscal years immediately preceding the date that the Company is required to prepare a Restatement (as defined below), plus any transition period (that results from a change in the Company's fiscal year) within or immediately following those three completed fiscal years; provided, however, that a transition period between the last day of the Company's previous fiscal year end and the first day of its new fiscal year that comprises a period of nine to 12 months would be deemed a completed fiscal year; and provided, further, that the Company's obligation to recover erroneously awarded compensation is not dependent on if or when the restated financial statements are filed.

For purposes of this Policy, a "Restatement" means an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period.

For purpose of determining the relevant recovery period, the date that the Company is required to prepare a Restatement is the earlier to occur of: (i) the date the Company's Board, a committee of the Board or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement; or (ii) the date a court, regulator or other legally authorized body directs the Company to prepare a Restatement.

Discretionary Authority to Recover Incentive Compensation from Covered Executives

In the event the Committee determines that a financial metric used to determine the vesting or payment of Incentive Compensation to a Covered Executive was calculated incorrectly, whether or not the Company is required to restate its financial statements, and without regard to whether such miscalculation was due to fraud or intentional misconduct, then the Committee may require (but is not obligated to require) reimbursement of certain Incentive Compensation received by such Covered Executive during the three-year period preceding the date on which the Company discovers the error or is required to prepare an accounting restatement, and/or authorize the cancellation of unpaid or unvested Incentive Compensation, as determined by the Committee pursuant to this Policy.

In addition, if the Committee determines that the Covered Executive has engaged in egregious conduct that is substantially detrimental to the Company, the Committee may require (but is not obligated to require) the Covered Executive to reimburse the Company for all or a portion of Incentive Compensation previously vested or paid to such Covered Executive during the one-year period preceding the date on which the Company discovers such conduct and/or authorize the cancellation of unpaid or unvested Incentive Compensation, as determined by the Committee pursuant to this Policy. "Egregious conduct substantially detrimental to the Company" will mean any one of the following:

- any act or omission which would constitute "Cause" for termination under the terms of the Covered Executive's employment agreement, if any;
- the material breach of a written policy applicable to the Covered Executive, including, but not limited to, the Code of Ethics;
- the material breach of any non-competition, non-solicitation or confidentiality agreement or agreement governing the ownership or assignment of intellectual property rights with the Company that is applicable to the Covered Executive;
- egregious misconduct by the Covered Executive including, but not limited to, fraud, criminal activities, falsification of Company records, theft, violent acts or threats of violence, or a violation of law, unethical conduct or inappropriate behavior that causes substantial reputational harm to the Company or exposes the Company to substantial legal liability; or
- the commission of an act or omission which causes the Covered Executive or the Company to be in violation of federal or state securities laws, rules or regulations.

In the event a recovery under this section of this Policy is triggered by an incorrect financial metric used to determine the vesting or payment of Incentive Compensation to a Covered Executive, then the recovery amount will be up to the amount of Incentive Compensation received by the Covered Executive that exceeds the amount of Incentive Compensation that otherwise would have been received based on the correct financial metric or restated results, as determined by the Committee in its sole discretion.

In the event a recovery under this section of this Policy is triggered by egregious conduct substantially detrimental to the Company by the Covered Executive, then the Committee will determine the amount of Incentive Compensation to recover from such Covered Executive based on the following factors:

- the amount of Incentive Compensation received by the Covered Executive that exceeds the amount of Incentive Compensation that otherwise would have been received or granted had the Covered Executive's egregious conduct substantially detrimental to the Company been known;
-

- the relative fault or degree of involvement by the Covered Executive;
- the overall work performance of the Covered Executive;
- the relative impact of the Covered Executive’s conduct on the Company and the magnitude of any restatement, loss or variance from budget or plan;
- the cost or difficulty of obtaining recovery, including but not limited to whether the Covered Executive has any outstanding equity-based awards that may be cancelled, whether the Covered Executive continues to be employed by the Company or its subsidiaries, and the language of this Policy in effect on the relevant date; and/or
- any other facts and circumstances determined relevant by the Committee, in its sole discretion.

Mandatory Authority and Obligation to Recover Erroneously Awarded Compensation

In the event of a Restatement and if required under Nasdaq Listing Rule 5608, the Company must reasonably promptly recover any Erroneously Awarded Compensation (as defined below) in compliance with this Policy and Nasdaq Listing Rule 5608, except to the extent one of the three conditions below is met and the Committee has made a determination that recovery would be impracticable.

1. The direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered and the Company has made a reasonable attempt to recover any amount of Erroneously Awarded Compensation, has documented such reasonable attempt(s) to recover and provided that documentation to Nasdaq.
2. Recovery would violate home country law where that law was adopted prior to November 28, 2022 and the Company has obtained an opinion of home country counsel, acceptable to Nasdaq, that recovery would result in such a violation and has provided such opinion to Nasdaq.
3. Recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of Section 401(a)(13) or 411(a) of the U.S. Internal Revenue Code and regulations thereunder.

The term “Erroneously Awarded Compensation” as used in this Policy means that amount of Incentive-Based Compensation Received that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received had it been determined based on the restated amounts, and must be computed without regard to any taxes paid.

For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in a Restatement the amount must be based on a reasonable estimate of the effect of the Restatement on the stock price or total shareholder return upon which the Incentive-based Compensation was Received. The Company must maintain documentation of the determination of that reasonable estimate and provide such documentation to Nasdaq.

