

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 December 31, 2021
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 001-37839



TPI Composites, Inc.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-1590775
(I.R.S. Employer
Identification Number)

8501 N. Scottsdale Rd.
Gainey Center II, Suite 100
Scottsdale, AZ 85253
(480) 305-8910
(Address, including zip code, and telephone number,
including area code, of Registrant's principal executive offices)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class
Common Stock, par value \$0.01

Trading symbol(s)
TPIC

Name of each exchange on which registered
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 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 the 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the shares of common stock held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on June 30, 2021 as reported by the NASDAQ Global Market on such date was approximately \$1.8 billion. Shares of the Registrant's common stock held by each executive officer, director and holder of 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This calculation does not reflect a determination that certain persons are affiliates of the Registrant for any other purpose.

As of January 31, 2022, the Registrant had 37,180,004 shares of common stock outstanding.

Documents Incorporated by Reference

Portions of the Registrant's Definitive Proxy Statement relating to the Annual Meeting of Stockholders, scheduled to be held on May 25, 2022, are incorporated by reference into Part III of this Report.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains 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 (the Exchange Act). All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. In many cases, you can identify forward-looking statements by terms such as “may,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “targets,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar words. Forward-looking statements contained in this Annual Report on Form 10-K include, but are not limited to, statements about:

- the potential impact of the COVID-19 pandemic on our business and results of operations;
- competition from other wind blade and wind blade turbine manufacturers;
- the discovery of defects in our products and our ability to estimate the future cost of warranty campaigns;
- growth of the wind energy market and our addressable market;
- our ability to absorb or mitigate the impact of price increases in resin, carbon reinforcements (or fiber), other raw materials and related logistics costs that we use to produce our products;
- the potential impact of the increasing prevalence of auction-based tenders in the wind energy market and increased competition from solar energy on our gross margins and overall financial performance;
- our future financial performance, including our net sales, cost of goods sold, gross profit or gross margin, operating expenses, ability to generate positive cash flow and ability to achieve or maintain profitability;
- changes in domestic or international government or regulatory policy, including without limitation, changes in trade policy;
- changes in global economic trends and uncertainty, geopolitical risks, and demand or supply disruptions from global events;
- the sufficiency of our cash and cash equivalents to meet our liquidity needs;
- our ability to attract and retain customers for our products, and to optimize product pricing;
- our ability to effectively manage our growth strategy and future expenses, including our startup and transition costs;
- our ability to successfully expand in our existing wind energy markets and into new international wind energy markets, including our ability to expand our field service inspection and repair services business and manufacture wind blades for offshore wind energy projects;
- our ability to successfully open new manufacturing facilities and expand existing facilities on time and on budget;
- the impact of the accelerated pace of new product and wind blade model introductions on our business and our results of operations;
- our ability to successfully expand our transportation business and execute upon our strategy of entering new markets outside of wind energy;
- our ability to maintain, protect and enhance our intellectual property;
- our ability to comply with existing, modified or new laws and regulations applying to our business, including the imposition of new taxes, duties or similar assessments on our products;
- the attraction and retention of qualified employees and key personnel;

- our ability to maintain good working relationships with our employees, and avoid labor disruptions, strikes and other disputes with labor unions that represent certain of our employees;
- our ability to procure adequate supplies of raw materials and components to fulfill our wind blade volume commitments to our customers; and
- the potential impact of one or more of our customers becoming bankrupt or insolvent, or experiencing other financial problems.

These forward-looking statements are only predictions. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, levels of activity, performance or achievements to materially differ from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. We have described under the heading "Risk Factors" included in Part 1, Item 1A of this Annual Report on Form 10-K the principal risks and uncertainties that we believe could cause actual results to differ from these forward-looking statements. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as guarantees of future events.

The forward-looking statements in this Annual Report on Form 10-K represent our views as of the date of this Annual Report on Form 10-K. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we undertake no obligation to update any forward-looking statement to reflect events or developments after the date on which the statement is made or to reflect the occurrence of unanticipated events except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date after the date of this Annual Report on Form 10-K. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make.

PART I

Item 1. Business

Description of Business

TPI Composites, Inc. is the holding company that conducts substantially all of its business operations through its direct and indirect subsidiaries (collectively, the Company or we). The Company was founded in 1968 and has been producing composite wind blades since 2001. The Company is incorporated in Delaware.

Overview

We are the only independent manufacturer of composite wind blades for the wind energy market with a global manufacturing footprint. We enable many of the industry's leading wind turbine original equipment manufacturers (OEM) to outsource the manufacturing of some of their wind blades through our global footprint of advanced manufacturing facilities strategically located to serve large and growing wind markets in a cost-effective manner. Given the importance of wind energy capture, turbine reliability and cost to power producers, the size, quality and performance of wind blades is highly strategic to our OEM customers. As a result, we have become a key supplier to our OEM customers in the manufacture of wind blades and related precision molding and assembly systems. We have entered into supply agreements pursuant to which we dedicate capacity at our facilities to our customers in exchange for their commitment to purchase minimum annual volumes of wind blade sets (each set consisting of three wind blades). This collaborative dedicated supplier model provides us with contracted volumes that generate significant revenue visibility, drive capital efficiency and allow us to produce wind blades at a lower total delivered cost, while ensuring critical dedicated capacity for our customers.

We also provide field service inspection and repair services to our OEM customers and wind farm owners and operators. Our field service inspection and repairs services include diagnostic, repair and maintenance service offerings for wind blades that have been installed on wind turbines located at wind farms. Our field service inspection and repair services can be performed up-tower, where a blade technician performs these services in the air or from the wind turbine tower on a wind turbine blade, or down tower, where a blade is first removed from a wind turbine and these services are performed on the ground at the wind farm site or in a repair facility.

We also leverage our advanced composite technology and history of innovation to supply high strength, lightweight and durable composite products to the transportation market. In June 2021, we extended our supply agreement with Proterra, Inc. (Proterra) to supply Proterra Catalyst® composite bus bodies through December 2024. In 2019, we made a capital investment of approximately \$11.5 million to develop a highly automated manufacturing line for the electric vehicle market within our Warren, Rhode Island facility to enable us to further develop our technology, create defensible product and process intellectual property (IP) and demonstrate our capability to manufacture composite components cost effectively at automotive volume rates. In 2021, we began a production program to manufacture a composite component for an electric vehicle manufacturer using this automated production line and have commenced production of additional composites components for this manufacturer in 2022. We manufactured approximately 26,000 production components in 2021 and anticipate manufacturing 25,000 production components in the first half of 2022. We continue to expand our manufacturing capabilities and have received orders with a major OEM to produce approximately 450,000 production components in 2022 and approximately 1,000,000 in 2023.

Our wind blade and precision molding and assembly systems manufacturing businesses accounted for approximately 95%, 96%, and 96% of our total net sales for each of the years ended December 31, 2021, 2020 and 2019, respectively. As of February 24, 2022, our wind and transportation supply agreements provide for minimum aggregate volume commitments from our customers of approximately \$2.2 billion and encourage our customers to purchase additional volume up to, in the aggregate, a total contract value of approximately \$3.5 billion through the end of 2024.

Financial Information about Segments and Geographic Areas

We divide our business operations into five geographic operating segments - (1) the United States (U.S.), (2) Asia, (3) Mexico, (4) Europe, the Middle East and Africa (EMEA) and (5) India as follows:

- Our U.S. segment includes (1) the manufacturing of wind blades at our Newton, Iowa facility, (2) the manufacturing of precision molding and assembly systems used for our transportation business at our Warren, Rhode Island facility, (3) the manufacturing of composite solutions for the transportation industry, which we also conduct at our Warren, Rhode Island facility, (4) wind blade inspection and repair services, (5) our advanced engineering center in Kolding, Denmark, which provides technical and engineering resources to our manufacturing facilities, (6) our engineering center in Berlin, Germany and (7) our corporate headquarters.
- Our Asia segment includes (1) the manufacturing of wind blades at our facilities in Dafeng, China and Yangzhou, China, (2) the manufacturing of precision molding and assembly systems at our Taicang Port, China facility and (3) wind blade inspection and repair services.
- Our Mexico segment includes (1) the manufacturing of wind blades at our three facilities in Juárez, Mexico and two facilities in Matamoros, Mexico, (2) the manufacturing of precision molding and assembly systems and composite solutions for the transportation industry at our fourth Juárez, Mexico facility and (3) wind blade inspection and repair services.
- Our EMEA segment includes (1) the manufacturing of wind blades at our two facilities in Izmir, Turkey, and wind blade inspection and repair services, and (2) our wind blade inspection and repair service facility in Madrid, Spain.
- Our India segment manufactures wind blades at our new manufacturing facility in Chennai, India, which commenced operations in the first quarter of 2020.

For additional information regarding our operating segments and geographic areas, see Note 21 – Segment Reporting of the Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Business Strategy

Our long-term success will be driven by our business strategy. The key elements of our business strategy are as follows:

- Capitalize on the long-term, global trends of decarbonization of the electric sector and the electrification of vehicles.** We believe we are well-positioned to participate and benefit from the long term, global trend of decarbonization of the electric sector. Although regulatory uncertainty, as well as permitting, siting and transmission challenges in the U.S. and Europe has tempered demand for wind energy in the near term, we expect global demand for renewable energy, and wind energy in particular, will continue to grow in the long term due to a multitude of factors, including: increased cost competitiveness of wind energy compared to fossil fuel generated electricity; increased demand from corporations and utility providers for renewable energy; and recent international policy initiatives designed to promote the growth of renewable energy. We believe our global footprint of manufacturing facilities will allow us to capitalize on the expected long term, global growth of wind energy. Similarly, we believe we are well-positioned to capitalize on the projected growth of electric vehicles. As the global vehicle electrification trend continues, reducing the weight of these vehicles is critical to expanding range and/or providing more room for additional batteries or reducing the number of batteries. We believe vehicle manufacturers and vehicle owners will also benefit from the lower cost of total ownership due to the durability and the non-corrosive properties of composites compared to metallic materials along with the ability to scale production with lower production investment costs. As a result, we expect there will be an increased demand for composites products for electric vehicles. In addition, we believe there is a potential demand in other strategic markets for composites to replace aluminum or other more expensive composite materials such as carbon reinforcements.
- Grow our existing relationships and develop new relationships with leading industry OEMs.** We plan to continue growing and expanding our relationships with existing customers who, according to data

from BloombergNEF (Bloomberg), represented approximately 37% of the global onshore wind energy market, approximately 76% of that market excluding China, and 89% of the U.S. onshore wind turbine market over the three years ended December 31, 2020, based on megawatts (MWs) of energy capacity installed, as well as developing new relationships with other leading industry OEMs. We expect to be presented with opportunities to expand our existing relationships and develop new relationships with industry OEMs as they seek to capitalize on the benefits of outsourced wind blade manufacturing while maintaining high quality customization and dedicated capacity. In July 2020, General Electric International, Inc. and its affiliates (GE Wind) agreed to extend our existing supply agreement in one of our Mexico plants by two years to 2022, and added one additional wind blade manufacturing line in Mexico to provide blades for GE Wind's turbine technologies in North America. In July 2020, we entered into a supply agreement with Nordex SE (Nordex) for two additional manufacturing lines in our Chennai, India facility, and we commenced production in the second quarter of 2021. In July 2021, we entered into a supply agreement with Nordex to takeover production at Nordex's existing manufacturing facility in Matamoros, Mexico through June 2024. In September 2021, we extended our supply agreement with Nordex at one of our Izmir, Turkey plants by one year through December 2022. In December 2021, we agreed to extend our supply agreement with Vestas at one of our Izmir, Turkey plants for an additional year through December 2023.

•Leverage our footprint in large and growing wind markets, capitalize on the continuing outsourcing trend, evaluate building wind blades for the growing offshore wind market and evaluate strategic acquisitions. As many wind turbine OEMs continue to shift towards increased outsourcing of wind blade manufacturing, we believe we are well-positioned with our global footprint. We utilize our strengths in composites technology and manufacturing, combined with our collaborative dedicated supplier model to provide our customers with an efficient solution for their expansion in large and growing onshore wind markets. We also are evaluating opportunities to manufacture wind blades for the growing offshore wind market. In addition, our demonstrated ability to enter into new markets and the strength of our manufacturing capabilities afford us the optionality to build new factories or grow through strategic acquisitions.

•Continue to drive down costs of wind energy. We continue to work with our customers on larger size wind blade models that maximize the capture of wind energy and drive down the levelized cost of energy (LCOE). We also continue to utilize our advanced technology, regional manufacturing facilities strategically located to cost effectively serve large and growing wind markets and ability to source materials globally at competitive costs to deliver high-performing, composite wind blades. Our collaborative engineering approach and our advanced precision molding and assembly systems allow us to integrate our customer's design requirements with cost-efficient, replicable and scalable manufacturing processes. This collaborative engineering approach with our customers also allows us to reduce manufacturing cycle times, new line and factory start up times and new blade model transition times. We also continue to work with our customers to drive down or minimize the impacts of increases in the cost of materials and production, the benefit of which we typically share with our customers contractually in a manner that reduces LCOE for customers, further strengthens our customer relationships and improves our margins.

•Expand our field service inspection and repair business and introduce new ancillary products and services to help our customers better manage the full life cycle of a wind blade. We plan to continue to expand our field service inspection and repair business by leveraging our existing wind blade manufacturing and composites expertise and global footprint. We believe there is an increasing demand and growing market for experienced wind blade inspection and repair services worldwide as the number of wind turbines installed worldwide continues to grow and the fleet of existing wind turbines continues to age. We also expect that the operating margins at our field service inspection and repair business will improve in 2022 and will be higher than the operating margins of our wind blade manufacturing business in future periods. We also are seeking to develop a more comprehensive suite of products and services such as wind blade design, engineering and recycling services to help our customers better manage the full life cycle of a wind turbine blade.

•Focus on continuing innovation. We have a history of innovation in advanced composite technologies and production techniques and use several proprietary technologies related to wind blade manufacturing. With this culture of innovation and a collaborative "design for manufacturability"

approach, we continue to address increasing physical dimensions, demanding technical specifications and strict quality control requirements for our customers' most advanced wind blades. We also invest in ongoing simplification and selective automation of production processes for increased efficiency and precision. In addition, we plan to leverage our history of composite industry-first innovations to grow our business in the transportation market, in which we believe there is a demand for high precision, structural composites manufacturing as well as high-speed, high-volume manufacturing of structural composite components, particularly in the transportation market.

Wind Blade Manufacturing Operations and Process

We have developed significant expertise in advanced composite technology and use high performance composite materials, precision molding and assembly systems including modular tooling, and advanced process technology, as well as sophisticated measurement, inspection, testing and quality assurance tools, allowing us to produce over 75,000 wind blades since 2001 with a strong, long-term field performance record in a market where reliability is critical to our customers' success. We manufacture or have manufactured wind blades ranging from 30 meters to approximately 80 meters in length across our global facilities and have the capability to manufacture wind blades of greater lengths as required by existing or new customers. In combination with our advanced technologies, we seek to create manufacturing processes that are replicable and scalable in our manufacturing facilities located worldwide, regardless of cultural or language barriers. Using continuous improvement principles, we can customize each manufacturing step, from raw materials to finished products. This also allows us to systematically design for the entire manufacturing process so that we can achieve better quality control and increase production efficiencies. We believe that our focus on simplifying and, where feasible, automating production processes is critical to manufacturing high-precision, lightweight and durable products at a reasonable cost to our customers. We produce high unit volumes of near-aerospace grade products at industrial costs.

Raw Materials

The key raw materials for the wind blades we manufacture include highly advanced fiberglass fabrics, select carbon reinforcements, foam, balsa wood, resin, adhesives for assembly of molded components, gel coat or paint for preparation of cosmetic surfaces and attachment hardware including steel components. Most of these materials are available in multiple geographic regions and in reasonably close proximity to our manufacturing facilities. Our agreements for the supply of raw materials are designed to secure volumes that we believe will be required to fulfill our customers' wind blade commitments for fixed prices with limited contractual price adjustment provisions. A portion of our raw materials are subject to price volatility, such as the resins and carbon reinforcements used in our manufacturing processes. During 2021, there have been both significant price increases and supply constraints with respect to resins and carbon fiber, which are key raw materials that we use to manufacture our products, as well as increases in logistics costs to obtain raw materials. These increases in raw materials and related logistics adversely affected our results of operations by approximately \$38 million for the year ended December 31, 2021.

Although the majority of materials incorporated into our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers. We seek multiple suppliers for our raw materials and continually evaluate potential new supplier relationships. Our largest customer, however, sources all of the critical raw materials that we use to produce such customers' wind blades. Since we do not source procurement of these raw materials for our largest customer, we have fewer controls and remedies to mitigate raw material and supply chain risks and disruptions relating to such raw materials. For example, we experienced production delays and reduced production volumes in 2021 at our Matamoros, Mexico and Izmir, Turkey manufacturing facilities due to carbon and other raw material shortages that were sourced by a customer.

Precision Molding and Assembly Systems

Over the last decade, we have produced hundreds of precision molding and assembly systems, ranging from 30 meters to approximately 80 meters in length, to support our global operations. In 2020, we transitioned our North American precision molding and assembly system production capabilities to a new facility in Juárez, Mexico, which serves customers globally. Our precision molding and assembly systems have been used to build tens of thousands of wind blades worldwide.

Our tooling solutions include precision wind blade patterns, precision molding and assembly systems, including modular tooling techniques. We believe that our technological and production expertise are key factors in our continued competitiveness, as we address continually increasing physical dimensions, demanding technical specifications, and strict quality control requirements for wind blades.

Wind Blade Production Process

Production of wind blades requires adherence to the unique specifications of each of our customers, who design their wind turbines and wind blades to optimize performance, reliability and total delivered cost. With our culture of innovation and a collaborative “design for manufacturability” approach, we have the capability and expertise to manufacture wind blades of different designs, utilizing fiberglass, carbon fiber, or other advanced composite materials to meet unique customer specifications. We also have the flexibility to quickly transition our manufacturing facilities to produce different wind blade models and sizes using our precision molding and assembly systems, including modular tooling techniques.

We have developed a highly dependable method for making high-quality wind blades. In conjunction with our continuous improvement principles, we design our proprietary manufacturing processes to be replicable, scalable and transferable to each of our advanced manufacturing facilities worldwide. As a result, we can repeatedly move a product from its design phase to volume production while maintaining quality, even in developing regions of the world. Similarly, we have developed the manual portions of our manufacturing processes based on proven technologies and production methods that can be learned and implemented rapidly by line personnel. We focus on consistency and quality control across our facilities, using hands-on training methods and employing repeatable manufacturing processes.

We use an advanced form of vacuum-assisted resin transfer tooling process to pull liquid resin into a dry lay-up, resulting in light, strong, and reliable composite structures. In our manufacturing process, fiber reinforcements and core materials are laid up in a mold while dry, followed by a vacuum bag that is placed over the layup and sealed to the mold. The wind blade component is then placed under vacuum. The resin is introduced into the wind blade component via resin inlet ports and then distributed through the reinforcement and core materials via a flow medium and a series of channels, saturating the wind blade component. The vacuum removes air and gases during processing, thereby eliminating voids. Pressure differentials drive resin uniformly throughout the wind blade component, providing a consistent laminate. By using a variety of reinforcement and core materials, the structural characteristics of the wind blade can be highly engineered to suit the custom specifications of our customers. Although only occasionally required by our customers, we are also capable of employing additional composite fabrication processes, such as pre-impregnated laminates, in addition to our vacuum infusion process.

Wind Blade Supply Agreements

Our current wind blade customers, which include Vestas, GE Wind, Nordex, and ENERCON GmbH (ENERCON), are some of the world’s largest wind turbine manufacturers. According to data from Bloomberg, our customers represented approximately 37% of the global onshore wind energy market, approximately 76% of that market excluding China, and 89% of the U.S. onshore wind turbine market over the three years ended December 31, 2020, based on MWs of energy capacity installed. In our collaborative dedicated supplier model, our customers are incentivized to maximize the volume of wind blades purchased through lower pricing at higher purchase volumes. As of February 24, 2022, our existing wind blade supply agreements provide for minimum aggregate volume commitments from our customers of approximately \$2.2 billion and encourage our customers to purchase additional volume up to, in the aggregate, a total contract value of approximately \$3.5 billion through the end of 2024, which we believe provides us with significant future revenue visibility and helps to insulate us from potential short-term fluctuations or legislative changes in any one market. Our supply agreements generally contain liquidated damages provisions in the event of late delivery, however, we generally do not bear the responsibility for transporting the wind blades we manufacture to our customers.

Our supply agreements with our customers generally provide downside protection for us through minimum annual volume commitments, as well as encourage our customers to maximize the volume of wind blades they purchase from us, since purchasing less than a specified amount typically triggers higher pricing. Some of our supply agreements also provide for annual sales price reductions reflecting assumptions regarding increases in our

manufacturing efficiency and productivity. We work to continue to drive down or minimize the impact of increases in the cost of materials and production through innovation and global sourcing, a portion of the benefit of which we share with our customers contractually, further strengthening our deep customer relationships. Similarly, we typically share any raw material price increases with our customers. Our largest customer, however, sources all of the critical raw materials that we use to produce its wind blades and this customer assumes 100% of any such raw material price increases or decreases. Wind blade pricing is based on annual commitments of volume as established in the customer's contract, with orders less than committed volume resulting in additional costs per wind blade to customers. Orders in excess of annual commitments may but generally do not result in discounts to customers from the contracted price for the committed volume. Customers may utilize early payment discounts, which are reported as a reduction of revenue at the time the discount is taken.

Vestas

In 2014, we entered into a supply agreement with Vestas to supply wind blades from our manufacturing facility in Dafeng, China. Based on the success of this manufacturing arrangement, we expanded our relationship with Vestas through additional supply agreements to manufacture wind blades at our manufacturing facilities in Turkey, Matamoros, Mexico, Yangzhou, China and Chennai, India. In December 2021, we extended our supply agreement with Vestas at one of our Izmir, Turkey plants for an additional year through December 2023. We consolidated our manufacturing footprint for Vestas in China at the end of 2021 by stopping production at our Dafeng, China facility and agreeing to add four new manufacturing lines to our Yangzhou, China manufacturing facility. Each of the supply agreements with Vestas provide for a minimum number of wind blade sets to be purchased by Vestas each year during the term, the schedule for which is established at the outset of the agreement. In return, we commit to dedicate a specific number of manufacturing lines to Vestas for each of the years under the supply agreements. Additionally, we have manufactured some of the model-specific tooling that we use to produce wind blades for Vestas. If either party commits a material breach of the supply agreement, the non-breaching party may terminate the supply agreement if the breach is not remedied or if the parties have not mutually agreed to plan for cure within 30 days after notice of breach has been given.

GE Wind

We have multiple supply agreements with GE Wind to manufacture wind blades from two manufacturing facilities in Juárez, Mexico. Each of the supply agreements with GE Wind provide for a minimum number of wind blade sets to be purchased by GE Wind each year during the term, the schedule for which is established at the outset of the agreement. In return, we commit to dedicate a specific number of manufacturing lines to GE Wind for each of the years under the supply agreements. In August 2018, GE Wind agreed to extend our existing supply agreement for one of our Mexico manufacturing facilities by two years to 2022 and increased the number of wind blade manufacturing lines in that facility from three to five. In July 2020, GE Wind agreed to extend our existing supply agreement in one of our Mexico plants by two years to 2022 and added one additional wind blade manufacturing line in Mexico to provide blades for GE Wind's turbine technologies in North America in 2021. We ceased production of GE Wind blades at our Iowa facility during the fourth quarter of 2021. Unless otherwise terminated or renewed, our supply agreements with GE Wind in Mexico are in effect until the end of 2022. In addition, either party may terminate these supply agreements upon a material breach by the other party which goes uncured for 30 days after written notice has been provided.

Nordex

We supply wind blades to Nordex from our manufacturing facilities in Turkey, India and Matamoros, Mexico. In Matamoros, we took over a facility from Nordex, pursuant to a 3-year supply agreement. If the supply agreement for the Matamoros manufacturing facility is not extended, then Nordex will resume management and operation of the Matamoros wind blade manufacturing facility at the end of the 3-year term. Each of the supply agreements with Nordex provide for a minimum number of wind blade sets to be purchased by Nordex each year during the term, and we commit to dedicate a specific number of manufacturing lines to Nordex for each of the years under the supply agreements.

Other Supply Agreements

We have a supply agreement in Turkey with ENERCON. With respect to this supply agreement, we have agreed to dedicate capacity for a set number of wind blades for each calendar year during the term of the agreement in exchange for a commitment to purchase minimum annual volumes of wind blade sets. Unless otherwise terminated, this supply agreement remains in effect for a period of several years and either party may terminate the supply agreement upon a material breach by the other party which goes uncured. This supply agreement contains provisions that allow for our customer to purchase less volume in later years of this supply agreement, reduce the number of dedicated manufacturing lines or to terminate the supply agreement upon notice for reasons such as our failure to deliver the contracted wind blade volumes or our failure to meet certain mutually agreed upon cost reduction targets. See “Risk Factors—Risks Related to Our Wind Blade Business— Some of our supply agreements with our customers are subject to early termination and volume reductions at the discretion of our customers, and any early termination of or reduced volumes of wind blades purchased under these agreements would materially harm our business, financial condition and results of operations” included in Part I, Item 1A of this Annual Report on Form 10-K.

Research and Development

We have a long history of developing composite products as well as the development of new and advanced materials, tooling, manufacturing processes and inspection methods. Our knowledge and experience of composite materials and manufacturing originates with our predecessor company, Tillotson Pearson Inc., a leading manufacturer of high-performance recreational sail and powerboats along with a wide range of composite structures used in other industrial applications. Leveraging our knowledge and experience, we realized the opportunity to specialize in wind energy and other industrial end-markets where there was a demand for high precision composite manufacturing capabilities.

We conduct research and development in close collaboration with our customers on the design, development, and deployment of innovative manufacturing processes, including automation, advanced materials and sophisticated product quality inspection tools. We have partnered with the U.S. Department of Energy (DOE), government laboratories, universities and our customers to innovate through cost sharing of advanced manufacturing and other innovative programs. In 2021, we began a collaboration with the University of Maine pursuant to a grant from the U.S. DOE’s Advanced Manufacturing Office to develop a rapid, low-cost additive manufacturing solution (3D printing) for fabricating large, segmented wind blade molds. Additionally, we participate on collaborative programs as a working member of the Institute for Advanced Composite Manufacturing Innovation (IACMI), a US DOE National Network of Manufacturing Innovation consortium. Specifically, this effort includes new material systems focused on creating an economical solution to end-of-life reclamation of materials for reuse and recycling. This work includes cost sharing of engineering and laboratory support to develop new process technologies.

We employ a highly experienced workforce of engineers in various facets of our business, from research and development projects, to the ongoing, real-time development and implementation of incremental manufacturing and material improvements. Our research and development effort places a priority on improving quality through process and procedure improvement, in addition to reducing cost through specification changes and sourcing of more cost-effective suppliers. Other areas of emphasis include composite design, in-house fabrication of precision molding and assembly systems, prototyping, testing, optimization and volume production capabilities. We also encourage our employees to invent and develop new technologies to maintain our competitiveness in the marketplace. In addition to our internal research and development activities, from time to time, we also conduct research and development activities pursuant to funded development arrangements with our customers and other third parties, and intend to continue to seek opportunities for product development programs that could create recurring revenue and increase our overall profitability over the long term.

In July 2019, we acquired certain IP and hired a team of engineering resources from the EUROS group, based in Berlin, Germany. This team of technical experts focuses on blade design, tooling, materials and process technology development. This acquisition strengthened our technical capabilities in support of our global operations and growth. In addition, we established an advanced engineering center in Kolding, Denmark which provides technical and engineering resources to our manufacturing facilities and our customers.

Competition

The wind blade market is highly concentrated, competitive and subject to evolving customer needs and expectations. Our competitors include LM Wind Power (a subsidiary of GE Renewable Energy) and other independent wind blade manufacturers such as Sinoma Science & Technology Co. Ltd., Shanghai Aeolon Wind Energy Technology Development (Group) Co., Ltd., Aeris Industria E Comercio De Equipamentos Para Geracao De Energia S.A. and ZhongFu Lianzhong Composites Group Co., Ltd., as well as regional wind blade suppliers in geographic areas where our current or prospective manufacturing facilities are located.

We also compete with, and in a number of cases supplement, vertically integrated wind turbine OEMs that manufacture their wind blades.

The principal competitive factors in the wind blade market include reliability, total delivered cost, manufacturing capability, product quality, engineering capability and timely completion of wind blades. We believe we compete favorably with our competitors on the basis of the foregoing factors. Our ability to remain competitive will depend to a great extent upon our ongoing performance in the areas of manufacturing capability, timely completion and product quality.

Competitive advantages in the wind blade service market include speed of response, local footprint, repair quality, competitive labor pricing and capacity to work across regions as demand adapts to the business seasonality. Our competitors include certain of our wind OEM customers, and a broad range of independent wind blade service companies. We have proven strong in many of these criteria and our ability to remain competitive will depend on such factors, including strengthening our response time, adding and managing labor resources, sourcing materials globally at competitive rates while further expanding into new countries, and offering additional value-added engineering support and technical solutions.

The transportation and automotive supply industry is highly competitive, and our composite solutions compete against alternative materials and a broad range of competitive suppliers. Our ability to remain competitive will depend on time to market, continuing to provide a lower upfront investment for our customers, and providing superior performance attributes with our composite solutions.

Transportation Products

We seek to create additional recurring revenue opportunities through the supply of other composite structures outside the wind energy market. We believe transportation products, including buses, trucks, electric vehicles and high-performance automotive products and components, are ideally suited for our advanced composite technology because of the benefits derived from weight reduction, corrosion resistance, strength, durability and lower upfront capital costs. These benefits should allow us to develop structural composite solutions to assist our customers in developing electric vehicles, including light, medium and heavy-duty trucks, buses and automobiles with clean propulsion systems or in meeting new and developing fuel economy standards.

In addition, by producing a range of composite structures, we are able to leverage the materials and manufacturing process technology and expertise developed through one project to maximize production quality, improve performance and minimize costs across our other manufacturing efforts, including our wind blade business. Our projects for customers in the transportation market have historically generated project-related revenues for a specific duration. We intend to seek collaborations with additional customers in these markets that will provide recurring revenue and business opportunities for us, in addition to the opportunities provided by our existing customers and relationships, and contribute to our overall profitability over the long term.

Our facilities in Warren, Rhode Island and Juárez, Mexico manufacture products for customers in the transportation market using, in some cases, similar proprietary and replicable manufacturing processes that we use to produce wind blades. Our projects for customers in the transportation market include, or have included, the supply of all-composite bodies for electric buses and last-mile delivery as well as automated people mover systems for airports. In November 2017, we signed a five-year supply agreement with Proterra to supply Proterra Catalyst® composite bus bodies. In June 2021, we extended our supply agreement with Proterra through December 2024.

In 2019, we made a capital investment of approximately \$11.5 million to develop a highly automated manufacturing line for the electric vehicle market within our Warren, Rhode Island facility to enable us to further develop our technology, create defensible product and process IP and demonstrate our capability to manufacture composite components cost effectively at automotive volume rates. In 2021, we began a production program to manufacture a composite component for an electric vehicle manufacturer using this automated production line and have commenced production of additional components for this manufacturer in 2022. We manufactured approximately 26,000 production components in 2021 and anticipate manufacturing an additional 25,000 production components in the first half of 2022. We continue to expand our manufacturing capabilities and have received orders with a major OEM to produce approximately 450,000 production components in 2022 and approximately 1,000,000 in 2023.

Our current principal competitors in the transportation market include suppliers of conventional steel and aluminum products and non-structural automotive fiberglass and other advanced composites-based manufacturers for transportation applications.

Intellectual Property

We have a variety of IP rights, including trademarks, copyrights and patents issued, filed and applied-for in a number of jurisdictions, including the U.S., Germany, the European Union and China, trademarks and copyrights, but we believe that our continued success and competitive position depend, in large part, on our proprietary materials, tooling, process and inspection technologies and our ability to innovate and not on our IP alone. Accordingly, we take measures to protect the confidentiality and control the disclosure of our proprietary technology. We rely primarily on a combination of patents, know-how and trade secrets to establish and protect our proprietary rights and preserve our competitive position. We also seek to protect our proprietary technology, in part, by confidentiality agreements with our customers, employees, consultants and other contractors. Trade secrets, however, are difficult to protect. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our customers, employees, consultants or contractors use IP owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Backlog

As of December 31, 2021 and 2020, our backlog for wind blades and related wind products totaled \$813.1 million and \$1,197.7 million, respectively. Our backlog includes purchase orders issued in connection with our supply agreements. We generally record a purchase order into backlog when the following requirements have been met: a signed supply agreement or other contractual agreement has been executed with our customer, a purchase order has been issued by our customer and we expect to ship wind blades to or produce the related wind products for such customer in satisfaction of any purchase order within 12 months. Backlog as of any particular date should not be relied upon as indicative of our revenue for any future period.

Regulation

Wind Energy

Our operations are subject to various foreign, federal, state and local regulations related to environmental protection, health and safety, labor relationships, general business practices and other matters. These regulations are administered by various foreign, federal, state and local environmental agencies and authorities, including the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration of the U.S. Department of Labor and comparable agencies in China, Mexico, Turkey, India and individual U.S. states. In addition, our manufacturing operations in China, Mexico, Turkey and India are subject to those countries' wage and price controls, currency exchange control regulations, investment and tax laws, laws restricting our ability to repatriate profits, trade restrictions and laws that may restrict foreign investment in certain industries. Some of these laws have only been recently adopted or are subject to further rulemaking or interpretation, and their impact on our operations, including the cost of complying with these laws, is uncertain. We believe that our operations currently comply, in all material respects, with applicable laws and regulations. Further, as a U.S. corporation, we are subject to The Foreign Corrupt Practices Act of 1977 (FCPA), which generally prohibits U.S. companies and their

intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business. As a U.S. corporation with global operations, we are also subject to foreign antibribery laws and regulations in the countries where we conduct business, including the U.K. Bribery Act.

In addition, our business has been and will continue to be affected by subsidization of the wind turbine industry with its influence declining over time as wind energy reaches grid parity with traditional sources of energy. In the U.S., the federal government has encouraged capital investment in renewable energy primarily through tax incentives. Production tax credits for new renewable energy projects were first established in 1992. The Production Tax Credit for Renewable Energy (PTC) provided the owner of a wind turbine placed in operation before January 1, 2015 with a 10-year credit against its U.S. federal income tax obligations based on the amount of electricity generated by the wind turbine.

The PTC was extended in 2015 for wind power projects through December 31, 2019, and was to be phased down over the term of the PTC extension. Specifically, the PTC was kept at the same rate in effect at the end of 2014 for wind power projects that either commenced construction or met certain safe harbor requirements by the end of 2016, and thereafter was to be reduced by 20% per year in 2017, 2018 and 2019, respectively. In December 2019, Congress extended the PTC through the end of 2020 and increased the rate from 40% to 60% for projects that either commenced construction or met certain safe harbor requirements by the end of 2020 and are commissioned by the end of 2024. In December 2020, Congress extended the PTC through the end of 2021, continuing the rate of 60% for projects that either commenced construction or met certain safe harbor requirements by the end of 2021 and are commissioned by the end of 2025. Although we believe that the onshore wind market will continue to grow over the long term, the expiration of the PTC at the end of 2021 has created uncertainty in the near term resulting in decreased demand for our wind blades in 2021 compared to 2020. We are monitoring legislative and regulatory policy proposals to extend or expand tax credits in the U.S. to promote wind energy.

At the state level, as of December 31, 2021, 30 states, the District of Columbia and Puerto Rico have implemented renewable portfolio standard (RPS) programs that generally require that, by a specified date, a certain percentage of a utility's electricity supplied to consumers within such state is to be from renewable sources (ranging from 10% to 100% and from between the present and 2050).

In addition, there are also increasing regulatory efforts globally to promote renewable power. In December 2020, the European Union (EU) agreed to reduce EU greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. Similarly, in December 2020, China announced its goal to reach carbon neutrality by 2060, and in November 2021, India targeted to increase its renewable energy capacity to 500 gigawatts by 2030 and to reach carbon neutrality by 2070. Additionally, Turkey enacted Law No. 5346 in 2005, which was recently amended and extended in January 2021, to promote renewable-based electricity generation within their domestic electricity market through feed-in- tariffs and purchase obligations for distribution companies requiring purchases from certified renewable energy producers.

Human Capital

As of December 31, 2021, we employed over 14,000 full-time employees, approximately 600 of whom were located in the U.S., 1,400 in China, 6,300 in Mexico, 4,100 in Turkey and 1,600 in India. Certain of our employees in Turkey and at our manufacturing facilities in Matamoros, Mexico are represented by labor unions. We believe that our relations with our employees are generally good.

Our human capital strategy focuses on creating an exceptional employee experience and ensuring that we foster a learning culture where our employees want to grow with us. Our primary focus areas of our human capital strategy are as follows:

Culture

We believe our unique culture is a key strategic advantage for us. Our associates are highly engaged and committed to the Company, their teams, and the jobs they perform based on our most recent employee engagement surveys. This strong employee engagement is due in part to a strong sense of purpose given our role in the broader

renewable energy supply chain. We believe strong employee engagement translates into a strong quality focus and orientation. It is through the efforts of our approximately 14,000 employees at year-end 2021 that we have been able to continue to achieve high levels of performance. When we select new persons to join our team, we ensure that the individuals have high levels of commitment and adaptability in addition to the skills needed for the role. Our employees embrace our core values of safety, operational excellence, commitment, integrity and leadership. Our team members bring our values to life by applying their diverse backgrounds and skillsets to the jobs they are performing, demonstrating high discretionary effort, and embracing our values in their day-to-day lives.

Safety

Safety is our most important and first core value. We strongly believe that all accidents are preventable and that every associate should return at the end of their shift to their families in the same healthy condition in which they showed up for work. To help drive these beliefs it is our goal to continuously improve our zero-harm culture and implement a global behavior-based safety (BBS) program resulting in zero unsafe behaviors. All of our manufacturing facilities have safety management systems in place that cover their associates and activities. We ensure the safety of our associates to support our zero-harm culture in a variety of ways, starting with safety education. Safety education is the foundation for our other safety measures. Associates receive regular training on environmental, health and safety (EHS) related topics. This training includes but is not limited to:

- general awareness EHS training
- ergonomics training
- compliance training
- hazard-specific training as required for the job or task
- fire hazard and prevention training
- hazardous material training
- equipment-specific safety training
- safety incident and corrective action training

Diversity, Equity and Inclusion

We value diversity in all forms, especially diversity of thought, and aspire to create an environment that recognizes and celebrates the benefits that come with a diverse workforce. We know that diversity of our employee population makes us better and strive to continue to improve and act with intention in these areas.

As a global business, we have an incredible opportunity to benefit from the diversity we have in our Company. We can and will do more to maximize the positive impact that diversity, equity, inclusion, and a feeling of belonging can bring. We believe that this and the rest of our vision statement for diversity, equity and inclusion is a solid representation of what we believe in, are committed to, and how we will hold associates and leaders accountable. We recognize that one of our greatest areas of opportunity is to increase the representation of women and overall racial and ethnic diversity at all levels of leadership as we add more talent to our leadership levels.

Talent

We market open jobs across multiple platforms such as our website, LinkedIn, internal postings and local job boards to ensure that our candidate pool is as diverse as possible. We promote having diversity on the interviewing and selection panel to ensure different points of view are considered as part of the final selection process. We enjoy high levels of retention across all of our geographies. Our overall turnover rate has continued to decline over the past three years on a global basis. We facilitate an annual talent review process in all regions and functional teams to promote the internal development and promotion of internal talent. We have enjoyed high participation in employee surveys, high engagement levels against industry normative data, and also facilitated a COVID-19 and diversity equity and inclusion survey in 2021.

Environmental, Health and Safety

We are subject to various environmental, health and safety laws, regulations and permit requirements in the jurisdictions in which we operate governing, among other things, health, safety, pollution and protection of the

environment and natural resources, the handling and use of hazardous substances, the generation, storage, treatment and disposal of wastes, and the cleanup of any contaminated sites. We are not aware of any pending environmental compliance or remediation matters that are reasonably likely to have a material adverse effect on our business, financial position or results of operations. However, failure by us to comply with applicable environmental and other requirements could result in fines, penalties, enforcement actions, third party claims, remediation actions, and could negatively impact our reputation with customers. We have adopted environmental, health and safety policies outlining our commitment to environmental responsibility and accountability and our desire to eliminate unsafe behaviors in the workplace. These policies apply to the Company as a whole, and our vendors and suppliers and are available on our website. We have a company-wide focus on safety and have implemented a number of measures to promote workplace safety. Customers are increasingly focused on safety records in their sourcing decisions due to increased regulations to report all incidents that occur at their sites and the costs associated with such incidents.

Available Information

Our website address is www.tpicomposites.com. All of our filings with the Securities and Exchange Commission (SEC), including this Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, statements of changes in beneficial ownership and amendments to those reports, are available free of charge on our website as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on our website is neither a part of, nor incorporated by reference into, this Annual Report on Form 10-K. The SEC also maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

Our investor relations website address is <https://ir.tpicomposites.com/websites/tpicomposites/English/0/investor-relations.html> and includes key information about our corporate governance initiatives, including our Nominating and Corporate Governance Committee charter, charters of the Audit and Compensation committees and our Code of Business Conduct & Ethics.

Information about our Executive Officers

The following table sets forth certain information regarding our Executive Officers as of February 24, 2022:

Name, Age	Position	Year Appointed as Executive Officer of TPI Composites, Inc.	Business Experience since January 1, 2017
William Siwek, 59	President, Chief Executive Officer and Director	2013	TPI Composites, Inc.: Chief Executive Officer since May 2020, President from May 2019 to May 2020, Chief Financial Officer from August 2013 to May 2019.
Ramesh Gopalakrishnan, 54	President, Chief Operating Officer, Wind	2019	TPI Composites, Inc.: President and Chief Operating Officer, Wind since January 2022, Chief Operating Officer, Wind from May 2019 to January 2022, Senior Vice President, Global Quality, Technology and Latin American Operations from February 2019 to May 2019, Senior Vice President, Technology and Industrialization from August 2017 to February 2019, Vice President Technology, Transfer and Launch from September 2016 to August 2017. Benchmark Electronics, Inc.: Director since October 2021.

Adan Gossar, 49	Interim Chief Financial Officer	2020	TPI Composites, Inc.: Interim Chief Financial Officer since December 2021, Chief Accounting Officer since July 2020. Reef Technology: Chief Accounting Officer from April 2019 to July 2020. Veritiv Corporation: Corporate Controller from March 2018 to March 2019. Allconnect Inc.: Vice President, Corporate Controller and Treasurer from August 2013 to February 2018.
Lance Marram, 50	Chief Commercial Officer, Wind	2022	TPI Composites, Inc.: Chief Commercial Officer since January 2022, Senior Vice President, Global Service from October 2019 to January 2022. Senvion North America: Managing Director from June 2017 to July 2019. E2M International: From April 2012 to May 2017.
Jerry Lavine, 53	President, Transportation	2021	TPI Composites, Inc.: President, Transportation since June 2021. Independent Consultant: From January 2021 to June 2021. Bordrin New Energy Vehicle Corporation: Chief Technology Officer and President of North America from November 2017 to January 2021. Magna International: Vice President, Product Development from September 2016 to November 2017.
Steven Fishbach, 52	General Counsel and Secretary	2015	TPI Composites, Inc.: General Counsel since January 2015.

Item 1A. Risk Factors

You should carefully consider the following risk factors. If any of the events contemplated by the following discussion of risks should occur, our business, results of operations, financial condition, growth prospects and cash flows could suffer significantly. Additional risks that we currently do not know about or that we currently believe to be immaterial may also impair our business. Certain statements below are forward-looking statements. See “Special Note Regarding Forward-Looking Statements” in this Annual Report on Form 10-K.

Risks Related to Our Wind Business

A significant portion of our business is derived from a small number of customers, and three wind blade customers in particular, therefore any loss of or reduction in purchase orders, failure of these customers to fulfill their obligations or our failure to secure supply agreement renewals from these customers could materially harm our business.

Substantially all of our revenues are derived from three wind blade customers. Vestas, GE Wind and Nordex accounted for 40.4%, 24.7% and 22.4%, respectively, of our total net sales for the year ended December 31, 2021, and 49.7%, 23.4% and 15.3%, respectively, of our total net sales for the year ended December 31, 2020, and 46.1%, 25.7% and 16.1%, respectively, of our total net sales for the year ended December 31, 2019. Accordingly, we are substantially dependent on continued business from our current wind blade customers. If one or more of our wind blade customers were to reduce or delay wind blade orders, file for bankruptcy or become insolvent, fail to pay amounts due or satisfactorily perform their respective contractual obligations with us or otherwise terminate or fail to renew their supply agreements with us, our business, financial condition and results of operations could be materially harmed.

Defects in materials and workmanship or wind blade failures could harm our reputation, expose us to product warranty or other liability claims, decrease demand for wind blades we manufacture, or materially harm existing or prospective customer relationships, and our reserves for warranty expenses might not be sufficient to cover all future costs.

Defects in the wind blades we manufacture are unpredictable and an inherent risk in manufacturing technically advanced products that involve a significant amount of manual labor and processes. Defects may arise from multiple causes, including design, engineering, materials, manufacturing and components failures as well as deficiencies in our manufacturing processes. Under our supply agreements, we warranty the materials and workmanship of the wind blades while our customers are responsible for the fitness of use and design of the wind blades. We have experienced wind blade failures and defects at some of our facilities during the startup manufacturing phase of new products, and we may experience failures or defects in the future. Wind blades that we have manufactured have also failed in the field. Any wind blade failures or other product defects in the future could materially harm our existing and prospective customer relationships. Specifically, negative publicity about the quality of the wind blades we manufacture or defects in the wind blades supplied to our customers could result in a reduction in wind blade orders, increased warranty claims, product liability claims and other damages or termination of our supply agreements or business relationships with current or new customers. Any of the foregoing could materially harm our business, operating results and financial condition.

We provide warranties for all of the wind blades and precision molding and assembly systems we produce, including parts and labor, for periods that typically range from two to five years depending on the product sold. Our estimate of warranty expense requires us to make assumptions about matters that are highly uncertain, including future rates of product failure, repair costs, shipping and handling and de-installation and re-installation costs at customers' sites. Our assumptions could be materially different from the actual performance of our products and these remediation expenses in the future. The expenses associated with wind blade repair and remediation activities can be substantial and may include changes to our manufacturing processes. If our estimates prove materially incorrect, we could incur warranty expenses that exceed our reserves and be required to make material unplanned cash expenditures, which could materially harm our business, operating results and financial condition.

We operate in an industry characterized by changing customer demands and associated transition costs, which could materially harm our business.

The wind energy industry is competitive and is characterized by evolving customer demands. As a result, we must adapt quickly to customer requests for changes to wind blade specifications, which increases our costs and can provide periods of reduced revenue and margins. For instance, during 2020 and into 2021, we undertook model transitions at several of our facilities for various customer demands. In 2020, we had several manufacturing lines in transition which adversely impacted our revenue and profitability. We currently expect to have manufacturing lines in transition during 2022 which could adversely affect our revenue and profitability in 2022. We typically share transition costs with the customer in connection with these changing customer demands, but any sharing is usually the subject of negotiation and the amount is not always contractually defined. If we do not receive transition payments from our customers sufficient to cover our transition costs or lost margins, our business, financial condition, and results of operations could be materially harmed.

We have experienced, and could in the future experience, quality or operational issues in connection with plant construction, expansion or assumption which could result in losses and cause delays in our ability to complete our projects and may therefore materially harm our business, financial condition and results of operations.

We dedicate most of the capacity of our current wind blade manufacturing facilities to existing customers and, as a result, we may need to build additional manufacturing capacity or facilities to serve the needs of new customers or expanded needs of existing customers. Since the third quarter of 2016, we have commenced operations at five manufacturing facilities in Mexico, one in Turkey, one in Yangzhou, China and one in Chennai, India. The construction of new plants and the expansion or assumption of existing plants involves significant time, cost and other risks. We generally expect our plants to generate losses in their first 12 to 18 months of operations related to production startup costs. Additionally, numerous factors can contribute, and have in the past contributed, to delays or difficulties in the startup of, or the adoption of our manufacturing lines to produce larger wind blade models, which we refer to as model transitions, in our manufacturing facilities. These factors include permitting, construction or renovation delays, defects or issues with product tooling, the engineering and fabrication of specialized equipment, the modification of our general production know-how and customer-specific manufacturing processes to address the specific wind blades to be tested and built, changing and evolving customer specifications and expectations and the hiring and training of plant personnel. Any delays or difficulties in plant startup, expansion or assumption may result in cost overruns, production delays, contractual penalties, loss of revenues, reduced margins and impairment of customer relationships, which could materially harm our business, financial condition and results of operations. For example, in 2019, we experienced construction and startup delays with respect to our new manufacturing facility in Yangzhou, China. These delays resulted in us paying liquidated damages of \$7.8 million to one of our customers in 2019 and 2020. In 2021, we experienced significant production delays at the Matamoros, Mexico manufacturing facility that we took over from Nordex in July 2021, which adversely impacted our profitability and financial condition.

Some of our supply agreements with our customers are subject to early termination and volume reductions at the discretion of our customers, and any early termination of or reduced volumes of wind blades purchased under these agreements could materially harm our business, financial condition and results of operations.

Our supply agreements expire between the end of 2021 and the end of 2024. Some of our supply agreements contain provisions that allow for the early termination of these agreements upon the customer providing us with advance written notice and paying an early termination fee. Our supply agreements generally establish annual purchase requirements on which we rely for our future production and financial forecasts. However, the timing and volume of purchases, within certain parameters, may be subject to change by our customers. The amount of the annual purchase requirements typically decline in the later years of our supply agreements. Our customers may not continue to maintain supply agreements with us in the future. For example, Vestas did not renew its Dafeng, China supply agreement, and GE did not renew its Iowa supply agreement, both of which expired at the end of 2021. If one or more of our customers terminate, or reduce the number of manufacturing lines and volumes of wind blades purchased, or fail to renew their supply agreements with us, it may materially harm our business, financial condition and results of operations.

Our wind turbine OEM customers are facing increasing competition and pricing pressure due to the increasing prevalence of auction-based tenders in wind energy markets, and correspondingly our margins and results of operations may be adversely affected.

Many governments are shifting from feed-in tariffs, which typically provide producers of wind energy with favorable prices for wind generated electricity, to unsubsidized, auction-based tenders as a means of promoting the development and growth of renewable energy sources such as wind energy. As a result of this shift, our wind turbine OEM customers are experiencing intense pricing pressure with respect to the sale of their turbines. As a result of this pricing pressure, we will be required to further reduce the costs we incur to manufacture wind blades to remain competitive. We typically share the benefit of cost reductions related to manufacturing wind blades with our customers pursuant to the terms of our supply agreements. If these pricing pressures continue, we may choose to reduce our margins or pass on a greater percentage of the savings to our OEM customers obtained from manufacturing cost reductions than required under our supply agreements to remain competitive, each of which may materially harm our business, financial condition and results of operations.

Although a majority of our manufacturing facilities are located outside the U.S., our business is still heavily dependent upon the demand for wind energy in the U.S. and any downturn in demand for wind energy in the U.S. could materially harm our business.

We have developed a global footprint to serve the growing wind energy market worldwide and have wind blade manufacturing facilities in the U.S., China, Mexico, Turkey and India. Although a majority of our manufacturing facilities are located outside of the U.S., historically more than half of the wind blades that we produced were deployed in wind farms located within the U.S. Our Iowa and Mexico manufacturing facilities manufacture wind blades that are generally deployed within the U.S. In addition, many of our wind blades are exported from our China, Turkey and India manufacturing facilities to the U.S. In addition, tariffs imposed on components of wind turbines from China, including wind blades, has had a negative impact on demand for our wind blades manufactured in our Chinese manufacturing facilities. Consequently, demand for wind energy and our wind blade sales could be adversely affected by a variety of reasons and factors, and any downturn in demand for wind energy in the U.S. could materially harm our business. We expect that demand for wind turbine blades in 2022 will remain at similar levels or decline compared to 2021 due in large part to continued regulatory uncertainty in the U.S. regarding whether the PTC will be extended or other clean energy legislation is enacted.

We have recently experienced significant price increases and supply constraints of raw materials and components that are critical to our manufacturing needs, and we may continue to, or in the future, experience such price increases and supply constraints, which may hinder our ability to perform under our supply agreements and adversely impact our profitability and financial condition.

We rely upon third parties for raw materials, such as fiberglass, carbon fiber, resins, foam core and balsa wood, and various components for the wind blades we manufacture. Some of these raw materials and components may only be purchased from a limited number of suppliers. For example, balsa wood is only grown and produced in a limited number of geographies and is only available from a limited number of suppliers. During 2021, there have been both significant price increases and supply constraints with respect to resin and carbon fiber, which are key raw materials that we use to manufacture our products, as well as increases in logistics costs to obtain raw materials. The resin price increases and supply constraints are due to a multitude of factors, including the extreme cold weather in Texas in February 2021, fires at resin manufacturing facilities in China and unplanned maintenance outages at resin manufacturing facilities in Europe. Carbon fiber prices have increased primarily due to the cost of raw material inputs as well as increased global demand for carbon fiber across multiple industries. Although we are able to pass a portion of these cost increases onto our customers, these raw material price and logistics cost increases adversely affected our results of operations by approximately \$38 million for the year ended December 31, 2021.

Additionally, our ability to purchase the appropriate quantities of raw materials is constrained by our customers' transitioning wind blade designs and specifications. As a result, we maintain, closely monitor and manage inventory and acquire raw materials and components as needed and with consideration to lead time factors. Due to significant international demand for these raw materials from many industries, and extended logistics lead times, we may be unable to acquire sufficient quantities or secure a stable supply for our manufacturing needs. Our largest customer sources all of the critical raw materials that we use to produce its wind blades and in some instances, our customers source the purchase of certain key raw materials and components. Since we do not source the procurement of these raw materials for our largest customer, we have fewer controls and remedies to mitigate

raw material and supply chain risks and disruptions relating to these raw materials. For example, we experienced production delays and reduced production volumes in 2021 at our Matamoros, Mexico and Izmir, Turkey manufacturing facilities due to carbon and other raw material shortages that were sourced by a customer.

In 2021, we procured approximately 22% of our raw materials from China so any ocean logistic delays, weather events, strikes, other force majeure events or geopolitical developments impacting China could disrupt our supply chain. In addition, a disruption in any aspect of our global supply chain caused by transportation delays, customs delays, cost issues or other factors could result in a shortage of raw materials or components critical to our manufacturing needs. Any supply shortages, delays in the shipment of materials or components from third party suppliers, or changes in the terms on which they are available could disrupt or materially harm our business, operating results and financial condition.

Demand for the wind blades we manufacture may fluctuate for a variety of reasons, including the growth of the wind industry, and decreases in demand could materially harm our business and may not be sufficient to support our growth strategy.

Our revenues, business prospects and growth strategy heavily depend on the continued growth of the wind industry and our customers' continuing demand for wind blades. Customer demand could decrease from anticipated levels due to numerous factors outside of our control that may affect the development of the wind energy market generally, portions of the market or individual wind project developments, including:

- general economic conditions;
- the general availability and demand for electricity;
- wind energy market volatility;
- cost-effectiveness, availability and reliability of alternative sources of energy and competing methods of producing electricity, including solar and non-renewable sources such as natural gas;
- foreign, federal and state governmental tariffs, subsidies and tax or regulatory policies;
- delays or cancellations of government tenders or auctions for wind energy projects;
- the availability of financing for wind development projects;
- the development of electrical transmission infrastructure and the ability to implement a proper grid connection for wind development projects;
- foreign, federal and state laws and regulations regarding avian protection plans, noise or turbine setback requirements and other environmental laws and regulations;
- our customers' cost of transporting wind blades from our manufacturing facilities to wind farms;
- increases in the price or lack of availability of raw materials used to produce our wind blades;
- administrative and legal challenges to proposed wind development projects; and
- public perception and localized community responses to wind energy projects.

In 2021, we experienced a decline in demand for our wind turbine blades due primarily to regulatory uncertainty regarding whether the PTC would be extended beyond 2021 in the U.S., which adversely impacted our operating results. We expect that demand for wind turbine blades in 2022 will remain at similar levels or decline compared to 2021. In addition to factors affecting the wind energy market generally, our customers' demand may also fluctuate based on other factors beyond our control. Any decline in customer demand below anticipated levels could materially harm our revenues and operating results and could delay or impede our growth strategy.

We have experienced in the past, and our future wind blade production could be affected by, operating problems at our facilities, which may materially harm our operating results and financial condition.

Our wind blade manufacturing processes and production capacity have in the past been, and could in the future be, disrupted by a variety of issues, including:

- production outages to conduct maintenance activities that cannot be performed safely during operations;
- prolonged power failures or reductions;
- breakdowns, failures or substandard performance of machinery and equipment;
- our inability to comply with material environmental requirements or permits;
- inadequate transportation infrastructure, including problems with railroad tracks, bridges, tunnels or roads;
- supply shortages of key raw materials and components;
- damage or production delays caused by earthquakes, fires, floods, tornadoes, hurricanes, extreme weather conditions such as windstorms, hailstorms, drought, temperature extremes, typhoons or other natural disasters or terrorism or health epidemics such as the COVID-19 pandemic; and
- labor unrest or shortages in skilled labor.

The cost of repeated or prolonged interruptions, reductions in production capacity, or the repair or replacement of complex and sophisticated tooling and equipment may be considerable and could result in damages under or the termination of our supply agreements or penalties for regulatory non-compliance, any of which could materially harm our business, operating results and financial condition.

We operate a substantial portion of our business in international markets and we may be unable to effectively manage a variety of currency, legal, regulatory, economic, social and political risks associated with our global operations and those in developing markets.

We currently operate manufacturing facilities in the U.S., China, Mexico, Turkey, and India. Since the third quarter of 2016, we have commenced operations at five new manufacturing facilities in Mexico, one in Turkey, one in Yangzhou, China and one in Chennai, India. For the years ended December 31, 2021, 2020 and 2019, approximately 90%, 89% and 88%, respectively, of our net sales were derived from our international operations. Our overall success depends, in part, upon our ability to succeed in differing legal, regulatory, economic, social and political conditions. The global nature of our operations is subject to a variety of risks, including:

- difficulties in staffing and managing multiple international locations;
- increased exposure to foreign currency exchange rate risk or currency exchange controls imposed by foreign countries;
- the risk of import, export and transportation regulations and tariffs on foreign trade and investment, including boycotts and embargoes;
- taxation and revenue policies or other restrictions, including royalty and tax increases, retroactive tax claims and the imposition of unexpected taxes;
- the imposition of, or rapid or unexpected adverse changes in, foreign laws, regulatory requirements or trade policies;
- restrictions on repatriation of earnings or capital or transfers of funds into or out of foreign countries;
- limited protection for IP rights in some jurisdictions;
- inability to obtain adequate insurance;
- difficulty administering internal controls and legal and compliance practices in countries with different cultural norms and business practices;
- the possibility of being subjected to the jurisdiction of foreign courts in connection with legal disputes and the possible inability to subject foreign persons to the jurisdiction of courts in the U.S.;
- the misinterpretation of local contractual terms, renegotiation or modification of existing supply agreements and enforcement of contractual terms in disputes before local courts;
- the inability to maintain or enforce legal rights and remedies at a reasonable cost or at all; and
- the potential for political unrest, expropriation, nationalization, revolution, war or acts of terrorism in countries in which we operate.

As we continue to operate our business globally, our success will depend, in part, on our ability to anticipate and effectively manage these and other related risks. We may be unsuccessful in developing and implementing policies and strategies that will be effective in managing these risks in each country where we do business or conduct operations. Our failure to manage these risks successfully could materially harm our business, operating results and financial condition.

We may not achieve the long-term growth we anticipate if wind turbine OEMs do not continue to shift from in-house production of wind blades to outsourced wind blade suppliers and if we do not expand our customer relationships, diversify our product and service offerings and add new customers.

Many wind turbine OEMs rely on in-house production of wind blades for some or all of their wind turbines. Our growth strategy depends in large part on the continued expansion of our relationships with our current wind blade customers, diversifying our product and service offerings and adding new key customers. All of our customers possess the financial, engineering and technical capabilities to produce their own wind blades and many source wind blades from multiple suppliers. Our existing customers may not expand their wind energy operations or, if they do, they may not choose us to supply them with new or additional quantities of wind blades or engage us to provide field service inspection and repair services or ancillary products and services. Our collaborative dedicated supplier

model for the manufacture of wind blades is a significant departure from traditional vertically integrated methods. As is typical for rapidly evolving industries, customer demand for new business models is highly uncertain. Although we have entered into supply agreements with customers that also produce wind blades for their wind turbines in-house, we may not be able to maintain these customer relationships or enter into similar arrangements with new customers that produce wind blades in-house in the future. In addition, although GE Wind historically outsourced all of their wind blade production requirements prior to its acquisition of LM, we expect that GE Wind will continue to utilize LM for a substantial percentage of its wind blade production in the future. Our business and growth strategies depend in large part on the continuation of the trend toward outsourcing manufacturing. If that trend does not continue or we are unsuccessful in persuading wind turbine OEMs to shift from in-house production to the outsourcing of their wind blade manufacturing and related product and service offerings, we may not achieve the long-term growth we anticipate and our market share could be limited.

A drop in the price of energy sources other than wind energy, or our inability to deliver wind blades that compete with the price of other energy sources, may materially harm our business, financial condition and results of operations.

We believe that the decision to purchase wind energy is, to a significant degree, driven by the relative cost of electricity generated by wind turbines compared to the applicable price of electricity from traditional (i.e. thermal) and other renewable energy sources. Decreases in the prices of electricity from traditional or renewable energy sources other than wind energy, such as solar, would harm the market for wind energy. In particular, a drop in natural gas prices could lessen the appeal of wind-generated electricity. Technological advancements or the construction of a significant number of power generation plants, including nuclear, coal, natural gas or power plants utilizing other renewable energy technologies, government support for other forms of renewable energy or construction of additional electric transmission and distribution lines could reduce the price of electricity produced by competing methods, thereby making the purchase of wind energy less attractive. The ability of energy conservation technologies, public initiatives and government incentives to reduce electricity consumption or support other forms of renewable energy could also lead to a reduction in the price of electricity, which would undermine the attractiveness of wind energy and thus wind turbines, and, ultimately wind blades. If prices for electricity generated by wind turbines are not competitive, our business, financial condition and results of operations may be materially harmed.

We encounter intense competition for limited customers from other wind blade manufacturers, as well as in-house production by wind turbine OEMs, which may make it difficult to enter into supply agreements, keep existing customers and potentially get new customers.

We face significant competition from other wind blade manufacturers, and this competition may intensify in the future. The wind turbine market is characterized by a relatively small number of large OEMs. The competitive environment in the wind energy industry recently has become more challenging primarily due to ongoing regulatory uncertainty and supply chain constraints and significant raw material price increases. This challenging environment may lead to further consolidation in the industry, which could lead to us having even fewer customers. In addition, a significant percentage of wind turbine OEMs, including all of our current customers, produce some of their own wind blades in-house. As a result, we compete for business from a limited number of customers that outsource the production of wind blades. We also compete with a number of wind blade manufacturers in China, who are growing in terms of their technical capability and aspire to expand outside of China. Some of our competitors have more experience in the wind energy industry, as well as greater financial, technical or human resources than we do, which may limit our ability to compete effectively with them and maintain or improve our market share. Additionally, our supply agreements dedicate capacity at our facilities to our customers, which may also limit our ability to compete if our facilities cannot accommodate additional capacity. If we are unable to compete effectively for the limited number of customers that outsource production of wind blades, our ability to enter into supply agreements with potential new and existing customers may be materially harmed.

Various legislation, regulations and incentives that are expected to support the growth of wind energy in the U.S. and around the world may not be extended or may be discontinued, phased out or changed, or may not be successfully implemented, which could materially harm wind energy programs and materially decrease demand for the wind blades we manufacture.

The U.S. wind energy industry has been dependent in part upon governmental support through certain incentives including federal tax incentives and state RPS programs and may not be economically viable if a large number of these incentives are not continued. Government-sponsored tax incentive programs including the PTC, and the Investment Tax Credit (ITC) have supported the U.S. growth of wind energy. The PTC and ITC were extended for an additional year through the end of 2021. Although we believe that the onshore wind market will continue to grow over the long term, the expiration of the PTC at the end of 2021 has created uncertainty in the near term resulting in decreased demand for our wind blades in 2021 compared to 2020. We are monitoring legislative and regulatory policy proposals to extend or expand tax credits in the U.S. to promote wind energy.