The term “Incentive-Based Compensation” as used in this Policy means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a Financial Reporting Measure.

The term “Financial Reporting Measures” as used in this Policy means measures that are determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements, and any measures that are derived wholly or in part from such measures. Financial reporting measures include, without limitation, stock price and total shareholder return, and may include non-GAAP financial measures. A financial reporting measure need not be presented within the Company’s financial statements or included in an SEC filing to constitute a financial reporting measure for this purpose.

Incentive-Based Compensation is deemed “Received” as such term is used in this Policy by an Executive Officer in the Company’s fiscal period during which the Financial Reporting Measure specified in the Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period.

Notwithstanding the generality of the foregoing, “Incentive-Based Compensation” is intended to be interpreted and construed broadly and includes with respect to any plan that takes into account incentive-based compensation (other than a tax-qualified plan) any amount contributed to a notional account based on erroneously awarded compensation and any earnings accrued to date on that notional account. Such plans include without limitation long-term disability plans, life insurance plans, supplemental executive retirement plans and other compensation, if it is based on incentive-based compensation.

Method of Recovery

The Committee will determine, in its sole discretion, the method for recovering Incentive Compensation or Erroneously Awarded Compensation hereunder, which may include, without limitation, any one or more of the following:

- requiring reimbursement of cash Incentive Compensation previously paid;
- seeking recovery of any gain realized on the vesting, exercise, settlement, sale, transfer or other disposition of any equity-based awards;
- cancelling or rescinding some or all outstanding vested or unvested equity-based awards;
- adjusting or withholding from unpaid compensation or other set-off;
- cancelling or setting-off against planned future grants of equity-based awards; and/or
- any other method authorized by applicable law or contract.

Enforceability

In addition to the adoption of this Policy, the Company will take steps to implement an agreement to this Policy by all Covered Executives. In furtherance of the foregoing, each Covered Executives subject to this Policy is required to sign and return to the Company the Acknowledgement Form attached hereto as Exhibit A pursuant to which such Covered Executive will agree to be bound by the terms and comply with this Policy.

Policy Not Exclusive

Any recovery under this Policy is in addition to, and not in lieu of, any other remedies or rights of recovery that may be available to the Company pursuant to the terms of any similar policy in any employment agreement, incentive or equity compensation plan or award or other agreement and any other legal rights or remedies available to the Company. Notwithstanding the generality of the foregoing, to the extent that the requirements under the provisions of Section 304 of the Sarbanes-Oxley Act of 2002 or other applicable law are broader than the provisions in this Policy, the provisions of such law will apply.

No Indemnification

The Company will not indemnify or agree to indemnify any Covered Executive against the loss of Erroneously Awarded Compensation or Incentive Compensation that is subject to this Policy nor will the Company pay or agree to pay any insurance premium to cover the loss of Erroneously Awarded Compensation or Incentive Compensation.

Effective Date and Relationship to Prior Policy

The effective date of this Policy is October 2, 2023 (the "Effective Date") and will apply to all Incentive Compensation that is approved, awarded or granted to Covered Executives on or after the Effective Date, except as otherwise agreed by any Covered Executive or pursuant to the terms of any Company plan regarding Incentive Compensation, and Incentive-Based Compensation Received by the Company's current or former Executive Officers on or after the Effective Date.

This Policy supersedes and replaces the Company's Clawback Policy, as adopted by the Board on September 1, 2018, with respect to all Incentive Compensation received by any Covered Executives on or after the Effective Date and all Incentive-Based Compensation Received by the Company's current and former Executive Officers on or after the Effective Date.

Required Disclosures

The Company will file all disclosures with respect to this Policy in accordance with the requirements of the federal securities laws, including the disclosure required by the applicable SEC filings and will provide all required SEC and other disclosures regarding this Policy and in the event of a Restatement.

Amendment and Termination

The Committee may amend, modify or terminate this Policy in whole or in part at any time in its sole discretion and may adopt such rules and procedures that it deems necessary or appropriate to implement this Policy or to comply with applicable laws, rules, and regulations, including without limitation Nasdaq Listing Rule 5608.

Successors

This Policy shall be binding and enforceable against all Covered Executives and their respective beneficiaries, heirs, executors, administrators, or other legal representatives.

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Approved by the Board of Directors of Northern Technologies International Corporation
November 10, 2023

**NORTHERN TECHNOLOGIES INTERNATIONAL CORPORATION
CLAWBACK POLICY**

ACKNOWLEDGEMENT FORM

By signing below, the undersigned acknowledges and confirms that the undersigned has received and reviewed a copy of Northern Technologies International Corporation Clawback Policy (the "Policy").

By signing this Acknowledgement Form, the undersigned acknowledges and agrees that the undersigned is and will continue to be subject to the Policy and that the Policy will apply both during and after the undersigned's employment with Northern Technologies International Corporation and its direct and indirect subsidiaries.

Further, by signing below, the undersigned agrees to abide by the terms of the Policy, including, without limitation, by returning any Incentive Compensation, including any Erroneously Awarded Compensation (in each case, as defined in the Policy), to Northern Technologies International Corporation and its direct and indirect subsidiaries to the extent required by, and in a manner permitted by, the Policy.

Signature: _____

Name: _____

Date: _____