Because of the long lead times necessary to develop wind energy projects, any uncertainty or delay in reinstating the PTC and ITC or adopting, extending or renewing other incentives promoting wind energy beyond their current or future expiration dates could negatively impact potential wind energy installations and result in industry volatility. There can be no assurance that governmental programs or subsidies for renewable energy will remain in effect in their present form or at all, and the elimination, reduction, or modification of these programs or subsidies could materially harm wind energy programs in the U.S. and international markets and materially decrease demand for the wind blades we manufacture and, in turn, materially harm our business, operating results and financial condition.

Risks Related to Our Transportation Business

Our efforts to expand our transportation business and enter into other strategic markets may not be successful.

While our primary focus has been to manufacture composite wind blades, our strategy is to expand our transportation business and to enter into other strategic markets. We have experienced startup challenges and incurred significant losses to date in connection with the supply of bus bodies to Proterra. The expansion of our transportation business and our entry into other strategic markets will require improved execution in terms of our start up activity and ongoing manufacturing performance as well as significant levels of investment. There can be no assurance that our transportation business or other strategic markets will develop as anticipated or that we will have success in any such markets, and if we do not, we may be unable to recover our investment, which could adversely impact our business, financial condition and results of operations.

We may incur material losses and costs as a result of product liability and warranty claims, litigation and other disputes and claims.

We are exposed to warranty and product liability claims if our transportation products fail to perform as expected. We may in the future be required to participate in a recall of these products or the vehicles incorporating our products. If public safety concerns are raised, we may have to participate in a recall even if our products are ultimately found not to be defective. Vehicle manufacturers have experienced increasing recall campaigns in recent years. Our customers may look to us for contribution when faced with recalls and product liability claims. If our customers demand higher warranty-related cost recoveries, or if our transportation products fail to perform as expected, our business, financial condition and results of operations could materially suffer.

Risks Related to Our Business as a Whole

Our business, operations and financial condition during the years ended December 31, 2021 and 2020 were adversely affected by the COVID-19 pandemic and we cannot estimate the duration of the COVID-19 pandemic and our business may be adversely affected in the future if the COVID-19 pandemic persists.

The COVID-19 pandemic adversely affected our business and operations during the years ended December 31, 2021 and 2020. During the first quarter of 2020, our China manufacturing facilities were adversely impacted by the COVID-19 pandemic in the form of reduced production levels and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. During the second quarter of 2020, all of our manufacturing facilities with the exception of our China manufacturing facilities and our Rhode Island

manufacturing facility were required to temporarily suspend production or operate at reduced production levels due primarily to certain applicable government-mandated stay at home orders in response to the COVID-19 pandemic, demands from certain of our labor unions to suspend or reduce production and general safety concerns of our associates. By the end of the second quarter of 2020, most of our manufacturing facilities had returned to operating at or near normal production levels. During the third quarter of 2021, our manufacturing facility in Yangzhou, China was required to temporarily suspend production due to a COVID-19 outbreak in Yangzhou City. We may be required to reinstate temporary production suspensions or volume reductions at our other manufacturing facilities to the extent there is a resurgence of COVID-19 cases in the regions where we operate or there is an outbreak of positive COVID-19 cases in any of our manufacturing facilities.

Our financial position, revenue, operating results, profitability and cash flows are difficult to predict and may vary from quarter to quarter, which could cause our share price to decline significantly.

Our quarterly revenue, operating results, profitability and cash flows have varied in the past and are likely to vary significantly from quarter to quarter in the future. The factors that are likely to cause these variations include:

- operating and startup costs of new manufacturing facilities;
- wind blade model transitions;
- differing quantities of wind blade production;
- unanticipated contract or project delays or terminations;
- changes in the costs of raw materials or disruptions in raw material supply;
- scrap of defective products;
- payment of liquidated damages to our customers for late deliveries of our products;
- warranty expense;
- availability of qualified personnel;
- employee wage levels;
- costs incurred in the expansion of our existing manufacturing capacity;
- volume reduction requests from our customers pursuant to our customer agreements;
- damage or production delays caused by earthquakes, fires, floods, tornadoes, hurricanes, extreme weather conditions such as windstorms, hailstorms, drought, temperature extremes, typhoons or other natural disasters or terrorism or health epidemics such as the COVID-19 pandemic;
- changes in our effective tax rate;
- general economic conditions; and
- the complexity of the financial assumptions we must use for forecasting our revenue, profitability and operating results under the revenue recognition standard and the impact that unanticipated blade transitions have on those estimates.

As a result, our revenue, operating results, profitability and cash flows for a particular period are difficult to predict and may decline in comparison to corresponding prior periods regardless of the strength of our business. It is also possible that in some future periods our revenue, operating results and profitability may not meet the expectations of securities analysts or investors. If this occurs, the trading price of our common stock could fall substantially, either suddenly or over time, and our business, operating results and financial condition would be materially harmed.

The fluctuation of foreign currency exchange rates could materially harm our financial results.

Since we conduct a significant portion of our operations internationally, our business is subject to foreign currency risks, including currency exchange rate fluctuations. The exchange rates are affected by, among other

things, changes in political and economic conditions. For example, an increase in our Turkey sales and operations will result in a larger portion of our net sales and expenditures being denominated in the Euro and Turkish Lira. Significant fluctuations in the exchange rate between the Turkish Lira and the U.S. dollar, the Turkish Lira and the Euro or the Euro and the U.S. dollar may adversely affect our revenue, expenses, as well as the value of our assets and liabilities. To the extent our future revenues and expenses are generated outside of the U.S. in currencies other than the U.S. dollar, including the Euro, the Turkish Lira, the Chinese Renminbi, Mexican Peso or India Rupee, among others, we will be subject to increased risks relating to foreign currency exchange rate fluctuations which could materially harm our business, financial condition and operating results.

Our manufacturing operations and future growth are dependent upon the availability of capital, which may be insufficient to support our capital expenditures.

Our current wind blade manufacturing activities and future growth will require substantial capital investment. For the years ended December 31, 2021 and 2020, our capital expenditures were \$38.9 million and \$65.9 million, respectively, including assets acquired under finance leases in 2021 and 2020 of \$1.8 million and \$0.2 million, respectively. We have recently entered into lease agreements with third parties to lease new manufacturing facilities in China, India and Mexico. We plan to make continued investments in our Turkey, Mexico, and China facilities. Our ability to grow our business is predicated upon us making significant additional capital investments to expand our existing manufacturing facilities and build and operate new manufacturing facilities in existing and new markets or access capital to acquire new businesses. We may not have the capital to undertake these capital investments. In addition, our capital expenditures may be significantly higher if our estimates of future capital investments are incorrect and may increase substantially if we are required to undertake actions to comply with new regulatory requirements or compete with new technologies. The cost of some projects may also be affected by foreign exchange rates if any raw materials or other goods must be paid for in foreign currency. We cannot assure you that we will be able to raise funds on favorable terms, if at all, or that future financings would not be dilutive to holders of our capital stock. We also cannot assure you that completed capital expenditures will yield the anticipated results. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants, or other restrictions on our business that could impair our operational flexibility, and would require us to fund additional interest expense. If we are unable to obtain sufficient capital at a reasonable cost or at all, we may not be able to expand our business to take advantage of changes in the marketplace or may be required to delay, reduce or eliminate some or all of our current operations, which could materially harm our business, operating results and financial condition.

Our business and reputation could be adversely impacted by any violations of the FCPA, the U.K. Bribery Act, and other foreign anti-corruption laws.

As a U.S. corporation, we are subject to the FCPA, which generally prohibits U.S. companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business. Other countries in which we operate also have anti-corruption laws, some of which prohibit improper payments to government and non-government persons and entities, and others extend their application to activities outside their country of origin. We have manufacturing facilities in China, Mexico, Turkey and India, countries with a fairly high risk of corruption. Those facilities are subject to routine government oversight. In addition, a number of our raw materials and components suppliers are state-owned, particularly in China. Moreover, due to our need to import raw materials across international borders, we also routinely have interactions, directly or indirectly, with customs officials. In many foreign countries, under local custom, businesses engage in practices that may be prohibited by the FCPA or other similar laws and regulations. Additionally, we continue to hire employees around the world as we continue to expand. Although we have implemented certain policies, procedures and controls designed to ensure compliance with the FCPA and similar laws, there can be no guarantee that all of our employees and agents, as well as those companies to which we outsource certain of our business operations, have not taken and will not take actions that violate our policies and the FCPA or other anti-corruption laws, which could subject us to fines, penalties, disgorgement, and loss of business, harm our reputation and impact our ability to compete in certain jurisdictions. In addition, these laws are complex and far-reaching in nature, and, as a result, we may be required in the future to alter one or more of our practices to be in compliance with these laws or any changes in these laws or the interpretation thereof. Moreover, our competitors may not be subject to the FCPA or similar laws, which could provide them with a competitive advantage in some jurisdictions.

Effective internal controls are necessary for us to provide reliable financial reports and effectively address fraud risks.

We maintain a system of internal controls 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 (GAAP). The process of designing and implementing effective internal controls is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to establish and maintain a system of internal controls that will be adequate to satisfy the reporting obligations of a public company. The effectiveness of our internal controls depends in part on the cooperation of senior managers worldwide.

Any system of controls, however well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system are met. Any failure to maintain that system, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business, and lead to our becoming subject to litigation, sanctions or investigations by The NASDAQ Global Market (NASDAQ), the SEC or other regulatory governmental agencies and bodies. Furthermore, investors' perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm our stock price.

Our indebtedness may adversely affect our business, results of operations and financial condition.

Our indebtedness could adversely affect our business, results of operations and financial condition by, among other things:

- requiring us to dedicate a substantial portion of our cash flow from operations to pay principal and interest on our debt, which would reduce the availability of our cash flow to fund working capital, capital expenditures, acquisitions, execution of our growth strategy and other general corporate purposes;
- limiting our ability to borrow additional amounts to fund debt service requirements, working capital, capital expenditures, acquisitions, execution of our growth strategy and other general corporate purposes;
- making us more vulnerable to adverse changes in general economic, industry and regulatory conditions and in our business by limiting our flexibility in planning for, and making it more difficult to react quickly to, changing conditions;
- placing us at a competitive disadvantage compared with those of our competitors that have less debt and lower debt service requirements;
- requiring us to potentially incur additional expenses to amend our London Interbank Offered Rate (LIBOR)-indexed loans to a new reference rate due to the planned phase out of the use of LIBOR;
- making us more vulnerable to increases in interest rates since some of our indebtedness is subject to variable rates of interest; and
- making it more difficult for us to satisfy our financial obligations.

In addition, we may not be able to generate sufficient cash flow from our operations to repay our outstanding indebtedness when it becomes due and to meet our other cash needs or to comply with the financial covenants set forth therein. We were not in compliance with certain financial covenants of our senior secured credit facility as of September 30, 2021, primarily due to the Mexico production delays, increased raw material costs and constraints described above. On November 8, 2021 (the Waiver Effective Date), we and the lenders that are parties to the senior secured credit facility executed a limited waiver pursuant to which the lenders agreed to temporarily waive our compliance with this financial covenant from the Waiver Effective Date through December 8, 2021. If we are not able to pay our debts as they become due, we could be in default under our senior secured credit facility or other indebtedness. We might also be required to pursue one or more alternative strategies to repay indebtedness, such as selling assets, refinancing or restructuring our indebtedness or selling additional debt or equity securities. We may

not be able to refinance our debt or sell additional debt or equity securities or our assets on favorable terms, if at all, and if we must sell assets, it may negatively affect our ability to generate revenues.

Much of our intellectual property consists of trade secrets and know-how that is very difficult to protect. If we experience loss of protection for our trade secrets or know-how, our business would be substantially harmed.

We have a variety of IP rights, including patents, trademarks and copyrights, but much of our most important IP rights consist of trade secrets and know-how and effective IP protection may be unavailable, limited or outside the scope of the IP rights we pursue in the U.S. and in foreign countries such as China where we operate. Although we strive to protect our IP rights, there is always a risk that our trade secrets or know-how will be compromised or that a competitor could lawfully reverse-engineer our technology or independently develop similar or more efficient technology. We have confidentiality agreements with each of our customers, suppliers, key employees and independent contractors in place to protect our IP rights, but it is possible that a customer, supplier, employee or contractor might breach the agreement, intentionally or unintentionally. It is also possible that our confidentiality agreements with customers, suppliers, employees and contractors will not be effective in preserving the confidential nature of our IP rights. The patents we own could be challenged, invalidated, narrowed or circumvented by others and may not be of sufficient scope or strength to provide us with any meaningful protection or commercial advantage. Once our patents expire, or if they are invalidated, narrowed or circumvented, our competitors may be able to utilize the inventions protected by our patents. Additionally, the existence of our IP rights does not guarantee that we will be successful in any attempt to enforce these rights against third parties in the event of infringement, misappropriation or other misuse, which may materially and adversely affect our business. Because our ability to effectively compete in our industry depends upon our ability to protect our proprietary technology, we might lose business to competitors and our business, revenue, operating results and prospects could be materially harmed if we suffer loss of trade secret and know-how protection or breach of our confidentiality agreements.

We may be subject to significant liabilities and costs relating to environmental and health and safety requirements.

We are subject to various environmental, health and safety laws, regulations and permit requirements in the jurisdictions in which we operate governing, among other things, health, safety, pollution and protection of the environment and natural resources, the handling and use of hazardous substances, the generation, storage, treatment and disposal of wastes, and the cleanup of any contaminated sites. In June 2018, Iowa's Occupational Safety and Health Administration, a division of the Iowa Department of Labor, issued a citation and notification of penalty to us alleging that certain of our workplace practices and conditions at our Newton, Iowa wind blade manufacturing facility had violated the Iowa Occupational Safety and Health Act. Specifically, the citation cited us for multiple alleged violations and proposed that we pay an aggregate penalty of \$0.2 million. In March 2019, we entered into a settlement agreement with the Iowa Department of Labor pursuant to which we agreed to make a settlement payment of \$0.1 million and to implement certain safety enhancements at our Newton, Iowa manufacturing facility to fully resolve this matter.

We have incurred, and expect to continue to incur, capital and operating expenditures to comply with such laws, regulations and permit requirements. While we believe that we currently are in material compliance with all such laws, regulations and permit requirements, any noncompliance may subject us to a range of enforcement measures, including the imposition of monetary fines and penalties, other civil or criminal sanctions, remedial obligations, and the issuance of compliance requirements restricting our operations.

There can be no assurance that we will not in the future become subject to compliance requirements, obligations to undertake cleanup or related activities, or claims or proceedings relating to environmental, health or safety matters, hazardous substances or wastes, contaminated sites, or other environmental or natural resource damages, that could impose significant liabilities and costs on us and materially harm our business, operating results or financial condition.

Work disruptions resulting from our collective bargaining agreements could result in increased operating costs and materially harm our business, operating results and financial condition.

Certain of our employees in Turkey and Matamoros, Mexico, which in the aggregate represented approximately 48% of our workforce as of December 31, 2021, are covered by collective bargaining agreements. Our collective bargaining agreement for our Turkey facilities are in effect through the end of 2022.

In January 2019, thousands of workers employed in dozens of manufacturing facilities in Matamoros, Mexico, went on strike. In general, these workers, who were represented by several different labor unions, demanded an increase in their wage rate and an annual bonus. In February 2019, our manufacturing production employees in Matamoros, Mexico, who were represented by a labor union, went on strike also demanding an increase in their hourly wage rate and the payment of an annual bonus. During this strike, our Matamoros manufacturing facility stopped production for several weeks until we reached a revised agreement with our labor union. We amended this Matamoros collective bargaining agreement to adjust the salaries and bonuses payable to our associates for calendar year 2022 that are covered by this agreement. This collective bargaining agreement is in effect through March 2023.

In July 2021, we took over a manufacturing facility from Nordex in Matamoros, Mexico pursuant to a 3-year supply agreement. We have a collective bargaining agreement for the associates at this facility that is in effect through April 2023 and we expect this collective bargaining agreement will be amended during the first half of 2022.

Additionally, our other employees working at other manufacturing facilities may vote to be represented by a labor union in the future. There can be no assurance that we will not experience labor disruptions such as work stoppages or other slowdowns by workers at any of our facilities. Should significant industrial action, threats of strikes or related disturbances occur, or other challenges with negotiating and extending our collective bargaining agreements with our unionized employees, we could experience further disruptions of operations and increased labor costs in Turkey, Mexico or other locations, which could materially harm our business, operating results or financial condition. Any such work stoppage or slow-down at any of our facilities could also result in additional expenses and possible loss of revenue for us.

Our information technology infrastructure could experience serious failures or disruptions, the failure of which could materially harm our business, operating results and financial condition.

Information technology is part of our business strategy and operations. It enables us to streamline operation processes, facilitate the collection and reporting of business data, and provide for internal and external communications. There are risks that information technology system failures, network disruptions, breaches of data security and phishing and ransomware attacks could disrupt our operations. Any significant disruption or breach may materially harm our business, operating results or financial condition.

Risks Related to Our Series A Preferred Stock

Holders of our Series A Preferred Stock may exercise influence over us, including through their ability to designate a member of our board of directors.

In November 2021, we issued 350,000 shares of Series A Preferred Stock to certain funds affiliated with Oaktree Capital Management, L.P. (the Series A Preferred Stockholders) for an aggregate purchase price of \$350 million. The Series A Preferred Stockholders are entitled to designate one representative to be appointed to our board of directors so long as 33% of the Series A Preferred Stock originally issued remains outstanding. Notwithstanding the fact that all directors are subject to fiduciary duties to us and subject to applicable law, the interests of the director designated by the Series A Preferred Stockholders may differ from the interests of holders of our common stock or of our other directors.

Although the Series A Preferred Stockholders do not have any voting rights or rights to convert such preferred shares into shares of common stock, we must obtain the prior written consent of holders of a majority of the outstanding shares of Series A Preferred Stock for, among other things: (i) amending our organizational documents to the extent such amendment has an adverse effect on the Series A Preferred Stockholders, (ii) effecting any change

of control, liquidation event or merger or consolidation of us unless the entirety of the applicable redemption price is paid with respect to all the then issued and outstanding Series A Preferred Stock (iii) increasing or decreasing the number of authorized shares of Series A Preferred Stock, (iv) making certain material acquisitions or dispositions or entering into joint ventures or similar transactions, (v) incurring indebtedness except for indebtedness incurred under our existing loan facilities and agreements so long as the total amount of such indebtedness does not exceed \$80 million, and (vi) committing to any capital expenditures or agreements to construct or acquire new manufacturing facilities, and (vii) certain other specified actions.

As a result, the Series A Preferred Stockholders have the ability to influence the outcome of certain matters affecting our governance and capitalization. The sponsors of the Series A Preferred Stockholders are in the business of making or advising on investments in companies, including businesses that may directly or indirectly compete with certain portions of our business, and they may have interests that diverge from, or even conflict with, those of our other stockholders. They may also pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. Our obligations to the Series A Preferred Stockholders could also limit our ability to obtain additional financing or increase our borrowing costs, which could have an adverse effect on our results of operations and financial condition.

Our Series A Preferred Stock has rights, preferences, and privileges that are not held by, and are preferential to, the rights of holders of our common stock, which could adversely affect our liquidity and financial condition.

The Series A Preferred Stockholders have certain liquidation, dividend and redemption rights requiring us, among other things, to repurchase their shares of Series A Preferred Stock under specified circumstances, and these rights are senior to the rights of holders of our common stock. We may not be able to generate sufficient cash flow from our operations to satisfy our dividend, liquidation and redemption obligations to the Series A Preferred Stockholder and could impact our liquidity and reduce the amount of cash available for working capital, capital expenditures, growth opportunities, acquisitions, and other general corporate purposes. Our obligations to the Series A Preferred Stockholders could also limit our ability to obtain additional financing or increase our borrowing costs, which could have an adverse effect on our financial condition. If we fail to meet our dividend, liquidation redemption and other material covenant obligations owing to the Series A Stockholders, the Series A Stockholders are entitled to additional rights and preferences, including an increased dividend rate, additional control rights over the management of our business and the right to require us to pursue a financing or other transaction to repay all outstanding dividend and redemption obligations owing to the Series A Preferred Stockholders.

Risks Related to Ownership of Our Common Stock

The price of our common stock may fluctuate substantially and your investment may decline in value.

The market price of our common stock is likely to be highly volatile and may fluctuate substantially due to many factors, including:

- actual or anticipated fluctuations in our results of operations;
- our ability to provide products due to shipments subject to delayed delivery and deferred revenue arrangements;
- loss of or changes in our relationship with one or more of our customers;
- failure to meet our earnings estimates;
- conditions and trends in the energy and manufacturing markets in which we operate and changes in estimates of the size and growth rate of these markets;
- announcements by us or our competitors of significant contracts, developments, acquisitions, strategic partnerships or divestitures;
- availability of equipment, labor and other items required for the manufacture of wind blades;
- changes in governmental policies;
- our ability to successfully grow our transportation business;

- additions or departures of members of our senior management or other key personnel;
- changes in market valuation or earnings of our competitors;
- sales of our common stock, including sales of our common stock by our directors and officers or by our other principal stockholders;
- the trading volume of our common stock; and
- general market and economic conditions.

These broad market and industry factors may materially harm the market price of our common stock, regardless of our operating performance. In the past, securities class-action litigation has often been instituted against a company following periods of volatility in the market price of that company's securities. Securities class-action litigation, if instituted against us, could result in substantial costs or damages and a diversion of management's attention and resources, which could materially harm our business and operating results.

A significant portion of our total outstanding shares may be sold into the public market in future sales, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market can occur at any time. These sales, or the market perception that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. As of December 31, 2021, we had 37,180,004 shares of common stock outstanding. All shares can now be sold, subject to any applicable volume limitations under federal securities laws. We may issue debt or equity securities in other registered or unregistered convertible debt or equity offerings.

In the future, we may also issue our securities in connection with investments or acquisitions. The amount of shares of our common stock issued in connection with an investment or acquisition could constitute a material portion of our then-outstanding shares of our common stock. Any issuance of additional securities in connection with investments or acquisitions may result in additional dilution to you and may cause the market price of our common stock to drop significantly.

The exercise of options and warrants and other issuances of shares of common stock or securities convertible into common stock under our equity compensation plans will dilute your interest.

Under our existing equity compensation plans, as of December 31, 2021, we had outstanding options to purchase 998,126 shares of our common stock, 636,606 restricted stock units and 378,661 performance stock units to our employees and non-employee directors. From time to time, we expect to grant additional options and other stock awards. We also issued warrants to purchase 4,666,667 shares of common stock at an exercise price of \$0.01 per share to the Series A Preferred Stockholders. The Series A Preferred Stockholders may exercise their warrants at any time during the five-year term of the warrants and the number of shares issuable upon exercise of the warrants is subject to customary adjustments upon the occurrence of certain events such as stock splits, reclassifications, combinations, dividends, distributions, mergers and other similar events. The exercise of options and warrants at prices below the market price of our common stock could adversely affect the price of shares of our common stock. Additionally, any issuance of our common stock that is not made solely to then-existing stockholders proportionate to their interests, such as in the case of a stock dividend or stock split, will result in dilution to each stockholder by reducing their percentage ownership of the total outstanding shares. If we issue options or warrants to purchase our common stock in the future and those options or warrants are exercised or we issue stock, stockholders may experience further dilution.

Provisions of Delaware law or our charter documents could delay or prevent an acquisition of our Company, even if the acquisition would be beneficial to our stockholders, and could make it more difficult for you to change management.

Provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated by-laws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their

shares. These provisions may also prevent or delay attempts by stockholders to replace or remove our current management or members of our board of directors. These provisions include: a classified board of directors; limitations on the removal of directors; advance notice requirements for stockholder proposals and nominations; the inability of stockholders to act by written consent or to call special meetings; the ability of our board of directors to make, alter or repeal our amended and restated by-laws; and the authority of our board of directors to issue preferred stock with such terms as our board of directors may determine.

The affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class, is necessary to amend or repeal the above provisions that are contained in our amended and restated certificate of incorporation. In addition, absent approval of our board of directors, our amended and restated by-laws may only be amended or repealed by the affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which limits business combination transactions with stockholders of 15% or more of our outstanding voting stock that our board of directors has not approved. These provisions and other similar provisions make it more difficult for stockholders or potential acquirers to acquire us without negotiation. These provisions may apply even if some stockholders may consider the transaction beneficial to them.

As a result, these provisions could limit the price that investors are willing to pay in the future for shares of our common stock. These provisions might also discourage a potential acquisition proposal or tender offer, even if the acquisition proposal or tender offer is at a premium over the then current market price for our common stock.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our headquarters is located in Scottsdale, Arizona, and we own or lease various other facilities in the U.S., China, Mexico, Turkey, India, Denmark, Germany and Spain. We believe that our properties are generally in good condition, are well maintained and are generally suitable and adequate to carry out our business at expected capacity for the foreseeable future. The table below lists various information regarding our facilities as of February 25, 2022:

Location	Operating Segment	Year Commenced	Leased or Owned	Approximate Square Footage	Description of Use
Newton, IA, U.S.	U.S.	2008	Leased	337,922	Wind Blade Manufacturing Facility
Newton, IA, U.S.	U.S.	2018	Leased	114,078	Transportation Manufacturing Facility
Dafeng, China	Asia	2013	Leased	381,102	Wind Blade Manufacturing Facility
Dafeng, China	Asia	2015	Leased	446,034	Wind Blade Manufacturing Facility
Taicang Port, China	Asia	2007	Owned	208,445	Precision Molding Facility
Yangzhou, China	Asia	2018	Leased	934,133	Wind Blade Manufacturing Facility
Juárez, Mexico	Mexico	2013	Leased	345,984	Wind Blade Manufacturing Facility
Juárez, Mexico	Mexico	2016	Leased	453,096	Wind Blade Manufacturing Facility
Juárez, Mexico	Mexico	2017	Leased	339,386	Wind Blade Manufacturing Facility
Juárez, Mexico	Mexico	2018	Leased	300,277	Precision Molding Manufacturing Facility
Matamoros, Mexico	Mexico	2017	Leased	527,442	Wind Blade Manufacturing Facility
Izmir, Turkey	EMEA	2012	Leased	343,000	Wind Blade Manufacturing Facility
Izmir, Turkey	EMEA	2015	Leased	817,078	Wind Blade Manufacturing Facility
Warren, RI, U.S.	U.S.	2004	Leased	108,750	Precision Molding Development and Manufacturing and Research and Development Facility, Transportation Manufacturing Facility

Santa Teresa, NM, U.S.	Mexico	2014	Leased	503,710	Wind Blade Storage Facility/Wind Blade Services Facility
Scottsdale, AZ, U.S.	U.S.	2015	Leased	22,508	Corporate Headquarters
Kolding, Denmark	U.S.	2018	Leased	2,583	Advanced Engineering Center
Chennai, India	India	2019	Leased	776,280	Wind Blade Manufacturing Facility
Madrid, Spain	U.S.	2021	Leased	26,124	Wind Blade Services Facility
Berlin, Germany	U.S.	2019	Leased	4,684	Engineering Center

Item 3. Legal Proceedings

For a discussion of our legal proceedings, refer to Note 16 – Commitments and Contingencies – (b) Legal Proceedings of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

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

On July 22, 2016, our common stock began trading on NASDAQ under the symbol “TPIC.” Prior to that time, there was no public market for our stock.

Performance Graph

The following graph and table illustrate the total stockholder return from July 22, 2016 through December 31, 2021, on our common stock, the Russell 2000 Index, the S&P Small Cap 600 Energy (Sector) Index and the NASDAQ Clean Edge Green Energy Index, assuming an investment of \$100.00 on July 22, 2016 including the reinvestment of dividends.



	Base Period 7/22/16	12/30/16	12/29/17	12/31/18	12/31/19	12/31/20	12/31/21
TPI Composites, Inc.	\$ 100.00	\$ 118.29	\$ 150.88	\$ 181.27	\$ 136.50	\$ 389.23	\$ 110.32
Russell 2000	\$ 100.00	\$ 111.89	\$ 126.60	\$ 111.19	\$ 137.56	\$ 162.82	\$ 185.12
S&P Small Cap 600 Energy (Sector)	\$ 100.00	\$ 133.11	\$ 97.60	\$ 55.64	\$ 47.19	\$ 28.17	\$ 44.86
NASDAQ Clean Edge Green Energy	\$ 100.00	\$ 102.59	\$ 134.16	\$ 116.50	\$ 163.93	\$ 462.91	\$ 448.76

Holders

As of January 31, 2022, there were two stockholders of record of our common stock, although there is a much larger number of beneficial owners.

Dividends

We have never declared or paid any cash dividends on shares of our capital stock. We currently intend to retain earnings, if any, to finance the development and growth of our business and do not anticipate paying cash dividends on the common stock in the future. Any payment of any future dividends to holders of our common stock, will be at the discretion of the board of directors, junior to the rights of the Series A Preferred Stockholders to receive dividends, and subject to compliance with certain covenants in our loan agreements, after taking into account various factors, including our financial condition, operating results, capital requirements, restrictions contained in any future financing instruments, growth plans and other factors the board deems relevant. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources” included in Part II, Item 7 of this Annual Report on Form 10-K.

Certain of our subsidiaries are limited in their ability to declare dividends without first meeting statutory restrictions of China, including retained earnings as determined under Chinese-statutory accounting requirements. Until 50% (\$26.7 million) of registered capital is contributed to a surplus reserve, our China operations can only pay dividends equal to 90% of after-tax profits (10% must be contributed to the surplus reserve). Once the surplus reserve fund requirement is met, our China operations can pay dividends equal to 100% of after-tax profit assuming other conditions are met. As of December 31, 2021, the amount of the surplus reserve fund was \$10.0 million. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Liquidity and Capital Resources” included in Part II, Item 7 of this Annual Report on Form 10-K.

Securities Authorized for Issuance under Equity Compensation Plans

The information required in response to Item 201(d) of Regulation S-K is set forth in Part III, Item 12 of this Annual Report on Form 10-K which is incorporated herein by reference.

Recent Sales of Unregistered Securities

There were no unregistered sales of equity securities during the year ended December 31, 2021 and from the period from December 31, 2021 to the filing date of this Annual Report on Form 10-K which have not previously been disclosed in a Quarterly Report on Form 10-Q or in a Current Report on Form 8-K.

Use of Proceeds from Registered Securities

None.

Purchases of Equity Securities by the Issuer

The following table summarizes the total number of shares of our common stock that we repurchased during the three months ended December 31, 2021 from certain employees who surrendered common stock to pay the taxes in connection with the vesting of restricted stock units.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number of Shares That May Yet Be Purchased Under the Program
October (October 1 - October 31)	—	\$ —	—	—
November (November 1 - November 30)	—	—	—	—
December (December 1 - December 31)	30,664	14.96	—	—
Total	<u>30,664</u>	<u>\$ 14.96</u>	<u>—</u>	<u>—</u>

Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes included in Part II, Item 8 of this Annual Report on Form 10-K and other financial information appearing elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those described in or implied by these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this Annual Report on Form 10-K, particularly those under “Risk Factors” included in Part I, Item 1A of this Annual Report on Form 10-K.

OVERVIEW

Our Company

We are the only independent manufacturer of composite wind blades for the wind energy market with a global manufacturing footprint. We deliver high-quality, cost-effective composite solutions through long term relationships with leading original equipment manufacturers in the wind and transportation markets. We also provide field service inspection and repair services to our OEM customers and wind farm owners and operators, and supply high strength, lightweight and durable composite products to the transportation market. We are headquartered in Scottsdale, Arizona and operate factories in the U.S., China, Mexico, Turkey, and India. We operate additional engineering development centers in Denmark and Germany and a services facility in Spain. For a further overview of our Company, refer to the discussion in “Business—Overview” included in Part I, Item 1 of this Annual Report on Form 10-K.

Our business operations are defined geographically into five geographic operating segments - (1) the U.S. (U.S.), (2) Asia, (3) Mexico, (4) Europe, the Middle East and Africa (EMEA) and (5) India. For further information regarding our operating segments, refer to Note 21 – Segment Reporting of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Key Trends Affecting our Business

We have identified the following material trends affecting our business:

- The after-effects of the pandemic continue to evolve and affect supply chain performance and underlying assumptions in unpredictable ways – specifically with unprecedented volatility in the commodity and logistics spaces. During 2021, there were both significant price increases and supply constraints with respect to resin and carbon fiber, key raw materials that we use to manufacture our products, as well as increases in logistics costs to obtain raw materials. We expect that carbon fiber and related product supply will remain constrained. Demand for carbon fiber and related products continues to outpace capacity additions while acrylonitrile used in the production of carbon fiber saw an increase in demand of up to 50% in 2021. Production of carbon products is very energy intensive and continued rising energy costs could continue to adversely impact the cost of materials. Resin prices were approximately 150% higher in the fourth quarter of 2021 as compared to the fourth quarter of 2020. High resin prices in Europe and North America continue to be supported by bullish demand from industries like automotive, infrastructure, construction and new container ship builds. While competitive resin suppliers are available in Asia, the current unreliable logistics environment in Asia and associated costs currently are offsetting any potential savings on price. We expect that the price of carbon fiber and resin will remain at elevated levels in 2022. Approximately 57% of the resin and resin systems we use are purchased under contracts either controlled or borne by two of our customers and therefore these customers receive/bear 100% of any decrease or increase in resin prices. With respect to our other customer supply agreements, our customers typically receive/bear 70% of any raw material price decreases or increases. If the supply of carbon fiber and resin feedstocks continue to be constrained and the prices for these raw materials remain elevated for an extended period of time, such constraints and elevated price levels will have a further material adverse impact on our results of operations.

•We believe there is an increasing demand for composite products for electric vehicles. As part of our diversification strategy, we have made significant investments to expand our transportation business during the last several years. In 2018 through 2021, we experienced significant losses relating to our transportation business and experienced operational challenges as we are expanding this business. From 2018 to 2021, we invested approximately \$62 million in our transportation business. We expect our transportation business will continue to operate at a small loss in 2022 and expect to invest between approximately \$5 million and \$10 million in our transportation business in 2022.

•Although none of our manufacturing facilities are currently operating below normal capacity due to COVID-19, we may be required to reinstate temporary production suspensions or volume reductions at our manufacturing facilities or at our other locations to the extent there is a resurgence of COVID-19 cases in the regions where we operate or there is an outbreak of positive COVID-19 cases in any of our facilities. The COVID-19 pandemic adversely affected our business and operations during the year ended December 31, 2020 as we temporarily suspended production at most of our facilities or operated at reduced production levels due primarily to certain applicable government-mandated stay at home orders in response to the COVID-19 pandemic, demands from certain of our labor unions to suspend or reduce production and general safety concerns of our associates. During the third quarter of 2021, our manufacturing facility in Yangzhou, China was required to temporarily suspend production due to a COVID-19 outbreak in Yangzhou City although the COVID-19 pandemic did not materially impact our business and operations for the year ended December 31, 2021.

COMPONENTS OF RESULTS OF OPERATIONS

Net Sales

We recognize revenue from manufacturing services over time as our customers control the product as it is produced, and we may not use or sell the product to fulfill other customers' contracts. Net sales include amounts billed to our customers for our products, including wind blades, precision molding and assembly systems and other products and services, as well as the progress towards the completion of the performance obligation for products in progress, which is determined on a ratio of direct costs incurred to date in fulfillment of the contract to the total estimated direct costs required to complete the performance obligation.

Cost of Goods Sold

Cost of goods sold includes the costs we incur at our production facilities to make products saleable on both products invoiced during the period as well as products in progress towards the completion of each performance obligation. Cost of goods sold includes such items as raw materials, direct and indirect labor and facilities costs, including purchasing and receiving costs, plant management, inspection costs, production process improvement activities, product engineering and internal transfer costs. In addition, all depreciation associated with assets used in the production of our products is also included in cost of goods sold. Direct labor costs consist of salaries, benefits and other personnel related costs for employees engaged in the manufacturing of our products and services.

Startup and transition costs are primarily unallocated fixed overhead costs and underutilized direct labor costs incurred during the period production facilities are transitioning wind blade models and ramping up manufacturing. All direct labor costs are included in the measure of progress towards completion of the relevant performance obligation when determining revenue to be recognized during the period. The cost of sales for the initial wind blades from a new model manufacturing line is generally higher than when the line is operating at optimal production volume levels due to inefficiencies during ramp-up related to labor hours per blade, cycle times per blade and raw material usage. Additionally, these costs as a percentage of net sales are generally higher during the period in which a facility is ramping up to full production capacity due to underutilization of the facility. Manufacturing overhead at each of our facilities includes virtually all indirect costs (including share-based compensation costs) incurred at the plants, including engineering, finance, information technology, human resources and plant management.

General and Administrative Expenses

General and administrative expenses primarily relate to the unallocated portion of costs incurred at our corporate headquarters and our research facilities and include salaries, benefits and other personnel related costs for

employees engaged in research and development, engineering, finance, internal audit, information technology, human resources, business development, global operational excellence, global supply chain, in-house legal and executive management. Other costs include outside legal and accounting fees, risk management (insurance), share-based compensation and certain other administrative and global resources costs.

The unallocated research and development expenses incurred at our Warren, Rhode Island location as well as at our Kolding, Denmark advanced engineering center and our Berlin, Germany engineering center are also included in general and administrative expenses. For the years ended December 31, 2021, 2020 and 2019, total research and development expenses totaled \$1.0 million, \$1.0 million and \$1.0 million, respectively.

Loss on Sale of Assets and Asset Impairments

Loss on sale of assets represents the losses on the sale of certain receivables, on a non-recourse basis under supply chain financing arrangements with our customers, to financial institutions and losses on the sale of other assets at our corporate and manufacturing facilities. Asset impairments represent the losses on the impairment of our assets at our corporate and manufacturing facilities.

Restructuring Charges

Restructuring charges primarily consist of employee severance, one-time termination benefits and ongoing benefits related to the reduction of our workforce and other costs associated with exit activities, which may include costs related to leased facilities to be abandoned and facility and employee relocation costs.

Other Income (Expense)

Other income (expense) consists of interest expense on our debt borrowings and the amortization of deferred financing costs on such borrowings, foreign currency income and losses, interest income, losses on extinguishment of debt and miscellaneous income and expense.

Income Taxes

Income taxes consists of federal, state, provincial, local and foreign taxes based on income in jurisdictions in which we operate, including in the U.S., China, Mexico, Turkey and India. The income tax rate, tax provisions, deferred tax assets and liabilities vary according to the jurisdiction in which the income or loss arises. Tax laws are complex and subject to different interpretations by management and the respective governmental taxing authorities and require us to exercise judgment in determining our income tax provision, our deferred tax assets and liabilities and the valuation allowance recorded against our net deferred tax assets.

KEY METRICS USED BY MANAGEMENT TO MEASURE PERFORMANCE

In addition to measures of financial performance presented in our consolidated financial statements in accordance with GAAP, we use certain other financial measures and operating metrics to analyze our performance. These “non-GAAP” financial measures consist of EBITDA, adjusted EBITDA, free cash flow and net cash (debt), which help us evaluate growth trends, establish budgets, assess operational efficiencies, oversee our overall liquidity, and evaluate our overall financial performance. The key operating metrics consist of wind blade sets produced, estimated megawatts of energy capacity to be generated by wind blade sets produced, utilization, dedicated manufacturing lines, and manufacturing lines installed, which help us evaluate our operational performance. We believe that these measures are useful to investors in evaluating our performance.

Key Financial Measures

The key financial measures as of and for the years ended December 31 are as follow:

	2021	2020 (in thousands)	2019
Net sales	\$ 1,732,583	\$ 1,670,137	\$ 1,436,500
Net income (loss)	(159,548)	(19,027)	(15,708)
EBITDA ⁽¹⁾	(66,573)	52,323	54,009
Adjusted EBITDA ⁽¹⁾	2,377	94,498	85,841
Capital expenditures	37,119	65,666	74,408
Free cash flow ⁽¹⁾	(62,644)	(28,096)	(17,324)
Total debt, net of debt issuance costs	74,646	216,867	141,389
Net cash (debt) ⁽¹⁾	167,519	(88,061)	(71,779)

(1) See below for more information and a reconciliation of EBITDA, adjusted EBITDA, free cash flow and net debt to net income (loss), net cash provided by (used in) operating activities and total debt, net of debt issuance costs, respectively, the most directly comparable financial measures calculated and presented in accordance with GAAP.

EBITDA and adjusted EBITDA

We define EBITDA, a non-GAAP financial measure, as net income or loss plus interest expense, income taxes and depreciation and amortization. We define adjusted EBITDA as EBITDA plus any share-based compensation expense, plus or minus any foreign currency losses or income, plus or minus any losses or gains from the sale of assets and asset impairments, plus any restructuring charges. Adjusted EBITDA is the primary metric used by our management and our board of directors to establish budgets and operational goals for managing our business and evaluating our performance. We monitor adjusted EBITDA as a supplement to our GAAP measures, and believe it is useful to present to investors, because we believe that it facilitates evaluation of our period-to-period operating performance by eliminating items that are not operational in nature, allowing comparison of our recurring core business operating results over multiple periods unaffected by differences in capital structure, capital investment cycles and fixed asset base. In addition, we believe adjusted EBITDA and similar measures are widely used by investors, securities analysts, ratings agencies, and other parties in evaluating companies in our industry as a measure of financial performance and debt-service capabilities.

Our use of adjusted EBITDA has limitations as an analytical tool and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are:

- adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- adjusted EBITDA does not reflect our cash expenditures for capital equipment or other contractual commitments;
- adjusted EBITDA does not reflect the interest expense or the cash requirements necessary to service interest or principal payments on our indebtedness;
- adjusted EBITDA does not reflect the dividends to our Series A Preferred Stockholders or accretion of the Series A Preferred Stock;
- adjusted EBITDA does not reflect losses on extinguishment of debt relating to prepayment penalties, termination fees and the write off of any remaining debt discount and debt issuance costs upon the repayment or refinancing of our debt;
- adjusted EBITDA does not reflect tax payments that may represent a reduction in cash available to us;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and adjusted EBITDA does not reflect capital expenditure requirements relating to the future need to augment or replace those assets;
- adjusted EBITDA does not reflect share-based compensation expense on equity-based incentive awards to our officers, employees, directors and consultants;

- adjusted EBITDA does not reflect the foreign currency income or losses in our operations;
- adjusted EBITDA does not reflect the gains or losses on the sale of assets and asset impairments;
- adjusted EBITDA does not reflect restructuring charges; and
- other companies, including companies in our industry, may calculate EBITDA and adjusted EBITDA differently, which reduces their usefulness as comparative measures.

In evaluating EBITDA and adjusted EBITDA, you should be aware that in the future, we will incur expenses similar to the adjustments noted herein. Our presentations of EBITDA and adjusted EBITDA should not be construed as suggesting that our future results will be unaffected by these expenses or any unusual or non-recurring items. When evaluating our performance, you should consider EBITDA and adjusted EBITDA alongside other financial performance measures, including our net income (loss) and other GAAP measures.

Free cash flow

We define free cash flow as net cash provided by (used in) operating activities less capital expenditures. We believe free cash flow is a useful measure for investors because it portrays our ability to generate cash from our business for purposes such as repaying maturing debt and accrued dividends and redemption obligations relating to our Series A Preferred Stock and funding business acquisitions.

Net cash (debt)

We define net cash (debt) as total unrestricted cash and cash equivalents less the total principal amount of debt outstanding. The total principal amount of debt outstanding is comprised of the long-term debt and current maturities of long-term debt as presented in our consolidated balance sheets adding back any debt issuance costs. We believe that the presentation of net cash (debt) provides useful information to investors because our management reviews net cash (debt) as part of our oversight of overall liquidity, financial flexibility and leverage. Net cash (debt) is important when we consider opening new manufacturing facilities and expanding existing manufacturing facilities, as well as for capital expenditure requirements.

The following table reconciles our non-GAAP key financial measures to the most directly comparable GAAP measures:

EBITDA and adjusted EBITDA for the years ended December 31 are reconciled as follows:

	2021	2020	2019
	(in thousands)		
Net income (loss) attributable to common stockholders	\$ (165,588)	\$ (19,027)	\$ (15,708)
Preferred stock dividends and accretion	6,040	—	—
Net income (loss)	(159,548)	(19,027)	(15,708)
Adjustments:			
Depreciation and amortization	52,593	49,667	38,580
Interest expense (net of interest income)	13,622	10,399	8,022
Income tax provision (benefit)	26,760	11,284	23,115
EBITDA	(66,573)	52,323	54,009
Share-based compensation expense	8,407	10,352	5,681
Foreign currency loss, net	23,671	19,986	4,107
Loss on sale of assets and asset impairments	13,110	7,748	18,117
Restructuring charges, net	23,762	4,089	3,927
Adjusted EBITDA	<u>\$ 2,377</u>	<u>\$ 94,498</u>	<u>\$ 85,841</u>

Free cash flow for the years ended December 31 is reconciled as follows:

	2021	2020 (in thousands)	2019
Net cash provided by (used in) operating activities	\$ (25,525)	\$ 37,570	\$ 57,084
Less capital expenditures	(37,119)	(65,666)	(74,408)
Free cash flow	<u>\$ (62,644)</u>	<u>\$ (28,096)</u>	<u>\$ (17,324)</u>

Net cash (debt) as of December 31 is reconciled as follows:

	2021	2020 (in thousands)	2019
Cash and cash equivalents	\$ 242,165	\$ 129,857	\$ 70,282
Less total debt, net of debt issuance costs	(74,646)	(216,867)	(141,389)
Less debt issuance costs	—	(1,051)	(672)
Net cash (debt)	<u>\$ 167,519</u>	<u>\$ (88,061)</u>	<u>\$ (71,779)</u>

Key Operating Metrics ⁽¹⁾

The key operating metrics as of and for the year ended December 31 are as follows:

	2021	2020	2019
Sets	3,255	3,544	3,189
Estimated megawatts	12,989	12,080	9,598
Utilization	76 %	81 %	79 %
Dedicated manufacturing lines	54	53	52
Manufacturing lines installed	54	55	48

(1) See below for more information on each of our key operating metrics.

Sets represents the number of wind blade sets, consisting of three wind blades each, which we produced worldwide during the period. We monitor sets and believe that presenting sets to investors is helpful because we believe that it is the most direct measurement of our manufacturing output during the period. Sets primarily impact net sales.

Estimated megawatts are the energy capacity to be generated by wind blade sets produced during the period. Our estimate is based solely on name-plate capacity of the wind turbine on which the wind blades we manufacture are expected to be installed. We monitor estimated megawatts and believe that presenting estimated megawatts to investors is helpful because we believe that it is a commonly followed measurement of energy capacity across our industry and provides an indication of our share of the overall wind blade market.

Utilization represents the percentage of the number of wind blades produced during the period compared to the total potential wind blade capacity of the manufacturing lines installed during the period. We monitor utilization because we believe it helps investors to better understand how close we are to operating at maximum production capacity.

Dedicated manufacturing lines are the number of wind blade manufacturing lines that we have dedicated to our customers pursuant to our supply agreements at the end of the period. We monitor dedicated manufacturing lines and believe that presenting this metric to investors is helpful because we believe that the number of dedicated manufacturing lines is the best indicator of demand for the wind blades we manufacture for customers under our supply agreements in any given period. Lines become dedicated upon the execution of a supply agreement; this means that lines are typically dedicated before they are installed.

Manufacturing lines installed represents the number of wind blade manufacturing lines installed and either in operation, startup or transition during the period. We believe that total manufacturing lines installed provides an understanding of the number of manufacturing lines installed and either in operation, startup or transition. From time to time, we have manufacturing lines installed that are not dedicated to our customers pursuant to a supply agreement.

RESULTS OF OPERATIONS

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

The following table summarizes certain of our operating results as a percentage of net sales for the years ended December 31 that have been derived from our consolidated statements of operations:

	2021	2020
Net sales	100.0%	100.0%
Cost of sales	98.9	93.5
Startup and transition costs	2.9	2.7
Total cost of goods sold	101.8	96.2
Gross profit	(1.8)	3.8
General and administrative expenses	1.7	2.0
Loss on sale of assets and asset impairments	0.8	0.5
Restructuring charges, net	1.4	0.2
Income from operations	(5.7)	1.1
Total other expense	(2.0)	(1.6)
Income (loss) before income taxes	(7.7)	(0.5)
Income tax provision	(1.5)	(0.6)
Net loss	<u>(9.2)%</u>	<u>(1.1)%</u>

Net sales

Consolidated discussion

The following table summarizes our net sales by product/service for the years ended December 31:

	2021	2020	Change	
		(in thousands)	\$	%
Wind blade sales	\$ 1,610,943	\$ 1,580,055	\$ 30,888	2.0%
Precision molding and assembly systems sales	34,919	28,073	6,846	24.4
Transportation sales	37,312	36,196	1,116	3.1
Field service, inspection and repair services sales	35,128	15,125	20,003	132.3
Other sales	14,281	10,688	3,593	33.6
Total net sales	<u>\$ 1,732,583</u>	<u>\$ 1,670,137</u>	<u>\$ 62,446</u>	3.7%

The increase in net sales of wind blades was primarily driven by a higher average sales price due to the mix of wind blade models produced and foreign currency fluctuations. Net sales from the manufacturing of precision molding and assembly systems increased, primarily in Asia, during the year ended December 31, 2021 as compared to the same period in 2020, primarily due to the adverse impact that COVID-19 pandemic had on our net sales in the prior year period. Additionally, there was an increase in our field service, inspection and repair service sales during the year ended December 31, 2021 as compared to the same period in 2020 due to an increase in demand for such services. The total increase in net sales was partially offset by a decrease in net sales due to extensions of our customer contracts during the year ended December 31, 2021. These extensions increased the total contract value and contract duration but resulted in less revenue recognized in the year ended December 31, 2021, as the revenue is recognized over the extended terms. The fluctuating U.S. dollar against the Euro in our Turkey operations and the

Chinese Renminbi in our China operations had a favorable impact of 0.1% on consolidated net sales for the year ended December 31, 2021 as compared to 2020. Our net sales for 2021 were adversely impacted by reduced production volumes at one of our Matamoros, Mexico manufacturing facilities due to carbon and other raw material shortages that were sourced by a customer.

Segment discussion

The following table summarizes our net sales by our five geographic operating segments for the years ended December 31:

	2021	2020		Change	
		(in thousands)	\$		%
U.S.	\$ 181,839	\$ 181,941	\$	(102)	-0.1%
Asia	260,197	527,083		(266,886)	-50.6
Mexico	608,098	495,839		112,259	22.6
EMEA	482,220	373,545		108,675	29.1
India	200,229	91,729		108,500	118.3
Total net sales	<u>\$ 1,732,583</u>	<u>\$ 1,670,137</u>	<u>\$</u>	<u>62,446</u>	<u>3.7%</u>

U.S. Segment

The following table summarizes our net sales by product/service for the U.S. segment for the years ended December 31:

	2021	2020		Change	
		(in thousands)	\$		%
Wind blade sales	\$ 130,455	\$ 135,415	\$	(4,960)	-3.7%
Transportation sales	26,812	33,849		(7,037)	-20.8
Field service, inspection and repair services sales	24,525	12,128		12,397	102.2
Other sales	47	549		(502)	-91.4
Total net sales	<u>\$ 181,839</u>	<u>\$ 181,941</u>	<u>\$</u>	<u>(102)</u>	<u>-0.1%</u>

The decrease in the U.S. segment's net sales of wind blades was primarily due to a 5% decrease in the number of wind blades produced in the year ended December 31, 2021 as compared to the same period in 2020, and was partially offset by a higher average sales price of wind blade models produced in the two comparative periods. The increase in the U.S. segment's field service, inspection and repair services sales was primarily due to increases in overall volume and demand for such services for the year ended December 31, 2021 as compared to the same period in 2020.

Asia Segment

The following table summarizes our net sales by product/service for the Asia segment for the years ended December 31:

	2021	2020	Change	%
		(in thousands)	\$	
Wind blade sales	\$ 240,891	\$ 511,090	\$ (270,199)	-52.9%
Precision molding and assembly systems sales	16,622	13,134	3,488	26.6
Field service, inspection and repair services sales	2,403	821	1,582	192.7
Other sales	281	2,038	(1,757)	-86.2
Total net sales	<u>\$ 260,197</u>	<u>\$ 527,083</u>	<u>\$ (266,886)</u>	-50.6%

The decrease in the Asia segment's net sales of wind blades was primarily due to a 53% net decrease in the number of wind blades produced in the year ended December 31, 2021 as compared to the same period in 2020, primarily due to the removal of five contracted manufacturing lines that expired in China at the end of 2020 and a further reduction of contracted manufacturing lines in 2021. This was partially offset by the adverse impact that the COVID-19 pandemic had on our net sales in the prior year period and also by an increase in the average sales price of wind blades due to a change in the mix of wind blades produced in the two comparative periods. The fluctuating U.S. dollar against the Chinese Renminbi in our China operations had a favorable impact of 0.2% on consolidated net sales for the year ended December 30, 2021, as compared to the same period in 2020.

Mexico Segment

The following table summarizes our net sales by product/service for the Mexico segment for the years ended December 31:

	2021	2020	Change	%
		(in thousands)	\$	
Wind blade sales	\$ 567,721	\$ 472,994	\$ 94,727	20.0%
Precision molding and assembly systems sales	18,297	14,939	3,358	22.5
Transportation sales	10,500	2,347	8,153	347.4
Field service, inspection and repair services sales	2,835	—	2,835	NM
Other sales	8,745	5,559	3,186	57.3
Total net sales	<u>\$ 608,098</u>	<u>\$ 495,839</u>	<u>\$ 112,259</u>	22.6%

The increase in the Mexico segment's net sales of wind blades reflects an increase in the average sales price of wind blades due to the mix of wind blades produced in the two comparative periods. These net sales increases were partially offset by a 3% net decrease in overall wind blade volume. In addition, during the third quarter of 2021, we experienced production delays at one of our Juarez, Mexico manufacturing facilities related to customer supplied specialized equipment and supply constraints affecting carbon reinforcements in connection with the ongoing transition to a new blade for one of our customers and production delays resulting from one of our customer's challenges in procuring adequate supplies of carbon reinforcements at one of our Matamoros, Mexico manufacturing facilities.

EMEA Segment

The following table summarizes our net sales by product/service for the EMEA segment for the years ended December 31:

	2021	2020	Change	
		(in thousands)	\$	%
Wind blade sales	\$ 472,059	\$ 368,907	\$ 103,152	28.0%
Field service, inspection and repair services sales	5,332	2,160	3,172	146.9
Other sales	4,829	2,478	2,351	94.9
Total net sales	<u>\$ 482,220</u>	<u>\$ 373,545</u>	<u>\$ 108,675</u>	29.1%

The increase in the EMEA segment's net sales of wind blades was driven by a 25% net increase in wind blade production at our two Turkey plants, primarily due to transitions and the adverse impact of the COVID-19 pandemic in the prior year period, as well as an increase in the average sales price of wind blades produced in the two comparative periods and foreign currency fluctuations. These net sales increases were partially offset by reduced production volumes due to one of our customer's challenges in procuring adequate supplies of resin and carbon reinforcements. The fluctuating U.S. dollar relative to the Euro had a favorable impact of 0.1% on net sales during the year ended December 31, 2021 as compared to the 2020 period.

India Segment

The following table summarizes our net sales by product/service for the India segment for the years ended December 31:

	2021	2020	Change	
		(in thousands)	\$	%
Wind blade sales	\$ 199,817	\$ 91,649	\$ 108,168	118.0%
Field service, inspection and repair services sales	33	16	17	106.3
Other sales	379	64	315	492.2
Total net sales	<u>\$ 200,229</u>	<u>\$ 91,729</u>	<u>\$ 108,500</u>	118.3%

The increase in the India segment's net sales of wind blades during the year ended December 31, 2021, as compared to the same period in 2020, was primarily driven by the commencement of production for one of our customers in 2020, and the ramp up of such production in 2021.

Total cost of goods sold

The following table summarizes our total cost of goods sold for the years ended December 31:

	2021	2020	Change	
		(in thousands)	\$	%
Cost of sales	\$ 1,713,331	\$ 1,561,432	\$ 151,899	9.7%
Startup costs	18,597	25,857	(7,260)	-28.1
Transition costs	32,235	18,749	13,486	71.9
Total cost of goods sold	<u>\$ 1,764,163</u>	<u>\$ 1,606,038</u>	<u>\$ 158,125</u>	9.8%
% of net sales	101.8%	96.2%		5.6%

Total cost of goods sold as a percentage of net sales increased by approximately ten percentage points during the year ended December 31, 2021 as compared to the same period in 2020, driven primarily by increases in direct

materials costs, direct labor costs and foreign currency fluctuations, partially offset by a decrease in warranty costs. The fluctuating U.S. dollar against the Euro and Turkish Lira had a combined favorable impact of 3.7%, offset by an unfavorable impact against the Chinese Renminbi and Mexican Peso of 3.9% and 0.9%, respectively, on consolidated cost of goods sold for the year ended December 31, 2021 as compared to 2020.

General and administrative expenses

The following table summarizes our general and administrative expenses for the years ended December 31:

	2021	2020 (in thousands)	\$	Change	%
General and administrative expenses	\$ 29,246	\$ 33,496	\$	(4,250)	-12.7%
% of net sales	1.7%	2.0%			-0.3%

The decrease in general and administrative expenses as a percentage of net sales for the year ended December 31, 2021 as compared to the same period in 2020, was primarily driven by our continued focus on reducing costs.

Loss on sale of assets and asset impairments

The following table summarizes our loss on sale of assets and asset impairments for the years ended December 31:

	2021	2020 (in thousands)	\$	Change	%
Loss on sale of receivables	\$ 5,223	\$ 6,207	\$	(984)	-15.8%
Loss on sale of other assets	798	1,292		(494)	-38.2
Asset impairment charges	7,088	249		6,839	NM
Total loss on sale of assets and asset impairments	<u>\$ 13,110</u>	<u>\$ 7,748</u>	<u>\$</u>	<u>5,362</u>	69.2%
% of net sales	0.8%	0.5%			0.3%

NM - not meaningful.

The increase in asset impairment charges for the year ended December 31, 2021 as compared to the same period in 2020, was primarily driven by asset impairment charges incurred at our Newton, Iowa blade facility related to the plant's shutdown at the end of 2021.

Restructuring charges, net

The following table summarizes our restructuring charges, net, for the years ended December 31:

	2021	2020 (in thousands)	\$	Change	%
Severance	\$ 23,027	\$ 3,960	\$	19,067	NM
Other restructuring costs	735	129		606	469.8
Total restructuring charges, net	<u>\$ 23,762</u>	<u>\$ 4,089</u>	<u>\$</u>	<u>19,673</u>	NM
% of net sales	1.4%	0.2%			1.2%

As a result of management's focus on the optimization of our global footprint and reducing operating costs, the Company incurred significant restructuring charges in 2021. These charges primarily related to severance benefits to terminated employees as a result of the closure of our Newton, Iowa; Taicang City, China; and Dafeng,

China manufacturing facilities and the stop of production in one of our Juarez, Mexico facilities. The restructuring charges incurred in 2020 primarily related to downsizing at our Dafeng, China manufacturing facility.

Income (loss) from operations

Segment discussion

The following table summarizes our income (loss) from operations by our five geographic operating segments for the years ended December 31:

	2021	2020 (in thousands)	\$	Change	%
U.S.	\$ (49,246)	\$ (40,991)	\$	(8,255)	-20.1 %
Asia	(13,025)	62,869	\$	(75,894)	-120.7
Mexico	(74,191)	(9,611)	\$	(64,580)	-671.9
EMEA	39,609	23,331	\$	16,278	69.8
India	(845)	(16,832)	\$	15,987	95
Total income from operations	<u>\$ (97,698)</u>	<u>\$ 18,766</u>	<u>\$</u>	<u>(116,464)</u>	NM
% of net sales	-5.6 %	1.1 %			-6.7 %

U.S. Segment

The increase in the loss from operations in the U.S. segment for the year ended December 31, 2021 as compared to the same period in 2020 was primarily due to a decrease in wind blade volume and an increase in direct material and labor costs. In addition, the increase in the loss from operations was due to impairment and restructuring charges incurred at our Newton, Iowa blade facility related to the plant's shutdown at the end of 2021, partially offset by an increase in the average sales price of wind blades produced.

Asia Segment

The decrease in the income from operations in the Asia segment for the year ended December 31, 2021 as compared to the same period in 2020, was primarily due to the decrease in wind blade volume, an increase in restructuring costs, and foreign currency fluctuations. The fluctuating U.S. dollar against the Chinese Renminbi had an unfavorable impact of 3.9% on cost of goods sold for the year ended December 31, 2021 as compared to the 2020 period.

Mexico Segment

The increase in loss from operations in the Mexico segment for the year ended December 31, 2021 as compared to the same period in 2020, was primarily due to an increase in direct material costs, restructuring charges, a decrease in wind blade volume, and startup and transition costs related to the Matamoros and Juarez, Mexico production delays described above, partially offset by an increase in the average sales price of wind blades, and a decrease in warranty costs. The fluctuating U.S. dollar relative to the Mexican Peso had an unfavorable impact of 0.9% on cost of goods sold for the year ended December 31, 2021 as compared to the 2020 period.

EMEA Segment

The increase in income from operations in the EMEA segment for the year ended December 31, 2021 as compared to the same period in 2020, was primarily driven by increased wind blade production at our two Turkey manufacturing facilities, an increase in the average sales price of wind blades produced, a decrease in startup and transition costs, and a decrease in warranty costs, partially offset by an increase in direct material costs. The fluctuating U.S. dollar relative to the Turkish Lira and Euro had a favorable impact of 3.7% on cost of goods sold for the year ended December 31, 2021 as compared to the 2020 period.

India Segment

The decrease in the loss from operations in the India segment for the year ended December 31, 2021 as compared to the same period in 2020, was driven by the commencement of production for one of our customers in 2020, and the ramp up of such production in 2021.

Other income (expense)

The following table summarizes our total other income (expense) for the years ended December 31:

	2021	2020	Change	%
		(in thousands)	\$	
Interest expense, net	\$ (13,622)	\$ (10,399)	\$ (3,223)	-31.0%
Foreign currency loss, net	(23,671)	(19,986)	(3,685)	-18.4
Miscellaneous income	2,203	3,876	(1,673)	-43.2
Total other expense	<u>\$ (35,090)</u>	<u>\$ (26,509)</u>	<u>\$ (8,581)</u>	-32.4%

The increase in the total other expense for the year ended December 31, 2021 as compared to the same period in 2020 was primarily due to increases in interest expense, net, as a result of the settlement of the interest rate swap in 2021, and increases in the foreign currency loss, net, primarily due to net Euro liability exposure against the Turkish Lira in the current year period as compared to the same period in 2020.

Income taxes

The following table summarizes our income taxes for the years ended December 31:

	2021	2020	Change	%
		(in thousands)	\$	
Income tax provision	\$ 26,760	\$ 11,284	\$ 15,476	137.1%
Effective tax rate	-20.2%	-145.7%		

The increase in the income tax provision for the year ended December 31, 2021 as compared to the same period in 2020, was primarily due to a change in the mix of earnings of foreign jurisdictions and U.S. tax on foreign earnings, and an increase in our uncertain tax positions in the current year period.

Net loss

The following table summarizes our net loss for the years ended December 31:

	2021	2020	Change	%
		(in thousands)	\$	
Net loss	\$ 159,548	\$ 19,027	\$ 140,521	NM

The increase in the net loss for the year ended December 31, 2021 as compared to the same period in 2020 was primarily due to the reasons set forth above.

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

For a comparison of our results of operations for the years ended December 31, 2020 and 2019, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations” included in Part II, Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 25, 2021 incorporated herein by reference.

LIQUIDITY AND CAPITAL RESOURCES

Our liquidity and capital resources were adversely affected by certain events that occurred during the year ended December 31, 2021. We experienced significant production delays that occurred at the Matamoros, Mexico manufacturing facility that we took over from Nordex in July 2021, as well as significant production delays in one of our Juarez, Mexico manufacturing facilities in connection with the ongoing transition to a new blade for one of our customers. We also experienced production delays and reduced production volumes in 2021 at our other Matamoros, Mexico and Izmir, Turkey manufacturing facilities due to carbon and other raw materials shortages that were sourced by a customer. Although we continued to stabilize production at our Matamoros manufacturing facility, we expect that this transition will continue to have an adverse impact on our liquidity in 2022 due in large part to increased raw materials costs associated with producing blades at these facilities. We also expect decreased demand for our wind blades from our customers during 2022. We believe this decrease in demand is due to the continued global renewable energy regulatory and policy uncertainty and raw material cost increases and constraints. We believe this decreased demand will also adversely impact our profitability and liquidity for 2022.

We were not in compliance with certain covenants of our senior secured credit facility as of September 30, 2021, primarily due to the Mexico production delays and increased raw material costs and constraints described above. On November 8, 2021 (the Waiver Effective Date), we and the lenders that are parties to the senior secured credit facility executed a limited waiver pursuant to which the lenders agreed to temporarily waive our compliance with this financial covenant from the Waiver Effective Date through December 8, 2021.

Given these near-term liquidity challenges, in November 2021, we entered into a Series A Preferred Stock Purchase Agreement, pursuant to which we issued and sold to the Purchasers 350,000 shares of our newly designated Series A Preferred Stock, par value \$0.01 per share, for an aggregate purchase price of \$350.0 million. In connection with the transaction, we also issued warrants to purchase 4,666,667 shares of common stock at an exercise price of \$0.01 per share to the Series A Preferred Stockholders. We used \$181.2 million of the net proceeds from the issuance and sale of the Series A Preferred Stock to repay all outstanding indebtedness under our existing senior secured credit facility and terminated this credit facility. We plan to use the remainder of the net proceeds for general corporate purposes. We also may elect, at our option, to require the Purchasers to purchase an additional \$50.0 million of Series A Preferred Stock upon the same terms and conditions as the initial issuance of the Series A Preferred Stock during the two-year period following the closing date of the issuance and sale of the Series A Preferred Stock. See Note 14 *Mezzanine Equity*, to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K, for further discussion on Series A Preferred Stock Purchase Agreement.

Our primary needs for liquidity have been, and in the future will continue to be, capital expenditures, purchases of raw materials, new facility startup costs, the impact of transitions, working capital, debt service costs, warranty costs and restructuring costs associated with the optimization of our global footprint. Our capital expenditures have been primarily related to machinery and equipment for new facilities or facility expansions. Historically, we have funded our working capital needs through cash flows from operations, the proceeds received from our credit facilities and from proceeds received from the issuance of stock. We had net repayments under our financing arrangements of \$145.1 million for the year ended December 31, 2021 as compared to net borrowings of \$75.7 million for the year ended December 31, 2020. As of December 31, 2021 and 2020, we had \$74.6 million and \$217.9 million in outstanding indebtedness, excluding debt issuance costs, respectively. As of December 31, 2021, we had an aggregate of \$65.9 million of remaining capacity and \$43.4 million of remaining availability under our various credit facilities. Working capital requirements have increased as a result of our overall growth and the need to fund higher accounts receivable and inventory levels as our business volumes have increased. Based upon current and anticipated levels of operations, we believe that cash on hand, available credit facilities and cash flow from operations will be adequate to fund our working capital and capital expenditure requirements and to make required payments of principal and interest on our indebtedness over the next twelve months.

We anticipate that any new facilities and future facility expansions will be funded through cash flows from operations, the incurrence of other indebtedness and other potential sources of liquidity. The Certificate of Designations for the Series A Preferred Stock contains certain covenants and consent rights including, but not limited to, obtaining approval from the Purchasers to incur indebtedness above certain specified levels, a cash on hand balance requirement of \$50.0 million in the U.S., an individual limit of \$10.0 million for any single capital expenditure project, and an annual total capital expenditure limit of \$30.0 million in the event of non-compliance

with a fixed charge coverage ratio target. At December 31, 2021 and 2020, we had unrestricted cash, cash equivalents and short-term investments totaling \$242.2 million and \$129.9 million, respectively. The December 31, 2021 balance includes \$76.8 million of cash located outside of the U.S., including \$25.9 million in China, \$42.6 million in Turkey, \$5.7 million in India, \$2.1 million in Mexico and \$0.5 million in other countries.

Our ability to repatriate funds from China to the U.S. is subject to a number of restrictions imposed by the Chinese government. We repatriate funds through several technology license and corporate/administrative service agreements. We are compensated quarterly based on agreed upon royalty rates for such IP licenses and quarterly fees for those services. Certain of our subsidiaries are limited in their ability to declare dividends without first meeting statutory restrictions of China, including retained earnings as determined under Chinese-statutory accounting requirements. Until 50% (\$26.7 million) of registered capital is contributed to a surplus reserve, our China operations can only pay dividends equal to 90% of after-tax profits (10% must be contributed to the surplus reserve). Once the surplus reserve fund requirement is met, our China operations can pay dividends equal to 100% of after-tax profit assuming other conditions are met. At December 31, 2021 and 2020, the amount of the surplus reserve fund was \$10.0 million and \$7.0 million, respectively. In July 2021, our subsidiary in China paid a dividend of approximately \$19.5 million, net of withholding taxes, to our subsidiary in Switzerland.

We are not presently involved in any off-balance sheet arrangements, including transactions with unconsolidated special-purpose or other entities that would materially affect our financial position, results of operations, liquidity or capital resources, other than our accounts receivable assignment agreements described below. Furthermore, we do not have any relationships with special-purpose or other entities that provide off-balance sheet financing; liquidity, market risk or credit risk support; or engage in leasing or other services that may expose us to liability or risks of loss that are not reflected in the consolidated financial statements and related notes.

Our segments enter into accounts receivable assignment agreements with various financial institutions. Under these agreements, the financial institution buys, on a non-recourse basis, the accounts receivable amounts related to our segment's customers at an agreed-upon discount rate.

The following table summarizes certain key details of each of the accounts receivable assignment agreements in place as of December 31, 2021:

Year Of Initial Agreement	Segment(s) Related To	Current Annual Interest Rate
2014	Mexico	LIBOR plus 0.75%
2018	Mexico	LIBOR plus 1.25%
2018	EMEA	EURIBOR plus 0.75%
2019	Asia and Mexico	LIBOR plus 1.00%
2019	Asia	Fixed rate of 3.85%
2020	EMEA	EURIBOR plus 1.95%
2020	India	LIBOR plus 1.00%
2020	U.S.	LIBOR plus 1.25%
2021	Mexico	LIBOR plus 1.25%

As the receivables are purchased by the financial institutions under the agreements noted above, the receivables are removed from our consolidated balance sheet. During the years ended December 31, 2021 and 2020, \$1,347.8 million and \$1,251.5 million, respectively, of receivables were sold under the accounts receivable assignment agreements described above.

Cash Flow Discussion

The following table summarizes our key cash flow activity for the years ended December 31:

	2021	2020	\$ Change
		(in thousands)	
Net cash provided by (used in) operating activities	\$ (25,525)	\$ 37,570	\$ (63,095)
Net cash used in investing activities	(37,119)	(65,666)	28,547
Net cash provided by financing activities	198,919	88,612	110,307
Impact of foreign exchange rates on cash, cash equivalents and restricted cash	(14,253)	(2,069)	(12,184)
Net change in cash, cash equivalents and restricted cash	<u>\$ 122,022</u>	<u>\$ 58,447</u>	<u>\$ 63,575</u>

Operating Cash Flows

Net cash provided by operating activities decreased by \$63.1 million for the year ended December 31, 2021 as compared to the same period in 2020 primarily as the result of decreased operating results and certain changes in our working capital.

Investing Cash Flows

Net cash used in investing activities decreased by \$28.5 million for the year ended December 31, 2021 as compared to the same period in 2020 primarily as the result of a decrease in capital expenditures.

We anticipate fiscal year 2022 capital expenditures of approximately \$30 million plus we estimate that the cost that we will incur after December 31, 2021 to complete our current projects in process will be approximately \$9.4 million. We have used, and will continue to use, cash flows from operations, the proceeds received from our credit facilities and the proceeds received from the issuance of stock for major projects currently being undertaken, which include building improvements and additional storage space to our manufacturing facility in Chennai, India and the continued investment in our existing Turkey, Mexico, and U.S. facilities.

Financing Cash Flows

Net cash provided by financing activities increased by \$110.3 million for the year ended December 31, 2021 as compared to the same period in 2020 primarily as the result of proceeds from the issuance of Series A Preferred Stock, offset by repayment of the outstanding senior revolving credit facility.

Our Indebtedness

For a discussion of our indebtedness, refer to Note 11 – Long-Term Debt, Net of Current Maturities of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Other Contingencies

For a discussion of our legal proceedings, refer to Note 16 – Commitments and Contingencies – (b) Legal Proceedings of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

The wind blades and other composite structures that we produce are subject to warranties against defects in workmanship and materials, generally for a period of two to five years. We are not responsible for the fitness for use of the wind blade or the overall wind turbine system. If a wind blade is found to be defective during the warranty period as a result of a defect in workmanship or materials, among other potential remedies, we may need to repair or replace the wind blade (which could include significant transportation and installation costs) at our sole expense. At

December 31, 2021 and 2020, we had accrued warranty reserves totaling \$42.0 million and \$50.9 million, respectively.

As of December 31, 2021, we had no material operating expenditures for environmental matters, including government imposed remedial or corrective actions, during the year ended December 31, 2021.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amount of our assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis, including those related to income taxes and warranty expense. We base our estimates on our historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making the judgments we make about the carrying values of our assets and liabilities that are not readily apparent from other sources. Because these estimates can vary depending on the situation, actual results may differ from the estimates.

We believe the following critical accounting policies affect our more significant judgments used in the preparation of our consolidated financial statements.

Revenue Recognition. The majority of our revenue is generated from supply agreements associated with manufacturing of wind blades and related services. We account for a supply agreement when it has the approval from both parties, the rights of the parties are identified, payment terms are established, the contract has commercial substance and the collectability of consideration is probable. Our manufacturing services are customer specific and involve production of items that cannot be sold to other customers due to the customers' protected IP.

Revenue is primarily recognized over time as we have an enforceable right to payment upon termination and we may not use or sell the product to fulfill other customers' supply agreements. Because control transfers over time, revenue is recognized based on the extent of progress towards the completion of the performance obligation under the cost-to-cost input measure of progress as this method provides the best representation of the production progress towards satisfaction of the performance obligation. Under the cost-to-cost method, progress and the related revenue recognition is determined by a ratio of direct costs incurred to date in fulfillment of the performance obligation to the total estimated direct costs required to complete the performance obligation.

Determining the revenue to be recognized for services performed under our supply agreements involves judgments and estimates relating to the total consideration to be received and the expected direct costs to complete the performance obligation. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information available to us at the time of the estimate and may materially change as additional information becomes known.

Under the cost-to-cost method, contract assets established primarily relate to our rights to consideration for work completed but not billed at the reporting date on our supply agreements. The contract assets are transferred to accounts receivable when the rights become unconditional, which generally occurs when customers are invoiced upon the determination that a product conforms to the contract specifications.

See Note 1 – Summary of Operations and Summary of Significant Accounting Policies – (c) Revenue Recognition of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K, for further discussion of our accounting policies related to revenue recognition, including accounting policies surrounding our non-manufacturing related services.

Income Taxes. In connection with preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves our assessment of any net operating loss carryforwards, as well as estimating our actual current tax liability together with assessing temporary

differences resulting from differing treatment of items, such as reserves and accrued liabilities, for tax and accounting purposes. We also have to assess whether any portion of our earnings generated in one taxing jurisdiction might be claimed as earned by income tax authorities in a differing tax jurisdiction. Significant judgment is required in determining our annual tax rate, the allocation of earnings to various jurisdictions and the evaluation of our tax positions.

In the normal course of business, we establish valuation allowances for our deferred tax assets when the realization of the assets is not more likely than not. We intend to maintain such valuation allowances on our deferred tax assets until there is sufficient evidence to support the reversal of all or some portion of the allowances. In 2019 a full valuation allowance was recorded in Taicang and India. Given our anticipated future earnings in India after becoming fully operational in 2020, we reversed the valuation allowance in that jurisdiction in 2020. In 2021 we determined that a valuation allowance for all of our U.S. deferred tax assets was appropriate. The effect of a change in judgment concerning the realizability of deferred tax assets is included in our income tax provision.

As of December 31, 2021, we have U.S. federal net operating losses (NOLs) of approximately \$167.0 million, state NOLs of approximately \$211.7 million, foreign NOLs of approximately \$31.0 million and foreign tax credits of approximately \$1.9 million available to offset future taxable income in the U.S., China and India. Income tax expense or benefit, deferred tax assets and liabilities, and liabilities for unrecognized tax benefits reflect our best estimate of current and future taxes to be paid. We are subject to income taxes in the U.S. and numerous foreign jurisdictions in which we operate, principally, China, Mexico, India and Turkey. Significant judgements and estimates are required in determining our consolidated income tax expense. The statutory federal corporate income tax rate in the U. S. is 21% and the tax rates in China, Mexico, India and Turkey are 25%, 30%, 17% and 25%, respectively. Our second Turkey facility is located in a tax-free zone and is not subject to income taxes on earnings recognized from its manufacturing activities.

Warranty Expense. The wind blades we manufacture are subject to warranties against defects in workmanship and materials, generally for a period of two to five years. We are not responsible for the fitness for use of the wind blade in the overall wind turbine system. If a wind blade is found to be defective during the warranty period as a result of a defect in workmanship or materials, among other potential remedies, we may need to repair or replace the wind blade at our sole expense. We provide warranties for all of our products with terms and conditions that vary depending on the product sold. We record warranty expense based upon our estimate of future repairs using a probability-based methodology that considers previous warranty claims, identified quality issues and industry practices. Once the warranty period has expired, any remaining unused warranty accrual for the specific products is reversed against the current year warranty expense amount.

Our estimate of warranty expense requires us to make assumptions about matters that are highly uncertain, including future rates of product failure, repair costs, availability of materials, shipping and handling, and de-installation and re-installation costs at customers' sites, among others. When a potential or actual warranty claim arises, we may accrue additional warranty reserves for the estimated cost of remediation or proposed settlement. We did not experience any material warranty expenses beyond the provision described above in the year ended December 31, 2021. In 2020, we accrued additional warranty expenses of approximately \$12.9 million beyond the normal warranty expense describe above related to a remediation campaign for a specific wind blade model for one of our customers. We did not experience any material warranty expenses beyond the provision described above in the year ended December 31, 2019. However, changes in warranty reserves could have a material effect on our consolidated financial statements.

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements, see Note 1 – Summary of Operations and Summary of Significant Accounting Policies of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk in the ordinary course of our business. These market risks are principally limited to changes in foreign currency exchange rates and commodity prices.

Foreign Currency Risk. We conduct international manufacturing operations in China, Mexico, Turkey and India. Our results of operations are subject to both currency transaction risk and currency translation risk. We incur currency transaction risk whenever we enter into either a purchase or sale transaction using a currency other than the local currency of the transacting entity. With respect to currency translation risk, our financial condition and results of operations are measured and recorded in the relevant domestic currency and then translated into U.S. dollars for inclusion in our consolidated financial statements. In recent years, exchange rates between these foreign currencies and the U.S. dollar have fluctuated significantly and may do so in the future. A hypothetical change of 10% in the exchange rates for the countries above would have resulted in a change to income from operations of approximately \$33.2 million and \$46.2 million for the years ended December 31, 2021 and 2020, respectively.

Commodity Price Risk. We are subject to commodity price risk under agreements for the supply of our raw materials. We have not hedged our commodity price exposure. We generally lock in pricing for our key raw materials for 12 months which protects us from price increases within that period. As many of our raw material supply agreements have meet or release clauses, if raw materials prices go down, we are able to benefit from the reductions in price. We believe that this adequately protects us from increases in raw material prices and also enables us to take full advantage of decreases.

Resin and resin systems are the primary commodities for which we do not have fixed pricing. Approximately 57% of the resin and resin systems we use are purchased under contracts either controlled or borne by two of our customers and therefore they receive/bear 100% of any increase or decrease in resin costs further limiting our exposure to price fluctuations. Prior to taking into account any contractual obligations of our customers to share with us the cost savings or increases resulting from a change in the price of resin and resin systems, we believe that a 10% change in the price of resin and resin systems for the customers in which we are exposed to fluctuating prices would have had an impact to income from operations of approximately \$12.4 million and \$10.1 million for the years ended December 31, 2021 and 2020, respectively. Under our supply agreements, our customers typically receive 70% of the cost savings or increases resulting from a change in the price of resin and resin systems.

Interest Rate Risk. As of December 31, 2021, all outstanding working capital loans, secured and unsecured financing and finance lease obligations are fixed rate instruments and are not subject to fluctuations in interest rates.

Item 8. Financial Statements and Supplementary Data

The financial statements required to be filed pursuant to this Item 8 are appended to this Report. An index of those financial statements is found in Part IV, Item 15 of this Annual Report on Form 10-K.

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

We maintain disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized, and reported within the time period specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Interim Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As required by Rule 13a-15(b) promulgated under the Exchange Act, our management, with the participation of our Chief Executive Officer and Interim Chief Financial Officer, evaluated the design and operating effectiveness as of December 31, 2021 of our disclosure controls and procedures, as defined in Rule 13a-15(e) promulgated under the Exchange Act. Based on this evaluation, our Chief Executive Officer and Interim Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2021.

Management's Report on Internal Control Over Financial Reporting

As required by Rules 13a-15(f) promulgated under the Exchange Act, our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2021. Management based its assessment on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management's assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies and our overall control environment. Based on this assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2021 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. We reviewed the results of management's assessment with the Audit Committee of our Board of Directors.

Our internal control over financial reporting as of December 31, 2021 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting during the three months ended December 31, 2021, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated by reference to “Business – Information about our Executive Officers” included in Part 1, Item 1 of this Annual Report on Form 10-K and the information that will be contained in our proxy statement related to the 2022 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to the information that will be contained in our proxy statement related to the 2022 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated by reference to the information that will be contained in our proxy statement related to the 2022 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to the information that will be contained in our proxy statement related to the 2022 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the fiscal year ended December 31, 2021.

Item 14. Principal Accounting Fees and Services

Our independent registered public accounting firm is KPMG LLP, Phoenix, AZ, Auditor Firm ID: 185.

The information required by this Item is incorporated by reference to the information that will be contained in our proxy statement related to the 2022 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the fiscal year ended December 31, 2021.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements and Schedules

The financial statements listed in the accompanying Index to Consolidated Financial Statements are filed as part of this Annual Report on Form 10-K. All financial statement schedules have been omitted as the required information is not applicable or is not material to require presentation of the schedule, or because the information required is included in the Consolidated Financial Statements and notes thereto of this Annual Report on Form 10-K.

(b) Exhibits

See Exhibit Index.

Item 16. Form 10-K Summary

Not applicable.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
TPI Composites, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of TPI Composites, Inc. and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in mezzanine equity and stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included

performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with 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 (3) 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. Also, projections of any evaluation of effectiveness to future periods are 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.

Critical Audit Matter

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 consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Variable consideration and direct costs to complete performance obligations for wind blade sales

As discussed in Notes 1 and 2 to the consolidated financial statements, the Company generates the majority of its revenue from long-term contracts associated with manufacturing custom wind blades. Revenue from manufacturing wind blades is primarily recognized over time based on progress towards the completion of the performance obligation in the contract. Progress is determined by the ratio of direct costs incurred to date in fulfillment of the performance obligation to the total estimated direct costs required to complete the performance obligation. The Company recognizes variable consideration for wind blade sales that includes estimates of future contract volumes. Wind blade sales under long-term contracts was \$1,610,943 thousand compared to total net sales of \$1,732,583 thousand in fiscal 2021.

We identified the evaluation of estimates of future contract volumes and direct costs to complete performance obligations for wind blade sales as a critical audit matter. Evaluating these estimates required a high degree of auditor judgment as changes to the inputs can have a significant effect on the Company's revenue. Each wind blade contract contains variable consideration that includes estimates of future contract volumes. Each wind blade contract also requires a measure of progress that includes estimates of direct costs to complete the performance obligations.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's process to recognize revenue from wind blade sales. This included controls related to estimates of future contract volumes and direct costs to complete the performance obligation. We read a selection of long-term customer contracts, and observed that terms, conditions, and key elements of the contracts were included in the Company's estimate of future contract volumes. We evaluated the Company's ability to estimate future contract volumes and direct costs to complete the performance obligations by comparing these estimates to historical results. We evaluated estimated future contract volumes by assessing (1) manufacturing plant capacity, (2) historical production volume, and (3) customer purchase commitments. We evaluated estimated direct costs to complete the performance obligations by examining the estimated amounts agreed upon with the customer and comparing them to historical costs. We compared the estimated future direct cost per blade to historical direct costs per blade and assessed the potential impact of future manufacturing efficiencies. Further, we evaluated historical direct labor cost by wind blade type and manufacturing plant, and analyzed jurisdiction-specific inflation rates based on publicly available data. We assessed current period revenue based upon the estimated consideration, the ratio of direct costs incurred to date in fulfillment of the performance obligations to the total estimated direct costs required to complete the performance obligations, and revenue recognized in previous periods for the performance obligations.

/s/ KPMG LLP

We have served as the Company's auditor since 2008.

Phoenix, Arizona
February 25, 2022

TPI COMPOSITES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2021	2020
	(In thousands, except par value data)	
Assets		
Current assets:		
Cash and cash equivalents	\$ 242,165	\$ 129,857
Restricted cash	10,053	339
Accounts receivable	157,804	132,768
Contract assets	188,323	216,928
Prepaid expenses	19,280	29,507
Other current assets	22,584	27,921
Inventories	11,533	10,839
Assets held for sale	8,529	—
Total current assets	660,271	548,159
Property, plant and equipment, net	169,578	209,001
Operating lease right of use assets	137,192	158,827
Goodwill	2,807	2,807
Intangible assets and deferred costs, net	3,540	4,146
Other noncurrent assets	34,313	33,317
Total assets	<u>\$ 1,007,701</u>	<u>\$ 956,257</u>
Liabilities, Mezzanine Equity and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	\$ 336,697	\$ 295,992
Accrued warranty	42,020	50,852
Current maturities of long-term debt	66,438	32,551
Current operating lease liabilities	22,681	26,099
Contract liabilities	1,274	614
Total current liabilities	469,110	406,108
Long-term debt, net of current maturities	8,208	184,316
Noncurrent operating lease liabilities	146,479	155,925
Other noncurrent liabilities	10,978	8,873
Total liabilities	634,775	755,222
Commitments and contingencies (Note 16)		
Mezzanine equity:		
Series A Preferred Stock, \$0.01 par value, 400 shares authorized; 350 and 0 shares issued and outstanding, respectively at December 31, 2021 and 2020; liquidation preference \$473,227 and \$0, respectively	250,974	—
Stockholders' equity:		
Common shares, \$0.01 par value, 100,000 shares authorized and 37,418 shares issued and 37,180 shares outstanding at December 31, 2021; 100,000 shares authorized and 36,771 shares issued and 36,564 shares outstanding at December 31, 2020	374	368
Paid-in capital	451,440	349,472
Accumulated other comprehensive loss	(54,006)	(32,990)
Accumulated deficit	(269,264)	(109,716)
Treasury stock, at cost, 239 shares at December 31, 2021; 207 shares at December 31, 2020	(6,592)	(6,099)
Total stockholders' equity	121,952	201,035
Total liabilities, mezzanine equity and stockholders' equity	<u>\$ 1,007,701</u>	<u>\$ 956,257</u>

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2021	2020	2019
Net sales	\$ 1,732,583	\$ 1,670,137	\$ 1,436,500
Cost of sales	1,713,331	1,561,432	1,290,619
Startup and transition costs	50,832	44,606	68,033
Total cost of goods sold	1,764,163	1,606,038	1,358,652
Gross profit (loss)	(31,580)	64,099	77,848
General and administrative expenses	29,246	33,496	39,916
Loss on sale of assets and asset impairments	13,110	7,748	18,117
Restructuring charges, net	23,762	4,089	3,927
Income (loss) from operations	(97,698)	18,766	15,888
Other income (expense):			
Interest expense, net	(13,622)	(10,399)	(8,022)
Foreign currency loss, net	(23,671)	(19,986)	(4,107)
Miscellaneous income	2,203	3,876	3,648
Total other expense	(35,090)	(26,509)	(8,481)
Income (loss) before income taxes	(132,788)	(7,743)	7,407
Income tax benefit (provision)	(26,760)	(11,284)	(23,115)
Net loss	(159,548)	(19,027)	(15,708)
Preferred stock dividends and accretion	(6,040)	—	—
Net loss attributable to common stockholders	<u>\$ (165,588)</u>	<u>\$ (19,027)</u>	<u>\$ (15,708)</u>
Weighted-average common shares outstanding:			
Basic	37,415	35,532	35,062
Diluted	37,415	35,532	35,062
Net loss per common share:			
Basic	\$ (4.43)	\$ (0.54)	\$ (0.45)
Diluted	\$ (4.43)	\$ (0.54)	\$ (0.45)

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	2021	Year Ended December 31, 2020 (In thousands)	2019
Net loss attributable to common stockholders	\$ (165,588)	\$ (19,027)	\$ (15,708)
Other comprehensive loss:			
Foreign currency translation adjustments	(18,419)	(8,099)	(7,026)
Unrealized loss on hedging derivatives, net of taxes of \$633, \$(200) and \$(585) for the years ended December 31, 2021, 2020 and 2019	(2,597)	(1,279)	(2,194)
Comprehensive loss	<u>\$ (186,604)</u>	<u>\$ (28,405)</u>	<u>\$ (24,928)</u>

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN MEZZANINE EQUITY AND STOCKHOLDERS' EQUITY

	Series A Preferred Stock		Common		Paid-in	Accumulated other	Accumulated	Treasury	Total
	Shares	Amount	Shares	Amount	capital	comprehensive loss (In thousands)	deficit	stock, at cost	stockholders' equity
Balance at December 31, 2018	—	—	34,745	347	311,771	(14,392)	(74,981)	(1,788)	220,957
Net loss	—	—	—	—	—	—	(15,708)	—	(15,708)
Other comprehensive loss	—	—	—	—	—	(9,220)	—	—	(9,220)
Common stock repurchased for treasury	—	—	—	—	—	—	—	(2,120)	(2,120)
Issuances under share-based compensation plan	—	—	581	6	5,291	—	—	—	5,297
Share-based compensation expense	—	—	—	—	5,844	—	—	—	5,844
Balance at December 31, 2019	—	—	35,326	353	322,906	(23,612)	(90,689)	(3,908)	205,050
Net loss	—	—	—	—	—	—	(19,027)	—	(19,027)
Other comprehensive loss	—	—	—	—	—	(9,378)	—	—	(9,378)
Common stock repurchased for treasury	—	—	—	—	—	—	—	(2,191)	(2,191)
Issuances under share-based compensation plan	—	—	1,445	15	16,569	—	—	—	16,584
Share-based compensation expense	—	—	—	—	9,997	—	—	—	9,997
Balance at December 31, 2020	—	—	36,771	368	349,472	(32,990)	(109,716)	(6,099)	201,035
Net loss	—	—	—	—	—	—	(159,548)	—	(159,548)
Preferred stock dividends	—	4,114	—	—	(4,114)	—	—	—	(4,114)
Other comprehensive loss	—	—	—	—	—	(21,016)	—	—	(21,016)
Common stock repurchased for treasury	—	—	—	—	—	—	—	(493)	(493)
Issuances under share-based compensation plan	—	—	647	6	5,239	—	—	—	5,245
Share-based compensation expense	—	—	—	—	8,414	—	—	—	8,414
Issuance of Series A Preferred Stock, net	350	244,934	—	—	—	—	—	—	—
Issuance of warrants to purchase common stock	—	—	—	—	94,355	—	—	—	94,355
Accretion of Series A Preferred Stock	—	1,926	—	—	(1,926)	—	—	—	(1,926)
Balance at December 31, 2021	<u>350</u>	<u>\$ 250,974</u>	<u>37,418</u>	<u>\$ 374</u>	<u>\$ 451,440</u>	<u>\$ (54,006)</u>	<u>\$ (269,264)</u>	<u>\$ (6,592)</u>	<u>\$ 121,952</u>

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	2021	Year Ended December 31, 2020		2019
		(In thousands)		
Cash flows from operating activities:				
Net loss	\$	(159,548)	\$ (19,027)	\$ (15,708)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:				
Depreciation and amortization		52,593	49,667	38,580
Loss on sale of assets and asset impairments		13,110	7,748	18,117
Share-based compensation expense		8,407	10,352	5,681
Amortization of debt issuance costs		1,051	351	206
Deferred income taxes		2,126	(7,982)	4,951
Changes in assets and liabilities:				
Accounts receivable		(34,715)	42,986	(19,366)
Contract assets and liabilities		23,983	(56,150)	(57,583)
Operating lease right of use assets and operating lease liabilities		8,771	15,036	6,953
Inventories		(1,018)	(4,276)	(1,145)
Prepaid expenses		9,683	(19,916)	(1,052)
Other current assets		4,699	1,491	(13,692)
Other noncurrent assets		11,612	734	(7,177)
Accounts payable and accrued expenses		45,755	10,298	84,647
Accrued warranty		(8,832)	3,213	10,874
Other noncurrent liabilities		(3,202)	3,045	2,798
Net cash provided by (used in) operating activities		(25,525)	37,570	57,084
Cash flows from investing activities:				
Purchases of property, plant and equipment		(37,119)	(65,666)	(74,408)
Acquisition of a business		—	—	(1,102)
Net cash used in investing activities		(37,119)	(65,666)	(75,510)
Cash flows from financing activities:				
Proceeds from revolving and term loans		18,109	80,000	22,000
Repayments of revolving and term loans		(181,154)	(21,260)	—
Proceeds from the issuance of Series A Preferred Stock and warrants to purchase common stock		350,000	—	—
Equity issuance costs		(10,711)	—	—
Net repayments of accounts receivable financing		—	(3,805)	(10,719)
Proceeds from working capital loans		10,269	—	3,535
Repayments of working capital loans		—	—	(3,535)
Principal repayments of finance leases		(5,750)	(6,116)	(9,128)
Net proceeds from (repayments of) other debt		13,438	26,875	(4,286)
Debt issuance costs		—	(730)	—
Proceeds from exercise of stock options		5,211	15,839	5,223
Repurchase of common stock including shares withheld in lieu of income taxes		(493)	(2,191)	(2,120)
Net cash provided by financing activities		198,919	88,612	970
Impact of foreign exchange rates on cash, cash equivalents and restricted cash		(14,253)	(2,069)	(171)
Net change in cash, cash equivalents and restricted cash		122,022	58,447	(17,627)
Cash, cash equivalents and restricted cash, beginning of year		130,196	71,749	89,376
Cash, cash equivalents and restricted cash, end of year	\$	<u>252,218</u>	\$ <u>130,196</u>	\$ <u>71,749</u>

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS – CONTINUED

	2021	Year Ended December 31, 2020		2019
		(in thousands)		
Supplemental cash flow information:				
Cash paid for interest	\$ 13,360	\$ 9,853	\$ 8,190	
Cash paid for income taxes, net of refunds	25,268	20,965	18,640	
Noncash investing and financing activities:				
Right of use assets obtained in exchange for new operating lease liabilities	13,232	61,455	15,855	
Property, plant, and equipment obtained in exchange for new finance lease liabilities	1,817	163	5,811	
Accrued capital expenditures in accounts payable	2,504	7,556	14,644	
Paid-in-kind preferred stock dividends and accretion	6,040	—	—	

Reconciliation of Cash, Cash Equivalents and Restricted Cash:

	2021	December 31, 2020		2019	2018
		(in thousands)			
Cash and cash equivalents	\$ 242,165	\$ 129,857	\$ 70,282	\$ 85,346	
Restricted cash	10,053	339	992	3,555	
Restricted cash included within other noncurrent assets	—	—	475	475	
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	<u>\$ 252,218</u>	<u>\$ 130,196</u>	<u>\$ 71,749</u>	<u>\$ 89,376</u>	

See accompanying notes to consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

Note 1. Summary of Operations and Summary of Significant Accounting Policies

(a) Description of Business

TPI Composites, Inc. is the holding company that conducts substantially all of its business operations through its direct and indirect subsidiaries (collectively, the Company or we). The Company was founded in 1968 and has been producing composite wind blades since 2001. The Company is incorporated in Delaware, headquartered in Scottsdale, Arizona and has expanded its global footprint to include domestic facilities in Newton, Iowa; Warren, Rhode Island and Santa Teresa, New Mexico and international facilities in Dafeng, China; Taicang Port, China; Yangzhou, China; Juárez, Mexico; Matamoros, Mexico; Izmir, Turkey; Chennai, India; Kolding, Denmark; Berlin, Germany and Madrid, Spain.

(b) Basis of Presentation

The accompanying consolidated financial statements include the accounts of TPI Composites, Inc. and all majority owned subsidiaries. All significant intercompany transactions and balances have been eliminated. Certain prior period amounts in the consolidated financial statements and accompanying notes have been reclassified to conform to the current period's presentation.

(c) Revenue Recognition

The majority of our revenue is generated from supply agreements associated with manufacturing of wind blades and related services. We account for a supply agreement when it has the approval from both parties, the rights of the parties are identified, payment terms are established, the contract has commercial substance and the collectability of consideration is probable.

To determine the proper revenue recognition method for each supply agreement, we evaluate whether the original contract should be accounted for as one or more performance obligations. This evaluation requires judgment and the decisions reached could change the amount of revenue and gross profit recorded in a given period. As most of our contracts contain multiple performance obligations, we allocate the total transaction price to each performance obligation based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. Our manufacturing services are customer specific and involve production of items that cannot be sold to other customers due to the customers' protected IP; therefore, we allocate the total transaction price under our contracts with multiple performance obligations using the contractually stated prices, as these prices represent the relative standalone selling price based on an expected cost plus margin model.

Revenue is primarily recognized over time as we have an enforceable right to payment upon termination and we may not use or sell the product to fulfill other customers' contracts. In addition, the customer does not have return or refund rights for items produced that conform to the specifications included in the contract. Because control transfers over time, revenue is recognized based on the extent of progress towards the completion of the performance obligation. We use the cost-to-cost input measure of progress for our contracts as this method provides the best representation of the production progress towards satisfaction of the performance obligation as the materials are distinct to the product being manufactured because of customer specifications provided for in the contract, the costs incurred are proportional to the progress towards completion of the product, and the products do not involve significant pre-fabricated component parts. Under the cost-to-cost method, progress and the related revenue recognition is determined by a ratio of direct costs incurred to date in fulfillment of the performance obligation to the total estimated direct costs required to complete the performance obligation.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

Determining the revenue to be recognized for services performed under our supply agreements involves judgments and estimates relating to the total consideration to be received and the expected direct costs to complete the performance obligation. As such, revenue recognized reflects our estimates of future contract volumes and the direct costs to complete the performance obligation. The judgments and estimates relating to the total consideration to be received include the amount of variable consideration as our contracts typically provide the customer with a range of production output options from guaranteed minimum volume obligations to the production capacity of the facility, and customers will provide periodic non-cancellable commitments for the number of wind blades to be produced over the term of the agreement. The total consideration also includes payments expected to be received associated with wind blade model transitions, and payments expected to be received or paid in the form of liquidated damages, for missed production deadlines which are paid over a negotiated timeline. We use historical experience, customer commitments and forecasted future production based on the capacity of the plant to estimate the total revenue to be received to complete the performance obligation. In addition, the amount of consideration per unit produced may vary based on the costs of production of the wind blades as we may be able to change the price per unit based on changes in the cost of production. Further, some of our contracts provide opportunities for us to share in labor and material cost savings as well as absorb some additional costs as an incentive for more efficient production, both of which impact the margin realized on the contract and ultimately the total amount of revenue to be recognized.

We estimate variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information available to us at the time of the estimate and may materially change as additional information becomes known.

Our contracts may be modified to account for changes in specifications of products and changing requirements. If the contract modifications are for goods or services that are not distinct from the existing contract, they are accounted for as if they were part of the original contract. The effect of a contract modification on the transaction price and the measure of progress for the performance obligation to which it relates is recognized as an adjustment to revenue on a cumulative catch-up basis. If contract modifications are for goods and services that are distinct from the existing contract and increases the amount of consideration reflecting the standalone sale price of the additional goods or services, then the contract modification is accounted for as a separate contract and is evaluated for one or more performance obligations.

Each reporting period, we evaluate the progress towards satisfaction of each performance obligation based on any contract modifications that have occurred, costs incurred to date, and an estimate of the expected future consideration and costs to be incurred to complete the performance obligation. Based on this analysis, any changes in estimates of total consideration to be received and direct costs to complete the performance obligation are recognized on a cumulative catch-up basis, which recognizes in the current period the cumulative effect of the changes on current and prior periods based on the percentage of completion of the performance obligation.

Wind blade pricing is based on annual commitments of volume as established in our supply agreements and orders less than committed volume may result in a higher price per wind blade to our customers. Orders in excess of annual commitments may result in discounts to our customers from the contracted price for the committed volume. Our customers typically provide periodic purchase orders with the price per wind blade given the current cost of the bill of materials, labor requirements and volume desired. We record an allowance for expected utilization of early payment discounts which are reported as a reduction of the total consideration to be received.

Precision molding and assembly systems included in a customer's contract are based upon the specific engineering requirements and design determined by the customer and are specific to the wind blade design and function desired. From the customer's engineering specifications, a job cost estimate is developed along with a production plan, and the desired margin is applied based on the location the work is to be performed and complexity of the customer's design. Precision molding and assembly systems are generally built to produce wind blades which may be manufactured by us in production runs specified in the customer contract.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

Contract assets primarily relate to our rights to consideration for work completed but not billed at the reporting date on supply agreements. The contract assets are transferred to accounts receivable when the rights become unconditional, which generally occurs when customers are invoiced upon the determination that a product conforms to the contract specifications and invoices are due based on each customer's negotiated payment terms, which, range from 5 to 95 days. We apply the practical expedient that allows us to exclude payment terms under one year from the transfer of a promised good or service from consideration of a significant financing component in its contracts. With regards to the production of precision molding and assembly systems, our contracts generally call for progress payments to be made in advance of production. Generally, payment is made at certain percentage of completion milestones with the final payment due upon delivery to the manufacturing facility. These progress payments are recorded within contract liabilities as current liabilities in the consolidated balance sheets and are reduced as we record revenue over time. We evaluate indications that a customer may not be able to meet the obligations under our supply agreements to determine if an account receivable or contract asset may be impaired.

Our customers may request, in situations where they do not have space available to receive products or do not want to take possession of products immediately for other reasons, that their finished products be stored by us in one of our facilities. Most of our contracts provide for a limited number of wind blades to be stored during the period of the contract with any additional wind blades stored subject to additional storage fees, which are included in wind blade sales.

Revenue related to field service inspection and repair services, non-recurring engineering and freight services provided under our supply agreements is recognized at a point in time following the transfer of control of the promised services to the customer. Customers usually pay the carrier directly for the cost of shipping associated with items produced. When we pay the shipping cost, we apply the practical expedient that allows us to account for shipping and handling as a fulfillment costs and include the revenue in the associated performance obligation and the costs are included in cost of goods sold.

Taxes assessed by a governmental authority that are both imposed on and concurrent with specific revenue-producing transactions, that are collected by us from a customer, are excluded from revenue.

(d) Cost of Goods Sold

Cost of goods sold includes the costs we incur at our production facilities to make products saleable on both products invoiced during the period as well as products in progress towards the satisfaction of the related performance obligations for which we have an enforceable right to payment upon termination and we may not use or sell the product to fulfill other customers' contracts. Cost of goods sold includes such items as raw materials, direct and indirect labor and facilities costs, including purchasing and receiving costs, plant management, inspection costs, production process improvement activities, product engineering and internal transfer costs, as well as the allocated portion of costs incurred at our corporate headquarters and our research facilities. In addition, all depreciation associated with assets used in the production of our products is also included in cost of goods sold. Direct labor costs consist of salaries, benefits and other personnel related costs for employees engaged in the manufacturing of our products and services.

Startup and transition costs are primarily unallocated fixed overhead costs and underutilized direct labor costs incurred during the period production facilities are transitioning wind blade models and ramping up manufacturing. All direct labor costs, excluding non-productive labor costs, are included in the measure of progress towards completion of the relevant performance obligation when determining revenue to be recognized during the period. The cost of sales for the initial products from a new model manufacturing line is generally higher than when the line is operating at optimal production volume levels due to inefficiencies during ramp-up related to labor hours per blade, cycle times per blade and raw material usage. Additionally, these costs as a percentage of net sales are generally higher during the period in which a facility is ramping up to full production capacity due to underutilization of the facility. Manufacturing overhead at each of our facilities includes virtually all indirect costs (including share-based compensation costs) incurred at the plants, including engineering, finance, information technology, human resources and plant management.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

(e) General and Administrative Expenses

General and administrative expenses primarily relate to the unallocated portion of costs incurred at our corporate headquarters and our research facilities and include salaries, benefits and other personnel related costs for employees engaged in research and development, engineering, finance, internal audit, information technology, human resources, business development, global operational excellence, global supply chain, in-house legal and executive management. Other costs include outside legal and accounting fees, risk management (insurance), share-based compensation and certain other administrative and global resources costs.

The unallocated research and development expenses incurred at our Warren, Rhode Island location as well as at our Kolding, Denmark advanced engineering center and our Berlin, Germany engineering center are also included in general and administrative expenses. For the years ended December 31, 2021, 2020 and 2019, total research and development expenses totaled \$1.0 million in each year, respectively.

(f) Loss on Sale of Assets and Asset Impairments

For the years ended December 31, 2021, 2020 and 2019, the losses on the sale of certain receivables, on a non-recourse basis under supply chain financing arrangements with our customers, to financial institutions, as well as the losses on the sale of other assets at our corporate and manufacturing facilities and asset impairment charges totaled \$13.1 million, \$7.7 million and \$18.1 million, respectively.

(g) Restructuring Charges, Net

Restructuring charges primarily consist of employee severance, one-time termination benefits and ongoing benefits related to the reduction of our workforce and other costs associated with exit activities, which may include costs related to leased facilities to be abandoned and facility and employee relocation costs. The determination of when we accrue for involuntary termination benefits under restructuring plans depends on whether the termination benefits are provided under an ongoing benefit arrangement or under a one-time benefit arrangement. Ongoing benefit arrangements are recognized over the service period or when termination becomes reasonably probable, and one-time benefit arrangements are recognized in the period the arrangement is approved and formally communicated to employees. If applicable, we record such costs into operating expense over the terminated employee's future service period beyond any minimum retention period. Restructuring charges that have been incurred but not yet paid are recorded in accrued expenses in the accompanying consolidated balance sheets.

For the years ended December 31, 2021, 2020 and 2019, restructuring charges, net totaled \$23.8 million, \$4.1 million and \$3.9 million, respectively. These charges primarily related to severance benefits to terminated employees as a result of the closure of our Newton, Iowa; Taicang City, China; and Dafeng, China manufacturing facilities and the stop of production in one of our Juarez, Mexico facilities.

(h) Cash and Cash Equivalents and Restricted Cash

Cash and cash equivalents include highly liquid investments that are readily convertible to known amounts of cash with original maturities of three months or less. The carrying value of cash and cash equivalents approximates fair value.

As of December 31, 2021 and 2020, our China locations collectively had unrestricted cash totaling \$25.9 million and \$47.4 million, respectively, in bank accounts in China. The Chinese government imposes certain restrictions on transferring cash out of China. The local governments in other countries in which we operate impose no such restrictions on transferring cash out of the respective country.

As of December 31, 2021 and 2020, we had provided for cash deposits for letters of guarantee used for customs clearance related to our China locations totaling \$0.0 million and \$0.3 million, respectively. These amounts are reported as restricted cash in our consolidated balance sheets.

As of December 31, 2021 and 2020, we had \$10.0 million and \$0.0 million, respectively of cash held as collateral for various instruments, primarily for letters of guarantee used for customs clearance related to our India

TPI COMPOSITES, INC. AND SUBSIDIARIES

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location, that were previously collateralized with our senior secured credit facility. These amounts are reported as restricted cash in our consolidated balance sheets.

(i) Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount and generally do not bear interest. We follow the allowance method of recognizing uncollectible accounts receivable, which recognizes bad debt expense based on a review of the individual accounts outstanding and prior history of uncollectible accounts receivable. Credit is extended based on evaluation of each of our customer's financial condition and is generally unsecured. Accounts receivable are generally due within 30 days and are stated net of an allowance for doubtful accounts in the consolidated balance sheets. Accounts are considered past due if outstanding longer than contractual payment terms. We record an allowance based on consideration of a number of factors, including the length of time trade accounts are past due, previous loss history, the creditworthiness of individual customers, economic conditions affecting specific customer industries, and economic conditions in general. We charge-off accounts receivable after all reasonable collection efforts have been exhausted. We credit payments subsequently received on such receivables to bad debt expense in the period payment is received. We record delinquent finance charges on outstanding accounts receivables only if they are collected. We wrote off no receivables during 2021, 2020, or 2019, and do not have any off-balance-sheet credit exposure related to our customers. See Note 4, *Accounts Receivable*.

(j) Inventories

Inventories represent materials purchased that are not restricted to fulfillment of a specific contract and are measured at the lower of cost or net realizable value. Net realizable value is defined as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Cost is determined using the first-in, first-out method for such raw materials. Write-downs to reduce the carrying cost of obsolete, slow-moving, and unusable inventory to net realizable value are recognized in cost of goods sold. The effect of these write-downs establishes a new cost basis in the related inventory, which is not subsequently written up.

(k) Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation and amortization of property, plant, and equipment is calculated on the straight-line method over the estimated useful lives of the assets. See Note 6, *Property, Plant and Equipment, Net*.

	Estimated useful lives
Machinery and equipment	7 to 10 years
Buildings	20 years
Leasehold improvements	5 to 10 years, or the term of the lease, if shorter
Office equipment and software	3 to 5 years
Furniture	3 to 5 years
Vehicles	5 years

(l) Recoverability of Long-Lived Assets

We review property, plant and equipment and other long-lived assets in order to assess recoverability based on expected future undiscounted cash flows whenever events or circumstances indicate that the carrying value may not be recoverable. If the sum of the expected future net cash flows is less than the carrying value, an impairment loss is recognized. The impairment loss is measured as the amount by which the carrying value exceeds the fair value of the asset.

(m) Assets Held for Sale

We classify long-lived assets or disposal groups to be sold as held for sale in the period in which all of the following criteria are met: (1) management, having the authority to approve the action, commits to a plan to sell the

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

asset or disposal group; (2) the asset or disposal group is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets or disposal groups; (3) an active program to locate a buyer and other actions required to complete the plan to sell the asset or disposal group have been initiated; (4) the sale of the asset or disposal group is probable, and transfer of the asset or disposal group is expected to qualify for recognition as a completed sale within one year, except if events or circumstances beyond our control extend the period of time required to sell the asset or disposal group beyond one year; (5) the asset or disposal group is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and (6) actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

We initially measure a long-lived asset or disposal group that is classified as held for sale at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held-for-sale criteria are met. Conversely, gains are not recognized on the sale of a long-lived asset or disposal group until the date of sale. We assess the fair value of a long-lived asset or disposal group less any costs to sell each reporting period it remains classified as held for sale and report any subsequent changes as an adjustment to the carrying value of the asset or disposal group, as long as the new carrying value does not exceed the carrying value of the asset at the time it was initially classified as held for sale.

Upon determining that a long-lived asset or disposal group meets the criteria to be classified as held for sale, we cease depreciation and report long-lived assets and/or the assets and liabilities of the disposal group, if material, in the line items assets held for sale and liabilities held for sale, respectively, in our consolidated balance sheets.

As of December 31, 2021, we met the criteria to classify \$8.5 million of assets as held for sale associated with our Taicang manufacturing facility, of which \$7.0 million was related to property, plant and equipment, net and \$1.5 million was related to other noncurrent assets (land-use rights). These amounts have been reclassified to Assets held for sale in the accompanying consolidated balance sheets. We expect the sale to be completed in the next twelve months.

(n) Goodwill, Intangible Assets and Deferred Costs, Net

Goodwill represents the excess of the acquisition cost of Composite Solutions, Inc. from True North Partners, LLC in 2004 over the fair value of identifiable assets acquired and liabilities assumed. Goodwill, which is entirely in the U.S. segment, is evaluated for impairment annually on October 31 and whenever events or circumstances make it likely that impairment may have occurred. In determining whether impairment has occurred, one compares the fair value of the related reporting unit (calculated using the discounted cash flow method) to its carrying value. If the carrying value exceeds the fair value, impairment is recognized for the difference. We may first assess qualitative factors to determine whether it is necessary to perform the quantitative goodwill impairment test. We performed our annual goodwill impairment test during 2021 and determined that it is more-likely-than-not that its fair value exceeds its carrying amount.

Our patents, licenses, trademarks and development tools were acquired in business acquisitions and provide contractual or legal rights, or other future benefits that could be separately identified. Our valuation of identified intangible assets was based upon discounted cash flow estimates that require significant management judgment with respect to revenue and expense growth rates, changes in working capital, and the selection and use of the appropriate discount rate. The intangible assets are amortized over their estimated useful life. Intangible assets with indefinite lives are evaluated at least annually for impairment or whenever events or circumstances make it likely that impairment may have occurred.

In addition, we recognize an asset for deferred costs incurred to fulfill a contract when such costs meet certain criteria. These deferred costs are amortized over their estimated useful life. See Note 2, *Revenue from Contracts with Customers* for a further discussion of those deferred costs. See Note 7, *Intangible Assets and Deferred Costs, Net*.

(o) Mezzanine Equity

We have issued Series A Preferred Stock that we have determined is a financial instrument with both equity and debt characteristics and is classified as mezzanine equity in our consolidated financial statements. The instrument was initially recognized at fair value net of issuance costs. We reassess whether the instrument is currently redeemable or probable to become redeemable in the future as of each reporting date, in which, if the instrument meets either criterion, we will accrete the carrying value to the estimated maximum redemption value.

TPI COMPOSITES, INC. AND SUBSIDIARIES

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based on the effective interest method over the remaining period to the expected redemption date. To assess classification, we review all features of the instrument, including all mandatory and optional redemption features that may be substantive. All financial instruments that are classified as mezzanine equity are evaluated for embedded derivative features by evaluating each feature against the nature of the host instrument (e.g. more equity-like or debt-like). Features identified as freestanding instruments or bifurcated embedded derivatives that are material are recognized separately as a derivative asset or liability in the consolidated financial statements. We have evaluated our Series A Preferred Stock and determined that its nature is that of a debt host and embedded derivatives exist that require bifurcation on our balance sheet. Mezzanine equity is presented net of related issuance costs and discounts resulting from bifurcated instruments and embedded features issued in conjunction with the host. See Note 14, *Mezzanine Equity*.

(p) Warranty Expense

We provide a limited warranty for our mold, wind blade, and transportation products, including materials and workmanship, with terms and conditions that vary depending on the product sold, generally for periods that range from two to five years. Warranty expense is recorded based upon estimates of future repairs using a probability-based methodology that considers previous warranty claims, identified quality issues and industry practices. Once the warranty period has expired, any remaining unused warranty accrual for the specific products is generally reversed against the current year warranty expense amount. See Note 9, *Accrued Warranty*.

(q) Treasury Stock

Common stock purchased for treasury is recorded at historical cost. Transactions in treasury shares relate to shares withheld in lieu of income taxes associated with share-based compensation plans and are recorded at weighted-average cost.

(r) Foreign Currency Translation and Income and Losses

Foreign currency-denominated assets and liabilities are translated into U.S. dollars at exchange rates existing at the respective balance sheet dates. Results of operations of our foreign subsidiaries are translated at the average exchange rates during the respective periods. Translation adjustments are reported in accumulated other comprehensive loss in our consolidated balance sheets. Currency translation adjustments for the years ended December 31, 2021, 2020 and 2019 amounted to other comprehensive losses of \$18.4 million, \$8.1 million and \$7.0 million, respectively.

Our reporting currency is the U.S. dollar. However, we have non-U.S. operating subsidiaries in our U.S., Mexico, Turkey, China and India operations.

- The U.S. parent companies of our China and Mexico operations, which are wholly-owned subsidiaries of TPI Composites, Inc., maintain their books and records in their functional currency, the US. dollar.
- Our Mexico operations maintain their books and records through multiple legal entities that are denominated in the local Mexican currency, the Peso, which are remeasured to their U.S. dollar functional currency.
- Our Turkey operations maintain their books and records in their functional currency, the local Turkish currency, the Lira.
- Our China operations maintain their books and records in their functional currency, the local Chinese currency, the Renminbi.
- Our Chennai, India operations maintain their books and records in their functional currency, the U.S. dollar.
- Our Kolding, Denmark operation, which is an indirect, wholly-owned subsidiary of TPI Composites, Inc., maintains its books and records in their functional currency, the local Danish currency, the Krone.
- Our Berlin, Germany operation, which is an indirect, wholly-owned subsidiary of TPI Composites, Inc., maintains its books and records in their functional currency, the Euro.

Foreign currency transaction gains and losses are reported in foreign currency loss, net in our consolidated statements of operations.

TPI COMPOSITES, INC. AND SUBSIDIARIES

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(s) Share-Based Compensation

We maintain one active incentive compensation plan: the Amended and Restated 2015 Stock Option and Incentive Plan (the 2015 Plan). The 2015 Plan provides for the issuance of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock units (RSUs), restricted stock awards, unrestricted stock awards, cash-based awards, performance-based restricted stock units (PSUs), and dividend equivalent rights to certain of our employees, non-employee directors and consultants. The term of stock options issued under the 2015 Plan may not exceed ten years from the date of grant. Under the 2015 Plan, incentive stock options and non-qualified stock options are granted at an exercise price that is not to be less than 100% of the fair market value of our common stock on the date of grant, as determined by the Compensation Committee of our board of directors. Stock options become vested and exercisable at such times and under such conditions as determined by the Compensation Committee on the date of grant.

We use the Black Scholes valuation model, unless the awards are subject to market conditions, in which case we utilize a binomial-lattice model (i.e., Monte Carlo simulation model), to determine the fair value of stock options. The Monte Carlo simulation model utilizes multiple input variables to determine the share-based compensation expense. For grants with market conditions made in the year ended December 31, 2021, we utilized a weighted-average volatility of 65.1%, a 0% dividend yield and a weighted-average risk-free interest rate of 0.3%. The volatility was based on the most recent comparable period for our peer group and us. The stock price projection for us and the components of our peer group assumes a 0% dividend yield. This is mathematically equivalent to reinvesting dividends in the issuing entity over the performance period. The risk-free interest rate is equal to the yield, as of the measurement date, of the zero-coupon U.S. Treasury bill that is commensurate with the remaining performance measurement period.

The determination of the grant date fair value using an option-pricing model and simulation model requires judgment as well as assumptions regarding a number of other complex and subjective variables. These variables include our closing market price at the grant date as well as the following assumptions:

Expected Volatility. The expected volatility assumption reflects an average of our historical volatility and the volatilities of publicly traded peer group companies with a period equal to the expected life of the options.

Expected Life (years). We use the simplified method to estimate the expected term of stock options. The simplified method for estimating expected term is to use the mid-point between the vesting term and the contractual term of the option. We elected to use the simplified method because we did not have historical exercise data to estimate the expected term due to the limited time period our common stock had been publicly traded.

Risk-Free Interest Rate. The risk-free interest rate assumption is based upon the U.S. constant maturity treasury rates as the risk-free rate interpolated between the years commensurate with the expected life of the options.

Dividend Yield. The dividend yield assumption is zero since we do not expect to declare or pay dividends in the foreseeable future.

Forfeitures. Share-based compensation expense is reversed when the service-based award is forfeited.

Expected Vesting Period. We amortize the share-based compensation expense over the requisite service period.

Share-based compensation expense related to RSUs and PSUs are expensed over the vesting period using the straight-line method for our employees and our board of directors. The RSUs and PSUs do not have voting rights. We calculate the fair value of our share-based awards on the date of grant for our employees and directors.

(t) Leases

In accordance with FASB ASC Topic 842, *Leases* we determine if an arrangement is a lease at inception. Operating leases are included in operating lease right of use (ROU) assets, current operating lease liabilities, and noncurrent operating lease liabilities in the consolidated balance sheets. Finance leases are included in property,

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plant and equipment, current maturities of long-term debt, and long-term debt, net of debt issuance costs and current maturities in the consolidated balance sheets.

Operating lease ROU assets and operating lease liabilities are recognized based on the present value of future minimum lease payments over the lease term at commencement date. Variable payments are not included in ROU assets or lease liabilities and can vary from period to period based on asset usage or our proportionate share of common costs. The implicit rate within our leases is generally not determinable and, therefore, the incremental borrowing rate at lease commencement is utilized to determine the present value of lease payments. We estimate our incremental borrowing rate based on third-party lender quotes to obtain secured debt in a like currency for a similar asset over a timeframe similar to the term of the lease. The ROU asset also includes any lease prepayments made and any initial direct costs incurred and excludes lease incentives. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term. We have elected not to recognize ROU assets or lease liabilities for leases with a term of 12 months or less.

We have lease agreements with lease and non-lease components. We have elected to apply the practical expedient to account for these components as a single lease component for all classes of underlying assets. See Note 12, *Leases*.

(u) Income Taxes

Income taxes are accounted for under the asset and liability method in accordance with FASB ASC Topic 740, *Income Taxes*. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those differences are projected to be recovered or settled. Realization of deferred tax assets is dependent on our ability to generate sufficient taxable income of an appropriate character in future periods. A valuation allowance is established if it is determined to be more-likely-than-not that a deferred tax asset will not be realized. See Note 17, *Income Taxes*.

(v) Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles (GAAP) 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. Significant items subject to such estimates and assumptions include the useful lives of property, plant and equipment, realizability of intangible assets, deferred costs and deferred tax assets, standalone selling prices and future contract volumes and the direct costs to complete the performance obligation for revenue recognition, fair value of stock options, performance-based restricted stock units and warrants, features related to our Series A Preferred Stock, warranty reserves and other contingencies.

(w) Fair Value of Financial Instruments

FASB ASC Topic 820, *Fair Value Measurements*, defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Topic 820 also specifies a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value is follows:

Level 1: Quoted prices in active markets for identical assets or liabilities;

Level 2: Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and

Level 3: Valuation is generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect our own estimate of assumptions that market participants would use in pricing the asset or liability.

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The carrying amounts of our cash and cash equivalents, trade accounts receivable, income taxes receivable, accounts payable and accrued expenses and income taxes payable approximate fair value because of the short-term nature of these financial instruments. The carrying amount of our short-term unsecured loans approximates fair value due to their short-term nature and the loans carry a current market rate of interest, a Level 2 input. The carrying value of our long-term debt approximates fair value based on its variable rate index or based upon market interest rates available to us for debt of similar risk and maturities, both of which are Level 2 inputs. Since our derivative assets and liabilities are not traded on an exchange, we value them using standard industry valuation models. As applicable, these models project future cash flows and discount the amounts to a present value using market-based observable inputs, including interest rate curves, credit risk, foreign exchange rates, and forward and spot prices for currencies. These inputs are observable in active markets over the contract term of the derivative instruments we hold, including the compound derivative associated with our Series A Preferred Stock and accordingly, we classify the valuation techniques as Level 2. See Note 14, *Mezzanine Equity*.

(x) Earnings Per Share

We calculate basic earnings per share by dividing net income, after deducting dividends on and accretion of preferred stock by the average number of common shares outstanding during the period, which includes unissued common shares associated with vested equity awards for which little or no consideration is required prior to issuance, net of any treasury shares. We calculate diluted earnings per share in a similar manner after consideration of the potential dilutive effect of common stock equivalents on the average number of common shares outstanding during the period. Common stock equivalents include warrants, stock options, restricted stock awards and units, and performance share awards and units. Common stock equivalents are calculated based upon the treasury stock method using an average market price of common shares during the period. Dilution is not considered when a net loss is reported. Common stock equivalents that have an antidilutive effect are excluded from the computation of diluted earnings per share. See Note 18, *Net Income (Loss) Per Share*.

(y) Recently Issued Accounting Pronouncements

Accounting Pronouncements Adopted in 2021

Convertible Instruments

In August 2020, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2020-06, Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity. This ASU is intended to simplify the accounting for certain convertible instruments with characteristics of both liability and equity. This ASU removes certain accounting models which separate the embedded conversion features from the host contract for convertible instruments. As a result, after the adoption of this guidance, an entity’s convertible debt instrument will be wholly accounted for as debt. This ASU also expands disclosure requirements for convertible instruments and simplifies areas of the guidance for diluted earnings-per-share calculations by requiring the use of the if-converted method.

This ASU is effective for all public business entities (other than smaller reporting companies) for fiscal years beginning after December 15, 2021, with early adoption permitted for fiscal years beginning after December 15, 2020 and can be adopted on either a fully retrospective or modified retrospective basis. An entity should adopt the guidance at the beginning of its annual fiscal year. We adopted this standard on January 1, 2021 on a modified retrospective basis and it did not have a material effect on our consolidated financial statements and related disclosures.

Recent Accounting Pronouncements

Reference Rate Reform

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. This ASU only applies to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. This ASU is effective for all entities beginning on March 12, 2020 and entities

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may elect to apply the ASU prospectively through December 31, 2022. The FASB later issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope*, to clarify the scope of Topic 848 so that derivatives affected by the discounting transition are explicitly eligible for certain optional expedients and exceptions in Topic 848. We are currently evaluating the impact this guidance may have on our consolidated financial statements and related disclosures.

There have been no other recent accounting pronouncements or changes in accounting pronouncements during the current year that are of significance, or potential significance, to us.

Note 2 – Net Sales

The following tables represents the disaggregation of our net sales by product for each of our reportable segments:

	U.S.	Asia	Year Ended December 31, 2021		India	Total
			Mexico	EMEA		
	(in thousands)					
Wind blade sales	\$ 130,455	\$ 240,891	\$ 567,721	\$ 472,059	\$ 199,817	\$ 1,610,943
Precision molding and assembly systems sales	—	16,622	18,297	—	—	34,919
Transportation sales	26,812	—	10,500	—	—	37,312
Field service, inspection and repair services sales	24,525	2,403	2,835	5,332	33	35,128
Other sales	47	281	8,745	4,829	379	14,281
Total net sales	<u>\$ 181,839</u>	<u>\$ 260,197</u>	<u>\$ 608,098</u>	<u>\$ 482,220</u>	<u>\$ 200,229</u>	<u>\$ 1,732,583</u>

	U.S.	Asia	Year Ended December 31, 2020		India	Total
			Mexico	EMEA		
	(in thousands)					
Wind blade sales	\$ 135,415	\$ 511,090	\$ 472,994	\$ 368,907	\$ 91,649	\$ 1,580,055
Precision molding and assembly systems sales	—	13,134	14,939	—	—	28,073
Transportation sales	33,849	—	2,347	—	—	36,196
Field service, inspection and repair services sales	12,128	821	—	2,160	16	15,125
Other sales	549	2,038	5,559	2,478	64	10,688
Total net sales	<u>\$ 181,941</u>	<u>\$ 527,083</u>	<u>\$ 495,839</u>	<u>\$ 373,545</u>	<u>\$ 91,729</u>	<u>\$ 1,670,137</u>

	U.S.	Asia	Year Ended December 31, 2019		India	Total
			Mexico	EMEA		
	(in thousands)					
Wind blade sales	\$ 120,125	\$ 366,206	\$ 410,337	\$ 431,362	\$ 687	\$ 1,328,717
Precision molding and assembly systems sales	3,774	25,203	19,703	—	—	48,680
Transportation sales	28,523	—	347	—	—	28,870
Field service, inspection and repair services sales	14,551	680	—	3,347	—	18,578
Other sales	2,344	1,720	5,219	2,372	—	11,655
Total net sales	<u>\$ 169,317</u>	<u>\$ 393,809</u>	<u>\$ 435,606</u>	<u>\$ 437,081</u>	<u>\$ 687</u>	<u>\$ 1,436,500</u>

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In addition, most of our net sales are made directly to our customers, primarily large multi-national wind turbine manufacturers, under our supply agreements.

For further information regarding our reportable segments, refer to Note 21, *Segment Reporting*.

Contract Assets and Liabilities

Contract assets consist of the amount of revenue recognized over time for performance obligations in production where control has transferred to the customer, but the contract does not yet allow for the customer to be billed. Typically, customers are billed when the product finishes production and meets the technical specifications contained in the contract. The time it takes to produce a single wind blade is typically between 5 to 7 days. The time it takes to produce a mold is typically between 3 to 6 months. The majority of the contract asset balance relates to materials procured based on customer specifications. The contract assets are recorded as current assets in the consolidated balance sheets. Contract liabilities consist of advance payments in excess of revenue earned. These amounts primarily represent progress payments received as precision molding and assembly systems are being manufactured. The contract liabilities are recorded as current liabilities in the consolidated balance sheets and are reduced as we record revenue over time.

These contract assets and liabilities are reported on the consolidated balance sheets net on a contract-by-contract basis at the end of each reporting period, as demonstrated in the table below.

Contract assets and contract liabilities as of December 31 consisted of the following:

	2021	2020 (in thousands)	\$ Change
Gross contract assets	\$ 196,659	\$ 223,428	\$ (26,769)
Less: reclassification from contract liabilities	(8,336)	(6,500)	(1,836)
Contract assets	<u>\$ 188,323</u>	<u>\$ 216,928</u>	<u>\$ (28,605)</u>

	2021	2020 (in thousands)	\$ Change
Gross contract liabilities	\$ 9,610	\$ 7,114	\$ 2,496
Less: reclassification to contract assets	(8,336)	(6,500)	(1,836)
Contract liabilities	<u>\$ 1,274</u>	<u>\$ 614</u>	<u>\$ 660</u>

Contract assets decreased by \$28.6 million from December 31, 2020 to December 31, 2021 primarily due to amounts billed to customers exceeding the revenue earned related to wind blades being produced, offset by incremental unbilled production during the year ended December 31, 2021. Contracts liabilities increased by \$0.7 million from December 31, 2020 to December 31, 2021 due to the amounts billed to customers exceeding the revenue earned related to wind blades being produced during the year ended December 31, 2021.

For the years ended December 31, 2021, 2020 and 2019, we recognized revenue of \$0.6 million, \$3.0 million and \$7.1 million, respectively, related to precision molding and assembly systems and wind blades, which was included in the corresponding contract liability balance at the beginning of the period.

Performance Obligations

Remaining performance obligations represent the transaction price for which work has not been performed and excludes any unexercised contract options. As discussed in Note 1, *Summary of Operations and Summary of Significant Accounting Policies – (c) Revenue Recognition*, the transaction price includes estimated variable consideration as determined based on the estimated production output within the range of the contractual guaranteed minimum volume obligations and production capacity.

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As of December 31, 2021, the aggregate amount of the transaction price allocated to the remaining performance obligations to be satisfied in future periods was approximately \$2.8 billion. We estimate that we will recognize the remaining performance obligations as revenue as follows:

	\$	% of Total
	(in thousands)	
Year Ending December 31,		
2022	\$ 1,585,057	56.9%
2023	1,018,620	36.5
2024	183,144	6.6
Total remaining performance obligations	<u>\$ 2,786,821</u>	<u>100.0%</u>

For the year ended December 31, 2021, net revenue recognized from our performance obligations satisfied in previous periods decreased by \$24.7 million. The current year decrease primarily relates to contract modifications that resulted in changes in certain of our estimated total contract values and related direct costs to complete the performance obligations, and were recognized on a cumulative catch-up basis.

Pre-Production Investments

We recognize an asset for deferred costs incurred to fulfill a contract when those costs meet all of the following criteria: (a) the costs relate directly to a contract or to an anticipated contract that we can specifically identify; (b) the costs generate or enhance our resources that will be used in satisfying performance obligations in the future; and, (c) the costs are expected to be recovered. We capitalize the costs related to training our workforce to execute the manufacturing services and other facility set-up costs related to preparing for production of a specific contract. We factor these costs into our estimated cost analysis for the overall contract. Costs capitalized are amortized over the number of units produced during the contract term. As of December 31, 2021, the cost and accumulated amortization of such assets totaled \$9.5 million and \$6.9 million, respectively. As of December 31, 2020, the cost and accumulated amortization of such assets totaled \$6.6 million and \$3.7 million, respectively. These amounts are included in intangible assets and deferred costs, net in the consolidated balance sheet. See Note 7, *Intangible Assets and Deferred Costs, Net*.

In applying the practical expedient as permitted under FASB ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, we recognize the incremental costs of obtaining contracts as an expense when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less. These costs are included in cost of goods sold.

Note 3. Significant Risks and Uncertainties

Our revenues and receivables are earned from a small number of customers. As such, our production levels are dependent on these customers' orders. See Note 20, *Concentration of Customers*.

The COVID-19 pandemic adversely affected our business and operations during the year ended December 31, 2020. During the first quarter of 2020, our China manufacturing facilities were adversely impacted by the COVID-19 pandemic in the form of reduced production levels and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. During the second quarter of 2020, all of our manufacturing facilities with the exception of our China manufacturing facilities and our Rhode Island manufacturing facility were required to temporarily suspend production or operate at reduced production levels due primarily to certain applicable government-mandated stay at home orders in response to the COVID-19 pandemic, demands from certain of our labor unions to suspend or reduce production and general safety concerns of our associates. By the end of the second quarter of 2020, most of our manufacturing facilities had returned to operating at or near normal production levels.

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Although none of our manufacturing facilities are currently operating below normal capacity due to COVID-19 we may be required to reinstate temporary production suspensions or volume reductions at our manufacturing facilities to the extent there are new resurgences of COVID-19 cases in the regions where we operate or there is an outbreak of positive COVID-19 cases in any of our manufacturing facilities. For example, during the year ended December 31, 2021 our manufacturing facility in Yangzhou, China was shut down for approximately three weeks due to a small outbreak of positive COVID-19 cases in Yangzhou City. In addition, our global supply chain has been adversely affected by the COVID-19 pandemic during 2021 and may continue to be adversely affected if the COVID-19 pandemic persists.

The after-effects of the pandemic continue to evolve and affect supply chain performance and underlying assumptions in various ways – specifically with volatility in the commodity and logistics spaces. During 2021, there were both significant price increases and supply constraints with respect to resin and carbon, key raw materials that we use to manufacture our products, as well as increases in logistics costs to obtain raw materials. We expect carbon fiber and related product supply will remain constrained. Production of carbon products is very energy intensive and continued rising energy costs could continue to adversely impact cost of materials. If the supply of resin feedstocks and carbon fiber continue to be constrained and the prices for these raw materials remain elevated for an extended period of time, such constraints and elevated price levels will have a further material adverse impact on our results of operations.

Although we believe that the onshore wind market will continue to grow over the long term, the expiration of the PTC at the end of 2021 has created uncertainty in the near term. We are monitoring legislative and regulatory policy proposals to extend or expand tax credits in the United States to promote wind energy.

We maintain our U.S. cash in bank deposit and money market accounts that, at times, exceed U.S. federally insured limits. U.S. bank accounts are guaranteed by the Federal Deposit Insurance Corporation (FDIC) in an amount up to \$250,000 during 2021 and 2020. U.S. money market accounts are not guaranteed by the FDIC. As of December 31, 2021 and 2020, we had \$165.4 million and \$68.9 million, respectively, of cash in bank deposit and money market accounts in high quality U.S. banks, which was in excess of FDIC limits. We have not experienced losses in any such accounts.

We also maintain cash in bank deposit accounts outside the U.S. with no insurance. As of December 31, 2021, this included \$25.9 million in China, \$42.6 million in Turkey, \$5.7 million in India, \$2.1 million in Mexico and \$0.5 million in other countries. As of December 31, 2020, this included \$47.4 million in China, \$6.0 million in Turkey, \$5.0 million in India, \$2.1 million in Mexico and \$0.5 million in other countries. We have not experienced losses in these accounts. In addition, as of December 31, 2021 and 2020, we have short-term deposits in interest bearing accounts of \$0.0 million and \$0.3 million, respectively, in China, which are reported as restricted cash in our consolidated balance sheets.

Note 4. Accounts Receivable

Accounts receivable as of December 31 consisted of the following:

	2021	(in thousands)	2020
Trade accounts receivable	\$ 154,464		\$ 127,765
Other accounts receivable	3,340		5,003
Total accounts receivable	<u>\$ 157,804</u>		<u>\$ 132,768</u>

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Note 5. Other Current Assets

Other current assets as of December 31 consisted of the following:

	2021	2020
	(in thousands)	
Refundable value-added tax	\$ 19,673	\$ 18,961
Deposits	1,323	2,791
Other current assets	1,588	6,169
Total current assets	<u>\$ 22,584</u>	<u>\$ 27,921</u>

Note 6. Property, Plant and Equipment, Net

Property, plant and equipment, net as of December 31 consisted of the following:

	2021	2020
	(in thousands)	
Machinery and equipment	\$ 191,192	\$ 204,917
Buildings	15,908	15,544
Leasehold improvements	63,136	61,947
Office equipment and software	37,339	35,194
Furniture	14,794	25,097
Vehicles	613	635
Construction in progress	8,704	8,725
Total property, plant and equipment, gross	331,686	352,059
Accumulated depreciation	(162,108)	(143,058)
Total property, plant and equipment, net	<u>\$ 169,578</u>	<u>\$ 209,001</u>

As of December 31, 2021, the projects in construction in progress included the continued investment in of our manufacturing facility in Chennai, India and in our other existing manufacturing facilities.

Total depreciation for the years ended December 31, 2021, 2020 and 2019 was \$49.0 million, \$48.6 million and \$36.7 million, respectively.

Note 7. Intangible Assets and Deferred Costs, Net

Carrying values and estimated useful lives of intangible assets and deferred costs as of December 31, 2021, consisted of the following:

	Estimated Useful Life	Cost	Accumulated Amortization (in thousands)	Net
Pre-production investments ⁽¹⁾	Various	\$ 9,493	\$ (6,931)	\$ 2,562
Patents	10 years	113	(28)	85
Acquired development tools	10 years	991	(248)	743
Trademarks	Indefinite	150	—	150
Total intangible assets and deferred costs, net		<u>\$ 10,747</u>	<u>\$ (7,207)</u>	<u>\$ 3,540</u>

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Carrying values and estimated useful lives of intangible assets and deferred costs as of December 31, 2020, consisted of the following:

	Estimated Useful Life	Cost	Accumulated Amortization (in thousands)	Net
Pre-production investments ⁽¹⁾	Various	\$ 6,581	\$ (3,723)	\$ 2,858
Patents	10 years	123	(6)	117
Acquired development tools	10 years	1,075	(54)	1,021
Trademarks	Indefinite	150	—	150
Total intangible assets and deferred costs, net		<u>\$ 7,929</u>	<u>\$ (3,783)</u>	<u>\$ 4,146</u>

(1) See Note 2, *Revenue from Contracts with Customers*, for a further discussion of these pre-production investments.

During the years ended December 31, 2021, 2020 and 2019, we recorded amortization expense for the intangible assets and deferred costs of \$3.6 million, \$1.1 million and \$1.9 million, respectively.

Note 8. Other Noncurrent Assets

Other noncurrent assets as of December 31 consisted of the following:

	2021	2020
	(in thousands)	
Deferred tax assets	\$ 21,078	\$ 18,793
Deposits	10,775	10,004
Land use right (50 year estimated useful life)	—	1,584
Other	2,460	2,936
Total other noncurrent assets	<u>\$ 34,313</u>	<u>\$ 33,317</u>

Note 9. Accrued Warranty

Warranty accrual as of December 31 consisted of the following:

	2021	2020	2019
	(in thousands)		
Warranty accrual at beginning of year	\$ 50,852	\$ 47,639	\$ 36,765
Accrual during the year	20,650	20,029	23,710
Cost of warranty services provided during the year	(23,174)	(29,890)	(6,220)
Changes in estimate for pre-existing warranties, including expirations during the period, and foreign exchange impact	(6,308)	13,074	(6,616)
Warranty accrual at end of year	<u>\$ 42,020</u>	<u>\$ 50,852</u>	<u>\$ 47,639</u>

Note 10. Share-Based Compensation

The share-based compensation expense recognized in the consolidated statements of operations for the years ended December 31 was as follows:

	2021	2020	2019
	(in thousands)		
Cost of goods sold	\$ 2,536	\$ 1,979	\$ 386
General and administrative expenses	5,871	8,373	5,295
Total share-based compensation expense	<u>\$ 8,407</u>	<u>\$ 10,352</u>	<u>\$ 5,681</u>

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The share-based compensation expense recognized by award type for the years ended December 31 was as follows:

	2021	2020 (in thousands)	2019
RSUs	\$ 5,703	\$ 4,613	\$ 3,658
Stock options	1,121	3,589	1,501
PSUs	1,583	2,150	522
Total share-based compensation expense	<u>\$ 8,407</u>	<u>\$ 10,352</u>	<u>\$ 5,681</u>

Included in total share-based compensation expense for the year ended December 31, 2020 is \$1.7 million of compensation expense associated with the modification of an employee and two non-employee awards during the period. The modifications primarily provided for the extension of the post termination exercise period of outstanding stock options, resulting in a one-time charge in the year ended December 31, 2020.

The summary of activity for our incentive plans is as follows:

	Stock Options			RSUs		PSUs		
	Shares Available for Grant	Shares	Weighted-Average Exercise Price	Options Exercisable	Units	Weighted-Average Grant Date Fair Value	Units	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2018	5,980,605	2,600,694	13.41	1,415,948	425,876	18.75	249,249	16.91
Increase in shares authorized	1,387,123	—	—	—	—	—	—	—
Granted	(875,557)	397,170	20.94	—	196,418	26.99	281,969	21.02
Exercised/vested	—	(345,475)	15.14	—	(236,187)	15.42	—	—
Forfeited/cancelled	129,341	(58,161)	15.23	—	(31,680)	24.91	(39,500)	20.24
Balance as of December 31, 2019	6,621,512	2,594,228	14.29	1,697,272	354,427	24.99	491,718	19.00
Increase in shares authorized	1,407,228	—	—	—	—	—	—	—
Granted	(1,044,491)	261,181	28.49	—	461,732	22.43	321,578	11.13
Exercised/vested	—	(1,195,405)	13.25	—	(117,683)	22.81	(131,924)	12.53
Forfeited/cancelled	221,289	(160,418)	20.40	—	(30,022)	25.06	(30,849)	19.02
Balance as of December 31, 2020	7,205,538	1,499,586	16.94	959,233	668,454	23.60	650,523	16.42
Granted	(312,173)	5,000	24.76	—	168,993	49.21	138,180	43.97
Exercised/vested	—	(371,971)	14.01	—	(135,621)	22.39	(139,924)	15.19
Forfeited/cancelled	469,827	(134,489)	26.12	—	(65,220)	31.86	(270,118)	23.99
Balance as of December 31, 2021	<u>7,363,192</u>	<u>998,126</u>	16.84	779,149	<u>636,606</u>	29.81	<u>378,661</u>	21.53

The fair value of RSUs, based on the share price on the date of vesting, which vested during the years ended December 31, 2021, 2020 and 2019 was \$9.0 million, \$10.4 million and \$6.2 million, respectively. In addition, during 2021, 2020 and 2019, we repurchased 31,310 shares, 61,920 shares and 79,040 shares for \$0.5 million, \$2.2 million and \$2.1 million, respectively, related to tax withholding requirements on vested RSU awards.

The following table summarizes the outstanding and exercisable stock option awards as of December 31, 2021:

Range of Exercise Prices:	Shares	Options Outstanding		Options Exercisable	
		Weighted-Average Remaining Contractual Life (in years)	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
\$10.87	495,460	3.4	10.87	495,460	10.87
\$11.00 to \$17.06	57,951	4.5	16.20	53,967	16.13
\$18.70	5,671	4.4	18.70	5,671	18.70
\$18.77 to \$29.56	439,044	8.0	23.64	224,051	23.53
\$10.87 to \$29.56	<u>998,126</u>	5.5	16.84	<u>779,149</u>	14.93

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The following table contains additional information pertaining to stock options for the years ended December 31:

	2021	2020 (in thousands)	2019
Total intrinsic value of stock options outstanding	\$ 2,032	\$ 53,741	\$ 12,219
Total intrinsic value of stock options exercisable	2,032	38,367	9,718
Cash received from the exercise of stock options	5,211	15,839	5,223
Intrinsic fair value of stock options vested	4,641	4,669	8,796

As of December 31, 2021, the unamortized cost of the outstanding RSUs and PSUs was \$7.8 million and \$2.4 million, respectively, which we expect to recognize in the consolidated financial statements over weighted-average periods of approximately 1.7 years and 1.8 years, respectively. Additionally, the total unrecognized cost related to non-vested stock option awards was \$0.8 million, which we expect to recognize in the consolidated financial statements over a weighted-average period of approximately 1.6 years.

The fair value of the stock options granted during the years ended December 31 were calculated using the Black-Scholes option pricing model with the following assumptions:

	2021	2020	2019
Weighted-average fair value	\$ 13.27	\$ 13.11	\$ 6.80
Expected volatility	55.9%	48.5%	28.0%
Expected life	6.3 years	6.1 years	6.3 years
Risk-free interest rate	1.4%	0.4%	1.9%
Dividend yield	0.0%	0.0%	0.0%

Note 11. Long-Term Debt, Net of Current Maturities

Long-term debt, net of current maturities, as of December 31 consisted of the following:

	2021 (in thousands)	2020
Senior revolving loan—US	\$ —	\$ 171,154
Unsecured financing—EMEA	48,444	30,040
Equipment financing—EMEA	—	4,335
Secured and unsecured working capital—India	10,269	—
Unsecured term loan—India	8,109	—
Equipment finance lease—Mexico	5,821	8,038
Equipment finance lease—EMEA	1,884	4,119
Other equipment finance leases	119	232
Total debt—principal	74,646	217,918
Less: Debt issuance costs	—	(1,051)
Total debt, net of debt issuance costs	74,646	216,867
Less: Current maturities of long-term debt	(66,438)	(32,551)
Long-term debt, net of debt issuance costs and current maturities	<u>\$ 8,208</u>	<u>\$ 184,316</u>

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The following table summarizes borrowings under these facilities as of December 31:

Credit Facilities	Interest Rates	2021		2020	
		Total Borrowing Capacity	Outstanding Balance (in thousands)	Total Borrowing Capacity	Outstanding Balance
Senior revolving loan—US	2.75%	\$ —	\$ —	\$ 205,000	\$ 171,154
Unsecured financing—EMEA	1.75-6.00%	96,187	48,444	99,315	30,040
Secured and unsecured working capital—India	1.72-3.16%	10,356	10,269	—	—
Unsecured financing—Asia	3.80%	18,037	—	13,027	—
Total credit facilities		124,580	58,713	317,342	201,194
Equipment financing and term debt	Interest Rates	Total Facility	Outstanding Balance	Total Facility	Outstanding Balance
Unsecured term loan—India	3.67%	8,109	8,109	—	—
Equipment financing—EMEA	EURIBOR+6.75%	—	—	4,335	4,335
Equipment finance lease—Mexico	3.25-6.65%	22,978	5,821	15,425	8,038
Equipment finance lease—EMEA	6.00%	10,000	1,884	10,000	4,119
Other equipment finance leases	4.93-9.75%	220	119	631	232
Total equipment financing and term debt		41,307	15,933	30,391	16,724
Total debt—principal		\$ 165,887	\$ 74,646	\$ 347,733	\$ 217,918

U.S.:

In November 2021, we used the net proceeds from the issuance and sale of the Series A Preferred Stock to repay all outstanding indebtedness under our senior revolving loan and letter of credit sub-facility (the Credit Agreement) and terminated our Credit Agreement.

As of December 31, 2021 and 2020, there was \$0 million and \$171.2 million outstanding under the Credit Agreement, respectively. Additionally, as of December 31, 2021 and 2020, there was \$0.0 million and \$7.9 million of letters of credit outstanding under the letter of credit sub-facility of the Credit Agreement, respectively.

EMEA:

In general, all of the credit agreements which the EMEA segment enters into have provisions which allow them to borrow in either U.S. dollars, Turkish Lira or Euro, regardless of the currency in which the agreement is denominated. In addition, none of the credit agreements have an expiration date, however each credit agreements' limits are reviewed annually to establish available capacity, and every time we draw under one of the credit agreements a term is set for the respective draw's repayment.

As of December 31, 2021 and 2020, available capacity under the EMEA unsecured financing agreements was reduced by \$5.4 million and \$1.0 million, respectively, for outstanding letters of credit.

In addition to the total borrowing capacity above, as of December 31, 2021 and 2020, the various EMEA general credit agreements provided for additional financing up to approximately \$14.9 million and \$7.6 million related to letters of credit and other non-cash items, of which approximately \$0.1 million and \$2.4 million were outstanding as of the end of each year, respectively. Interest on the letters of credit and other non-cash items accrue at fixed rates of between 0.35% and 6.95% and are generally payable quarterly until the letters of credit are closed.

Due to the short-term nature of the unsecured financings in the EMEA segment, we estimate that fair-value approximates the face value of the notes.

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Asia:

In August 2021, we amended our credit agreement with a Chinese financial institution to increase the amount available under the unsecured credit line from 90.0 million Renminbi up to 150.0 million Renminbi (approximately \$23.5 million as of December 31, 2021) related to two of our China facilities, of which 97.0 million Renminbi (approximately \$15.2 million as of December 31, 2021) can be used for the purpose of working capital, and 53.0 million Renminbi (approximately \$8.3 million as of December 31, 2021) can be used for issuing customs letters of guarantee and covering the related deposits on such letters of guarantee, and certain other transactions approved by the lender. Interest on the credit line accrues at the Chinese central bank interest rate plus an applicable margin (3.8% as of December 31, 2021) and can be paid monthly, quarterly or at the time of the debt's maturity (August 2023). As of December 31, 2021 and 2020, there were no amounts outstanding under this credit agreement.

In March 2018, we entered into a credit agreement, as amended, with a Chinese financial institution to provide an unsecured credit line of up to 100.0 million Renminbi (approximately \$15.7 million as of December 31, 2021) of which 82.0 million Renminbi (approximately \$12.9 million as of December 31, 2021) can be used for the purpose of issuing customs letters of guarantee and 18.0 million Renminbi (approximately \$2.8 million as of December 31, 2021) can be used for the purpose of working capital. Interest on the credit line accrues at the Chinese central bank interest rate plus an applicable margin (3.8% as of December 31, 2021) and can be paid monthly, quarterly or at the time of the debt's maturity (in March 2023). As of December 31, 2021 and 2020, there were no amounts and 40.5 million Renminbi (approximately \$6.4 million), respectively, of letters of guarantee used for customs clearance outstanding under this credit agreement.

Mexico:

In September 2021, we entered into a sale-lease agreement with a leasing company for the initial lease of up to \$7.5 million of machinery and equipment at our Matamoros, Mexico facility. The lease includes an implied effective interest rate of 4.1% annually and requires monthly payments during each 48 month term. The amount outstanding under this agreement as of December 31, 2021 was \$1.6 million.

India:

In May 2021, we entered into a three-year unsecured term loan with an Indian financial institution to provide up to 600.0 million Indian rupee (approximately \$8.1 million as of December 31, 2021) of unsecured financing. Interest on the term loan accrues at a fixed rate of 3.67% and is payable in quarterly installments starting in May 2022. The balance outstanding as of December 31, 2021 was \$8.1 million.

In June 2021, we entered into a general credit agreement with an Indian financial institution to provide up to 400.0 million Indian rupee (approximately \$5.4 million as of December 31, 2021) of secured financing. Interest on the secured financing accrues at a fixed rate of 1.81% and is payable at the end of the term when the loan is repaid. The balance outstanding as of December 31, 2021 was \$5.3 million.

In October 2021, we entered into a general credit agreement to provide up to \$5.0 million in unsecured financing to be used for working capital. Interest on the working capital loan accrues at a fixed rate of 3.16% and is payable at the end of the term when the loan is repaid.

The average interest rate on our short-term borrowings as of December 31, 2021 and 2020 was approximately 3.7% and 3.3%, respectively.

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The future aggregate annual principal maturities of debt as of December 31, 2021 are as follows:

Year Ending December 31,	(in thousands)
2022	\$ 66,438
2023	5,619
2024	2,213
2025	370
2026	6
Total debt—principal	<u>\$ 74,646</u>

Note 12. Leases

We have operating and finance leases for our manufacturing facilities, warehouses, offices, automobiles and certain of our machinery and equipment. Our leases have remaining lease terms of between one and 13 years, some of which may include options to extend the leases up to five years.

The components of lease cost for the years ended December 31 were as follows:

	2021	2020
	(in thousands)	
Total operating lease cost	<u>\$ 39,209</u>	<u>\$ 36,958</u>
Finance lease cost		
Amortization of assets under finance leases	\$ 3,662	\$ 5,973
Interest on finance leases	637	985
Total finance lease cost	<u>\$ 4,299</u>	<u>\$ 6,958</u>

Total lease liabilities as of December 31 were as follows:

	2021	2020
	(in thousands)	
Operating Leases		
Operating lease right of use assets	<u>\$ 137,192</u>	<u>\$ 158,827</u>
Current operating lease liabilities	\$ 22,681	\$ 26,099
Noncurrent operating lease liabilities	146,479	155,925
Total operating lease liabilities	<u>\$ 169,160</u>	<u>\$ 182,024</u>
Finance Leases		
Property, plant and equipment, gross	\$ 26,405	\$ 28,462
Less: accumulated depreciation	(13,782)	(12,461)
Total property, plant and equipment, net	<u>\$ 12,623</u>	<u>\$ 16,001</u>
Current maturities of long-term debt	\$ 5,435	\$ 6,018
Long-term debt, net of debt issuance costs and current maturities	2,389	6,371
Total finance lease liabilities	<u>\$ 7,824</u>	<u>\$ 12,389</u>

Future minimum lease payments under noncancelable leases as of December 31, 2021 were as follows:

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	Operating Leases	Finance Leases
	(in thousands)	
Year Ending December 31,		
2022	\$ 34,564	\$ 5,856
2023	32,236	1,341
2024	28,074	709
2025	27,539	379
2026	27,822	7
Thereafter	76,503	—
Total future minimum lease payments	226,738	8,292
Less: interest	(57,578)	(468)
Total lease liabilities	<u>\$ 169,160</u>	<u>\$ 7,824</u>

Supplemental cash flow information related to leases for the years ended December 31 was as follows:

	2021	2020
	(in thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 36,355	\$ 31,478
Operating cash flows from finance leases	637	985
Financing cash flows from finance leases	5,750	6,116
Right of use assets obtained in exchange for new lease obligations:		
Operating leases	13,232	61,455
Finance leases	1,817	163

Other information related to leases as of December 31 was as follows:

	2021	2020
Weighted-Average Remaining Lease Term (In Years):		
Operating leases	7.0	7.7
Finance leases	1.9	2.2
Weighted-Average Discount Rate:		
Operating leases	8.0%	7.9%
Finance leases	5.8%	6.4%

As of December 31, 2021, there were no material additional leases related to our manufacturing facilities, warehouses, offices, automobiles or our machinery and equipment which have not yet commenced.

Note 13. Financial Instruments

Foreign Exchange Forward Contracts

We use foreign exchange forward contracts to mitigate our exposure to fluctuations in exchange rates between the functional currencies of our subsidiaries and the other currencies in which they transact. We do not use such forward contracts for speculative or trading purposes.

Mexican Peso

All of our remaining outstanding foreign exchange forward contracts (excluding those with call options) expired during the year ended December 31, 2021. As of December 31, 2020, the notional values associated with

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our foreign exchange forward contracts qualifying as cash flow hedges were approximately 0.3 billion Mexican Pesos (approximately \$14.0 million).

With regards to our foreign exchange call option contracts, for the years ended December 31, 2021, 2020 and 2019, \$2.9 million, \$0.2 million and \$0.0 million of premium amortization was recorded through cost of sales within our consolidated statements of operations, respectively. The net loss recognized in accumulated other comprehensive loss in our consolidated statements of changes in mezzanine equity and stockholders' equity for our foreign exchange call option contracts is expected to be recognized in cost of sales in our consolidated statements of operations during the next three months.

As of December 31, 2021, and 2020 the notional values associated with our foreign exchange call option contracts qualifying as cash flow hedges were approximately 0.4 billion Mexican Pesos (approximately \$20.2 million) and 0.4 billion Mexican Pesos (approximately \$17.3 million), respectively.

Chinese Renminbi

With regards to our foreign exchange forward contracts, for which hedge accounting does not apply, for the years ended December 31, 2021, 2020 and 2019 \$2.2 million, \$1.8 million and \$0.0 million in gains were recorded through foreign currency loss within our consolidated statements of operations, respectively.

India Rupee

In November 2020, we entered into a monthly foreign exchange forward contract to hedge our exposure to exchange rate fluctuations on certain balance sheet amounts recorded on our India entities that are not the entities' functional currency. Hedge accounting does not apply to the foreign exchange forward contracts, all of which expired during the year ended December 31, 2021. For the year ended December 31, 2020, \$0.7 million in gains were recorded through foreign currency loss within our consolidated statements of operations.

Beginning June 2021, we entered into a monthly foreign exchange call option contract to hedge the same exposure. Hedge accounting does not apply to the foreign exchange call option contract. For the year ended December 31, 2021, \$2.8 million in gains were recorded through foreign currency loss within our consolidated statements of operations, respectively. Additionally, with regards to our foreign exchange call option contracts, for the year ended December 31, 2021, \$0.7 million of premium amortization was recorded as losses through foreign currency loss within our consolidated statements of operations.

All of our derivative assets and liabilities measured at fair value are classified as Level 2 within the fair value hierarchy. For a detailed discussion of the fair value hierarchy, refer to the discussion in Note 1, *Summary of Operations and Summary of Significant Accounting Policies – Fair Value of Financial Instruments*.

The fair values and location of financial instruments in our consolidated balance sheets as of December 31, were as follows:

Financial Instrument	Consolidated Balance Sheet Line Item	2021	2020
		(in thousands)	
Foreign exchange forward contracts	Other current assets	\$ 1,580	\$ 5,832
Foreign exchange forward contracts	Accounts payable and accrued expenses	1,052	2,096
Interest rate swap	Other noncurrent liabilities	—	4,414

The following table presents the pretax amounts reclassified from accumulated other comprehensive loss into our consolidated statements of operations:

Comprehensive Income (Loss) Component	Consolidated Statement of Operations Line Item	2021	2020	2019
		(in thousands)		
Foreign exchange forward contracts	Cost of sales	\$ (3,037)	\$ 996	\$ —

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Note 14. Mezzanine Equity

On November 22, 2021 (“Series A Preferred Stock Closing Date”), we issued 350,000 shares of our preferred stock, at a price of \$1,000 per share, for aggregate gross proceeds of \$350.0 million. We designated this preferred stock as Series A Preferred Stock (our “Series A Preferred Stock”) and warrants to purchase an aggregate of 4,666,667 share of our Common Stock (the “Warrants”) at an exercise price of \$0.01 per share.

Our Series A Preferred Stock is classified as mezzanine equity in our consolidated financial statements as redemption has been deemed probable. We have determined there are embedded features that require recognition as a compound derivative liability (“Compound Derivative”).

We allocated the gross proceeds of \$350.0 million first to the standalone fair value of the compound derivative, which as of the Series A Preferred Stock Closing Date and December 31, 2021 was \$0.0 million, with the remaining proceeds allocated to the Series A Preferred Stock and Warrants based on the relative fair value of each instrument, resulting in \$252.7 million being allocated to the Series A Preferred Stock, and \$97.3 million being allocated to the Warrants. We incurred \$10.7 million in issuance costs associated with the Series A Preferred Stock. These costs are allocated to the Series A Preferred Stock, and the Warrants consistent with the allocation of proceeds.

As of December 31, 2021, the carrying value of our Series A Preferred Stock, net of issuance costs, is \$251.0 million, and holders have earned unpaid dividends in the amount of \$4.1 million. We expect these dividends will be paid in kind for the first two years following the Series A Preferred Stock Closing Date. If the Series A Preferred Stock was redeemed in full as of December 31, 2021, the redemption amount would be \$473.2 million. This redemption value includes (i) the par value of all currently outstanding Series A Preferred Shares, (ii) accrued paid-in-kind (PIK) dividends, (iii) remaining cash dividends through the third anniversary, and (iv) the applicable redemption premium of 102%.

Dividends—The holders of our Series A Preferred Stock are entitled to dividends. The dividend rate is 11.0% per annum and compounds on a quarterly basis. The dividend rate will increase by 2.0% per annum: (i) on the fifth anniversary date of the Series A Preferred Stock Closing Date and on each anniversary thereafter, (ii) to the extent that the we fail to pay any dividend that is required to be paid in cash, (iii) if we are in material breach of its covenants under the Series A Preferred Stock Purchase Agreement and related exhibits, or if we experience a bankruptcy or insolvency event, or if certain other events of noncompliance occur, (iv) in the event we fail to maintain a specified fixed charge dividend coverage ratio, and (v) in respect of any Series A Preferred Stock issued as curative equity in accordance with the Investor Rights Agreement; provided that in no event shall the dividend rate exceed 20.0%. On or prior to the second anniversary of the Series A Preferred Stock Closing Date, we may pay dividends either in cash or “in kind”. Following the second anniversary of the Series A Preferred Stock Closing Date, dividends shall be payable only in cash.

Voting Rights—The holders of Series A Preferred Stock do not have any voting rights or rights to convert such preferred shares into shares of Common Stock. We must obtain the prior written consent of the holders of a majority of the outstanding shares of Series A Preferred Stock for, among other things: (i) amending our organizational documents to the extent such amendment has an adverse effect on the holders of the Series A Preferred Stock, (ii) effecting any change of control, liquidation event or merger or consolidation of us unless the entirety of the applicable Series A Preferred Stock price is paid with respect to all the then issued and outstanding Series A Preferred Stock, (iii) increasing or decreasing the number of authorized shares of Series A Preferred Stock, (iv) making certain material acquisitions or dispositions or entering into joint ventures or similar transactions, (v) incurring indebtedness except for indebtedness incurred under its existing loan facilities and agreements so long as the total amount of such indebtedness does not exceed \$80.0 million, (vi) committing to any capital expenditures or agreements to construct or acquire new manufacturing facilities, and (vii) certain other specified actions, such as entering into single capital expenditure projects greater than \$10.0 million and/or annual total capital expenditures greater than \$30.0 million.

Redemption—We will have the right to redeem all or any portion of the Series A Preferred Stock at any time by paying the applicable redemption price; provided, however, that no optional redemption will be permitted that would result in less than 10% of the shares of Series A Preferred Stock remaining outstanding following such redemption unless all remaining shares of Series A Preferred Stock are redeemed.

The holders of the Series A Preferred Stock will have the option to require us to redeem any portion of the Series A Preferred Stock at any time after the fifth anniversary of the Series A Preferred Stock Closing Date or an event of noncompliance occurs. We will be required to redeem all of the outstanding shares of Series A Preferred Stock automatically upon the occurrence of a change of control, liquidation or insolvency event. We shall be

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required to redeem all of the outstanding shares of Series A Preferred Stock automatically upon the occurrence of (i) a change of control or a liquidation event, or (ii) any insolvency event. Upon consummation of any such mandatory redemption, we shall pay to the holders from whom such shares were redeemed an amount that would equal the applicable redemption price effective as of the date of the event.

The redemption price includes a redemption premium, which varies based on the date of redemption. Upon redemption prior to the third anniversary of the Series A Preferred Stock Closing Date, the Company is required to pay all dividends that would have otherwise accrued from the date of redemption through the third anniversary of the Series A Preferred Stock Closing Date.

Liquidation Rights—Upon our liquidation, dissolution, or winding up, holders of our Series A Preferred Stock will be entitled to receive cash out of our assets prior to holders of the common stock.

Financial Covenants—We must maintain cash on hand of \$50.0 million in the U.S., and beginning December 31, 2023, and quarterly thereafter, compliance with a fixed charge-dividend coverage ratio of 1.10 to 1.00.

Warrants—The Warrants are fully vested and are exercisable at any time from the Series A Preferred Stock Closing Date to the close of business on the fifth anniversary of the Series A Preferred Stock Closing Date. The Warrants include customary anti-dilution adjustments.

Compound Derivative—Certain features embedded with the Series A Preferred Stock are required to be bifurcated as derivative instruments. The compound derivative instrument is recorded at fair value and marked-to-market each reporting period with changes in fair value being reflected in earnings. As of December 31, 2021, the compound derivative had a value of \$0.0 million. For the year ended December 31, 2021, there were no mark-to-market adjustments recorded through earnings.

Note 15. Restructuring charges, net

Restructuring charges, net for the years ended December 31 were as follows:

	2021	Year Ended December 31,	
		2020	2019
		(In thousands)	
Severance	\$ 23,027	\$ 3,960	\$ 3,285
Other restructuring costs	735	129	642
Total restructuring charges, net	<u>\$ 23,762</u>	<u>\$ 4,089</u>	<u>\$ 3,927</u>

The following is a summary of our restructuring liability activity for the periods presented:

	Severance and other costs
Balance at December 31, 2020	\$ 3,200
Restructuring charges, net	23,762
Payments	(14,018)
Balance at December 31, 2021	<u>\$ 12,944</u>

Note 16. Commitments and Contingencies

Legal Proceedings

From time to time, we may be involved in disputes or litigation relating to claims arising out of its operations.

In January 2021, we received a complaint that was filed by the administrator for the Senvion GmbH (Senvion) insolvency estate in German insolvency court. The complaint asserts avoidance against us in the aggregate amount of \$13.3 million. The alleged avoidance claims relate to payments that Senvion made to us for wind blades that we produced prior to Senvion filing for insolvency protection. We filed a response to these alleged avoidance claims in August 2021 and expect to file a supplemental response in April 2022. We believe we have meritorious defenses to

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the alleged avoidance claims. Due to the early stage of this claim, we have determined that the ultimate outcome cannot be estimated at this time.

From time to time, we are party to various lawsuits, claims, and other legal proceedings that arise in the ordinary course of business, some of which are covered by insurance. Upon resolution of any pending legal matters, we may incur charges in excess of presently established reserves. Our management does not believe that any such charges would, individually or in the aggregate, have a material adverse effect on our financial condition, results of operations or cash flows.

Insurance/Self-Insurance

We use a combination of insurance and self-insurance for a number of risks, including claims related to our employee health care, workers' compensation and general liability. Liabilities associated with these risks are estimated based on, among other things, historical claims experience, severity factors, and other actuarial assumptions. Our loss exposure related to self-insurance is limited by stop loss coverage on a per occurrence and aggregate basis. We regularly analyze our reserves for incurred but not reported claims, and for reported but not paid claims related to our self-funded insurance programs. While we believe our reserves are adequate, significant judgment is involved in assessing these reserves such as assessing historical paid claims, average lags between the claims' incurred date, reported dates and paid dates, and the frequency and severity of claims. There may be differences between actual settlement amounts and recorded reserves and any resulting adjustments are included in expense once a probable amount is known.

Dividend Restrictions

Certain of our subsidiaries are limited in their ability to declare dividends without first meeting statutory restrictions of China, including retained earnings as determined under Chinese-statutory accounting requirements. Until 50% (\$26.7 million) of registered capital is contributed to a surplus reserve, our China operations can only pay dividends equal to 90% of after-tax profits (10% must be contributed to the surplus reserve). Once the surplus reserve fund requirement is met, our China operations can pay dividends equal to 100% of after-tax profit assuming other conditions are met. As of December 31, 2021, the amount of the surplus reserve fund was \$10.0 million.

Collective Bargaining Agreements

Certain of our employees in Turkey and Matamoros, Mexico are covered by collective bargaining agreements. We have a collective bargaining agreement with our employees in Turkey through the end of 2022. We have separate collective bargaining agreements for each of our Matamoros, Mexico manufacturing facilities. We amended a collective bargaining agreement at one of our Matamoros, Mexico manufacturing facilities to adjust the salaries and bonuses payable to our associates for calendar year 2022, and this collective bargaining agreement is in effect through March 2023. We have a collective bargaining agreement for our other facility in Matamoros, Mexico that we took over from Nordex, which is in effect through April 2023, and we expect this collective bargaining agreement for the associates at this manufacturing facility will be amended during the first half of 2022.

Escheat Audit

In November 2020, we were notified by the state of Delaware that they intend to examine our books and records to determine compliance with Delaware escheat laws. Since that date, additional states have joined with Delaware in the audit process and additional states may join in the audit process. The audit is conducted by an outside firm on behalf of the states and covers the period from 2005 to 2019. We believe that the audits may take several years to complete. Due to the preliminary stage of this audit, we have determined that the ultimate outcome cannot be reasonably estimated at this time. Any claims or liabilities resulting from these audits could have a material impact on our financial condition, results of operations and cash flows.

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Note 17. Income Taxes

Geographic sources of income (loss) before income taxes are as follows for the years ended December 31:

	2021	2020	2019
	(in thousands)		
United States	\$ (141,074)	\$ 4,913	\$ (41,255)
China	(18,919)	16,232	(3,777)
Turkey	(8,551)	(26,566)	47,579
Mexico	10,297	8,509	8,434
India	26,453	(13,810)	(3,970)
Other	(994)	2,979	396
Total income (loss) before income taxes	<u>\$ (132,788)</u>	<u>\$ (7,743)</u>	<u>\$ 7,407</u>

Tax Reform

The Tax Cuts and Jobs Act (Tax Reform) enacted a new minimum tax on U.S. companies' foreign operations called global intangible low tax income (GILTI). The GILTI provisions require us to include in our U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. We have made a policy election to account for any ongoing impacts of GILTI tax in the period in which it is incurred.

The Internal Revenue Service published final regulations in July 2020 to address the application of the high-tax exclusion from GILTI under the Tax Reform allowing us to make an annual election to exclude GILTI of our foreign subsidiaries with an effective tax rate greater than 90% of the U.S. corporate rate. We recognized \$10.6 million of tax benefits related to 2020 and 2019 as a result of this change in legislation.

We do not provide deferred taxes related to U.S. GAAP basis in excess of outside tax basis in the investment in our foreign subsidiaries to the extent such amounts relate to indefinitely reinvested earnings and profits of such foreign subsidiaries. In 2021, management classified the Taicang subsidiary as held for sale, therefore the company no longer asserts permanent reinvestment in Taicang and has accrued for the estimated tax on disposal. As of December 31, 2021, our undistributed earnings of certain of our foreign subsidiaries amounted to approximately \$198.4 million, and we consider those earnings reinvested indefinitely.

The income tax provision includes U.S. federal, state, and local taxes, Turkey, China, Mexico and India taxes currently payable and those deferred because of temporary differences between the financial statement and the tax bases of assets and liabilities.

The components of the income tax provision (benefit) for the years ended December 31 are as follows:

	2021	2020	2019
	(in thousands)		
Current:			
U.S. federal	\$ (630)	\$ —	\$ —
U.S. state and local taxes	(23)	32	(7)
Foreign	25,287	19,234	18,171
Total current	24,634	19,266	18,164
Deferred:			
U.S. federal	3,869	(1,909)	6,277
U.S. state and local taxes	2,374	(1,385)	(950)
Foreign	(4,117)	(4,688)	(376)
Total deferred	2,126	(7,982)	4,951
Total income tax provision (benefit)	<u>\$ 26,760</u>	<u>\$ 11,284</u>	<u>\$ 23,115</u>

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The following is a reconciliation from the U.S. statutory income tax rate to our effective income tax rate for the years ended December 31:

	2021	2020	2019
United States statutory income tax rate	21.0%	21.0%	21.0%
Foreign rate differential	(12.3)	(189.1)	(40.8)
Foreign permanent differences	(0.6)	(19.4)	2.9
Tax rate change	0.1	(6.9)	(0.3)
Withholding taxes	(4.4)	(20.1)	24.5
Subpart F / GILTI income	(6.3)	137.6	212.3
Unrecognized tax benefits	(1.7)	(91.6)	—
Share-based compensation	(0.2)	3.5	(9.1)
Valuation allowance	(21.0)	0.7	115.5
State taxes	1.0	13.7	(10.2)
Deferred tax adjustments	(0.9)	11.8	2.1
Research and development	0.2	11.2	(13.4)
Foreign currency / inflationary adjustments	3.6	5.6	(0.5)
Other	1.3	(23.7)	8.1
Effective income tax rate	<u>(20.2)%</u>	<u>(145.7)%</u>	<u>312.1%</u>

The following is a summary of the components of deferred tax assets and liabilities as of December 31:

	2021	2020	2019
		(in thousands)	
Deferred tax assets:			
Net operating loss and credit carry forwards	\$ 47,533	\$ 36,754	\$ 23,065
Deferred revenue	1,727	180	1,792
Non-deductible accruals	12,788	12,360	16,111
Equity compensation	2,892	3,298	3,274
Lease liabilities	26,611	23,271	1,062
Non-deductible interest	5,618	3,302	—
Tax credits	1,931	1,931	1,931
Other	11,623	6,760	4,480
Gross deferred tax assets	110,723	87,856	51,715
Valuation allowance	(47,469)	(18,903)	(18,505)
Total deferred tax assets	<u>63,254</u>	<u>68,953</u>	<u>33,210</u>
Deferred tax liabilities:			
Deferred revenue	(16,620)	(24,294)	(17,081)
Depreciation	(2,155)	(3,446)	(4,196)
Lease assets	(25,354)	(22,453)	(32)
Other	(3,352)	33	(827)
Total deferred tax liabilities	<u>(47,481)</u>	<u>(50,160)</u>	<u>(22,136)</u>
Net deferred tax assets	<u>\$ 15,773</u>	<u>\$ 18,793</u>	<u>\$ 11,074</u>

The deferred tax valuation allowance as of December 31 consisted of the following:

	2021	2020	2019
		(in thousands)	
Valuation allowance at beginning of year	\$ (18,903)	\$ (18,505)	\$ (8,520)
Benefits obtained (costs accumulated)	(28,566)	(398)	(9,985)
Valuation allowance at end of year	<u>\$ (47,469)</u>	<u>\$ (18,903)</u>	<u>\$ (18,505)</u>

The valuation allowance as of December 31, 2021 primarily relates to the U.S. federal and state deferred tax assets and certain foreign net operating losses (NOLs) that we believe do not meet the more-likely-than-not criteria

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for recording the related benefits. During 2019, we increased the valuation allowance recorded against deferred tax assets in Taicang, China and India. The increase of this valuation allowance resulted in tax expense of \$8.5 million for the year. During 2020, we recognized \$0.6 million tax benefits from the release of valuation allowance against deferred tax assets in India and changes to realizability of certain attributes in the U.S. During 2021, we recognized a full U.S. valuation allowance, resulting in tax expense of \$26.8 million for the year.

As of December 31, 2021, we have U.S. federal and state NOL carryforwards of \$167.0 million and \$211.7 million, respectively, with foreign NOL carryforwards of approximately \$31.0 million and foreign tax credits of approximately \$1.9 million available to offset future U.S., China and India taxable income. A portion of the U.S. federal and all state NOL carryforwards expire in varying amounts through 2039 with most of the U.S. federal NOLs having indefinite lives. We also have foreign tax credits that expire in 2026 and foreign NOL carryforwards that expire in varying amounts through 2028. The utilization of our NOLs is subject to an annual limitation under Section 382 of the Internal Revenue Code due to changes in ownership. Based on our analysis, we do not believe such limitation will impact our realization of the NOL carryforwards.

We recognize the impact of a tax position in the financial statements if that position is more-likely-than-not to be sustained on audit, based on the technical merits of the position. We disclose all unrecognized tax benefits, which include the reserves recorded for uncertain tax positions on filed tax returns and the unrecognized portion of affirmative claims. Included in the balance of unrecognized tax benefits as of December 31, 2021 are \$9.4 million, of tax benefits that, if recognized, would reduce our annual effective rate. We do not anticipate any decreases to unrecognized tax benefits in the coming year. Our policy is to recognize any interest and penalties that we may incur related to our tax positions as a component of our income tax provision or benefit. There were no estimated interest or penalties to accrue in 2021 related to the unrecognized tax benefits. We did not record any uncertain tax positions in 2019.

The following is a reconciliation of the beginning and ending amount of total unrecognized tax benefits for the years ended December 31:

	2021	(in thousands)	
		2020	2019
Unrecognized tax benefits at beginning of year	\$ 6,992	\$ —	\$ —
Increases related to prior year tax positions	—	5,220	—
Decreases related to prior year tax positions	—	—	—
Increases related to current year tax positions	2,391	2,268	—
Increases (decreases) due to currency translation	—	—	—
Decreases relating to settlements with authorities	—	(496)	—
Decreases from laps in statute of limitations	—	—	—
Unrecognized tax benefits at end of year	<u>\$ 9,383</u>	<u>\$ 6,992</u>	<u>\$ —</u>

We operate in and file income tax returns in various jurisdictions in China, Mexico, Turkey, India, U.S., Denmark, Germany, Spain and Switzerland, which are subject to examination by tax authorities. In the U.S., the federal tax returns for 2018 through 2020 remain open to examination. For U.S. state and local taxes as well as in non-U.S. jurisdictions, the statute of limitations generally varies between three and ten years. However, to the extent allowable by law, the tax authorities may have a right to examine and make adjustment to prior periods when amended returns have been filed, or when NOLs or tax credits were generated and carried forward for subsequent utilization.

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Note 18. Net Income (Loss) Per Common Share

The following table sets forth the computation of basic and diluted net income (loss) per common share:

	2021	2020	2019
	(in thousands, except per share data)		
Numerator:			
Net loss	\$ (159,548)	\$ (19,027)	\$ (15,708)
Preferred stock dividends and accretion	(6,040)	—	—
Net loss attributable to common stockholders	<u>\$ (165,588)</u>	<u>\$ (19,027)</u>	<u>\$ (15,708)</u>
Denominator:			
Basic weighted-average shares outstanding	37,415	35,532	35,062
Effect of dilutive awards	—	—	—
Diluted weighted-average shares outstanding	<u>37,415</u>	<u>35,532</u>	<u>35,062</u>
Basic net loss per common share	\$ (4.43)	\$ (0.54)	\$ (0.45)
Diluted net loss per common share	\$ (4.43)	\$ (0.54)	\$ (0.45)
Dilutive shares excluded from the calculation due to net losses in the period	1,569	1,674	1,176
Anti-dilutive share-based compensation awards that would be excluded from the calculation if income was reported in the period	1	17	28

For the year ended December 31, 2021, the weighted average number of common shares outstanding during the period includes 4,666,667 of outstanding, fully vested warrants that are exercisable for \$0.01 per warrant.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

Note 19. Stockholders' Equity

Accumulated Other Comprehensive Loss

The following table presents the changes in accumulated other comprehensive loss (AOCL) by component for the years ended December 31, 2021, 2020 and 2019:

	Foreign currency translation adjustments	Interest rate swap (in thousands)	Foreign exchange forward contracts	Total AOCL
Balance at December 31, 2018	(14,986)	594	—	(14,392)
Other comprehensive income (loss) before reclassifications	(7,026)	(3,469)	518	(9,977)
Amounts reclassified from AOCL	—	—	172	172
Net tax effect	—	730	(145)	585
Net current period other comprehensive income (loss)	(7,026)	(2,739)	545	(9,220)
Balance at December 31, 2019	(22,012)	(2,145)	545	(23,612)
Other comprehensive income (loss) before reclassifications	(8,099)	(1,698)	(777)	(10,574)
Amounts reclassified from AOCL	—	—	996	996
Net tax effect	—	400	(200)	200
Net current period other comprehensive income (loss)	(8,099)	(1,298)	19	(9,378)
Balance at December 31, 2020	(30,111)	(3,443)	564	(32,990)
Other comprehensive income (loss) before reclassifications	(18,419)	4,414	(3,341)	(17,346)
Amounts reclassified from AOCL	—	—	(3,037)	(3,037)
Net tax effect	—	(971)	338	(633)
Net current period other comprehensive income (loss)	(18,419)	3,443	(6,040)	(21,016)
Balance at December 31, 2021	<u>\$ (48,530)</u>	<u>\$ —</u>	<u>\$ (5,476)</u>	<u>\$ (54,006)</u>

Note 20. Concentration of Customers

Revenues from certain customers (in thousands) in excess of 10 percent of total consolidated Company revenues for the years ended December 31 are as follows:

<u>Customer</u>	2021		2020		2019	
	Revenues (in thousands)	% of Total	Revenues (in thousands)	% of Total	Revenues (in thousands)	% of Total
Customer 1—Vestas	\$ 699,632	40.4%	\$ 830,302	49.7%	\$ 662,302	46.1%
Customer 2—GE	428,013	24.7	391,533	23.4	369,067	25.7
Customer 3—Nordex	387,714	22.4	255,912	15.3	230,563	16.1

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Trade accounts receivable from certain customers in excess of 10 percent of total consolidated Company trade accounts receivable as of December 31 are as follows:

<u>Customer</u>	2021 % of Total	2020 % of Total
Customer 1—Vestas	10.7%	35.0%
Customer 3—Nordex	61.5	40.8
Customer 5—Enercon	14.7	8.3

Note 21. Segment Reporting

FASB ASC Topic 280, *Segment Reporting*, establishes standards for the manner in which companies report financial information about operating segments, products, services, geographic areas and major customers. In managing our business, management focuses on growing our revenues and earnings in select geographic areas serving primarily the wind energy market. We have operations in the United States, China, Mexico, Turkey and India.

The Company's reportable segments are (1) the United States (U.S.), (2) Asia, (3) Mexico, (4) Europe, the Middle East and Africa (EMEA) and (5) India. These reportable segments are reflective of how the Company's chief operating decision maker reviews operating results for the purposes of allocating resources and assessing performance.

As further described below, our operating segments are defined geographically as the U.S., Asia, Mexico, EMEA and India. All of our segments operate in their local currency except for the Mexico and Asia segments, which both include a U.S. parent company, and India, which operate in the U.S. dollar.

We divide our business operations into five geographic operating segments as follows:

Our U.S. segment includes (1) the manufacturing of wind blades at our Newton, Iowa facility, (2) the manufacturing of precision molding and assembly systems used for our transportation business at our Warren, Rhode Island facility, (3) the manufacturing of composite solutions for the transportation industry, which we also conduct at our Warren, Rhode Island facility, (4) wind blade inspection and repair services, (5) our advanced engineering center in Kolding, Denmark, which provides technical and engineering resources to our manufacturing facilities, (6) our engineering center in Berlin, Germany and (7) our corporate headquarters, the costs of which are included in general and administrative expenses.

Our Asia segment includes (1) the manufacturing of wind blades at our facilities in Dafeng, China and Yangzhou, China, (2) the manufacturing of precision molding and assembly systems at our Taicang Port, China facility and (3) wind blade inspection and repair services.

Our Mexico segment includes (1) the manufacturing of wind blades at our three facilities in Juárez, Mexico and two facilities in Matamoros, Mexico, (2) the manufacturing of precision molding and assembly systems and composite solutions for the transportation industry at our fourth Juárez, Mexico facility and (3) wind blade inspection and repair services.

Our EMEA segment includes (1) the manufacturing of wind blades at our two facilities in Izmir, Turkey and wind blade inspection and repair services, and (2) our wind blade inspection and repair service facility in Madrid, Spain.

Our India segment manufactures wind blades from our new manufacturing facility in Chennai, India, which commenced operations in the first quarter of 2020.

The following tables set forth certain information regarding each of our segments as of or for the years ended December 31:

	2021	2020	2019
	(in thousands)		
Net sales by segment:			
U.S.	\$ 181,839	\$ 181,941	\$ 169,317
Asia	260,197	527,083	393,809

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Mexico	608,098	495,839	435,606
EMEA	482,220	373,545	437,081
India	200,229	91,729	687
Total net sales	\$ 1,732,583	\$ 1,670,137	\$ 1,436,500
Net sales by geographic location ⁽¹⁾ :			
United States	\$ 181,839	\$ 181,941	\$ 169,317
China	260,197	527,083	393,809
Mexico	608,098	495,839	435,606
Turkey	482,220	373,545	437,081
India	200,229	91,729	687
Total net sales	\$ 1,732,583	\$ 1,670,137	\$ 1,436,500
Depreciation and amortization:			
U.S.	\$ 8,269	\$ 7,193	\$ 9,223
Asia	14,987	15,692	10,699
Mexico	17,047	18,587	12,577
EMEA	5,814	6,217	6,081
India	6,476	1,978	—
Total depreciation and amortization	\$ 52,593	\$ 49,667	\$ 38,580
Income (loss) from operations:			
U.S.	\$ (49,246)	\$ (40,991)	\$ (78,278)
Asia	(13,025)	62,869	24,132
Mexico	(74,191)	(9,611)	3,533
EMEA	39,609	23,331	70,449
India	(845)	(16,832)	(3,948)
Total income (loss) from operations	\$ (97,698)	\$ 18,766	\$ 15,888
Capital expenditures:			
U.S.	\$ 9,422	\$ 6,949	\$ 8,321
Asia	2,583	13,135	22,471
Mexico	10,659	15,624	25,842
EMEA	2,103	10,887	11,023
India	12,352	19,071	6,751
Total capital expenditures	\$ 37,119	\$ 65,666	\$ 74,408
Tangible long-lived assets:			
U.S.	\$ 25,522	\$ 31,811	
Asia (China)	26,965	46,075	
Mexico	71,208	78,813	
EMEA (Turkey)	14,413	28,312	
India	31,470	23,990	
Total tangible long-lived assets	\$ 169,578	\$ 209,001	
Total assets:			
U.S.	\$ 207,601	\$ 118,456	
Asia (China)	171,963	250,582	
Mexico	266,936	251,764	
EMEA (Turkey)	192,737	201,691	
India	168,464	133,764	
Total assets	\$ 1,007,701	\$ 956,257	

(1) Net sales are attributable to countries based on the location where the product is manufactured or the services are performed.

TPI COMPOSITES, INC. AND SUBSIDIARIES

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Exhibit Index

Number	Description
3.1	<u>Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on July 11, 2016)</u>
3.2	<u>Second Amended and Restated By-laws of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on July 11, 2016)</u>
3.3	<u>Certificate of Designations of Series A Preferred Stock of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Form 8-K (File No. 001-37839) filed on November 24, 2021)</u>
4.1	<u>Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on July 11, 2016)</u>
4.2	<u>Third Amended and Restated Investor Rights Agreement by and among the Registrant and the investors named therein, dated June 17, 2010, as amended (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on June 17, 2016)</u>
4.3	<u>Form of senior indenture, to be entered into between the Registrant and the trustee designated therein (incorporated by reference to Exhibit 4.3 to the Registrant's Registration Statement on Form S-3 (File No. 333-220307) filed on September 1, 2017)</u>
4.4	<u>Form of subordinated indenture, to be entered into between the Registrant and the trustee designated therein (incorporated by reference to Exhibit 4.5 to the Registrant's Registration Statement on Form S-3 (File No. 333-220307) filed on September 1, 2017)</u>
4.5	<u>Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Act of 1934 (incorporated by reference to the Registrant's Annual Report on Form 10-K (File No. 001-37839) filed on March 2, 2020)</u>
10.1‡	<u>2008 Stock Option and Grant Plan, as amended by Amendment No. 1, dated August 14, 2008 and Amendment No. 2, dated December 30, 2008, and forms of award agreements thereunder (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on June 17, 2016)</u>
10.2‡	<u>Amended and Restated 2015 Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-212093) filed on June 17, 2016)</u>
10.3†	<u>Supply Agreement between General Electric International, Inc. and TPI Mexico III, LLC, entered into as of October 4, 2016 (incorporated by reference to Exhibit 10.4 of the Registrant's Current Report on Form 8-K (File No. 001-37839) filed on December 30, 2020)</u>
10.4†	<u>Amended and Restated Supply Agreement between General Electric International, Inc. and TPI Iowa, LLC, entered into as of October 4, 2016 (incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K (File No. 001-37839) filed on December 30, 2020)</u>
10.5†	<u>Supply Agreement between General Electric International, Inc. and TPI Mexico, LLC, entered into as of October 18, 2013, as amended (incorporated by reference to Exhibit 10.10 to the Registrant's Current Report on Form 8-K (File No. 001-37839) filed on December 30, 2020)</u>
10.6†	<u>First Amendment to Supply Agreement between General Electric International, Inc. and TPI Mexico, LLC, entered into as of October 4, 2016 (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 001-37839) filed on December 30, 2020)</u>

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- 10.7 [Lease between TPI Iowa, LLC and Opus Northwest L.L.C., dated November 13, 2007, as amended \(incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.8 [Commencement Date Memorandum between TPI Iowa LLC and Opus Northwest, L.L.C., entered into as of July 25, 2008 \(incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.9 [Lease between TPI Kompozit Kanat Sanayi ve Ticaret A.S. and Med Union Containers A.S., dated March 16, 2012 \(incorporated by reference to Exhibit 10.13 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.10 [Lease between TPI Wind Blade Dafeng Company Limited and Jiangsu Erhuajie Energy Equipment Co., Ltd, dated November 27, 2013, as amended \(incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.11 [Lease between the Registrant \(f/k/a LCSH Holding, Inc.\) and Gainey Center II LLC, dated June 12, 2007, as amended \(incorporated by reference to Exhibit 10.15 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.12 [Lease between TPI, Inc. \(f/k/a TPI Composites, Inc.\) and Borden & Remington Fall River LLC, dated as of December 1, 2008, as superseded by Standard Industrial Lease between TPI, Inc. and Borden & Remington Fall River LLC, dated June 28, 2010, as amended \(incorporated by reference to Exhibit 10.16 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.13 [Lease between Composite Solutions, Inc. and TN Realty, LLC, dated September 30, 2004, as amended \(incorporated by reference to Exhibit 10.17 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.14 [Lease between TPI-Composites S. de R.L. de C.V. and Deutsche Bank México, S.A. Institución de Banca Múltiple, División Fiduciaria, as Trustee of Trust F/1638, dated April 15, 2013, as amended \(incorporated by reference to Exhibit 10.18 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.15 [Amendment Agreement, among Macquarie Mexico Real Estate Management S.A. de C.V., TPI-Composites, S. de R.L. de C.V. and TPI Composites, Inc., dated November 27, 2018 \(incorporated by reference to Exhibit 10.17 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on March 5, 2019\)](#)
- 10.16 [Lease between TPI-Composites S. de R.L. de C.V. and The Bank of New York Mellon, S.A., as Trustee in the Trust F/00335, dated September 25, 2013 \(incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.17 [Lease between TPI Mexico, LLC and Trailer Transfer, Inc., dated October 16, 2013 \(incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.18 [Lease between TPI Mexico, LLC and Lanestone 1, LLC, dated April 14, 2014 \(incorporated by reference to Exhibit 10.21 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.19 [Plant and Equipment Lease between TPI Composites \(Taicang\) Co., Ltd. and Suzhou Tianneng Power Wind Mold Co., Ltd, dated May 1, 2014 \(incorporated by reference to Exhibit 10.22 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.20 [Form of Employment Agreement between the Registrant and each of its executive officers \(incorporated by reference to Exhibit 10.21 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on February 25, 2021\)](#)

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- 10.21 [Form of Indemnification Agreement \(incorporated by reference to Exhibit 10.24 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.22 [Lease between TPI Composites, S. de R.L. de C.V. and Vesta Baja California, S. de R.L. de C.V., dated November 20, 2015 \(incorporated by reference to Exhibit 10.26 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.23 [Lease between TPI Turkey IZBAS, LLC and Dere Konstruksiyon Demir Celik Insaat Taahhut Muhendislik Musavirlik Sanayi ve Ticaret Anonim Sirketi, dated December 9, 2015 \(incorporated by reference to Exhibit 10.27 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.24 [Lease between TPI Composites \(Taicang\) Co., Ltd. and Suzhou Suchen Chemical & Plastics Co., Ltd., dated August 5, 2014 \(incorporated by reference to Exhibit 10.28 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.25 [Lease between TPI Wind Blade Dafeng Co., Ltd. and Jiangsu Jianhao Transmission Machinery Co., Ltd., commencing January 1, 2016 \(incorporated by reference to Exhibit 10.29 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.26 [Lease between TPI Kompozit Kanat San. ve Tic. A.S. and BORO Insaat Yatirim Sanayi ve Ticaret A.S., dated October 16, 2015 \(incorporated by reference to Exhibit 10.30 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.27 [Sublease between TPI Inc. and Nordex Energy GmbH, dated April 24, 2015 \(incorporated by reference to Exhibit 10.31 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on June 17, 2016\)](#)
- 10.28 [Senior Executive Cash Incentive Bonus Plan \(incorporated by reference to Exhibit 10.34 to the Registrant's Registration Statement on Form S-1 \(File No. 333-212093\) filed on July 11, 2016\)](#)
- 10.29 [Lease between Phoenix Newton LLC and TPI Iowa II, LLC, dated January 5, 2018 \(incorporated by reference to Exhibit 10.33 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on March 8, 2018\)](#)
- 10.30 [Master Lease Agreement Subject to Condition between TPI Composites II, S. de R.L. de C.V. and QVC II, S. de R.L. de C.V. dated May 25, 2017, as amended \(incorporated by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on March 8, 2018\)](#)
- 10.31 [Second Amended and Restated Non-Employee Director Compensation Policy \(incorporated by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on February 25, 2021\)](#)
- 10.32 [Agreement to Lease between Aarush \(Phase III\) Logistics Park Private Limited, Aarush \(Phase IV\) Logistics Parks Private Limited, Aarush \(Phase V\) Logistics Parks Private Limited, Aarush Logistics Parks Private Limited, Aarush \(Phase II\) Logistics Parks Private Limited and Prospect One Manufacturing LLP, dated February 4, 2019 \(incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K \(File No. 001-37839\) filed on March 5, 2019\)](#)
- 10.33 [Credit Agreement entered into as of April 6, 2018, by and among the Registrant, JPMorgan Chase Bank, N.A., as Administrative Agent, and Well Fargo Bank, National Association and Capital One National Association, as Co-Syndication Agents, and the lenders from time to time party thereto \(incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.34 [Amendment No. 1 dated as of May 24, 2019 to the Credit Agreement entered into as of April 6, 2018, by and among the Registrant, JPMorgan Chase Bank, N.A., as Administrative Agent, and Well Fargo Bank, National Association and the lenders party thereto \(incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on August 7, 2019\)](#)

TPI COMPOSITES, INC. AND SUBSIDIARIES

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- 10.35 [Amendment No. 2 dated as of June 29, 2020, by and among the Registrant, JPMorgan Chase Bank, N.A., as Administrative Agent, and Well Fargo Bank, National Association and Capital One National Association, as Co-Syndication Agents, and the lenders from time to time party thereto \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K \(File No. 001-37839\) filed on June 30, 2020\)](#)
- 10.36 [Incremental Facility Agreement dated as of February 26, 2020, by and among the Registrant, JPMorgan Chase Bank, N.A., as Administrative Agent, and Well Fargo Bank, National Association and Capital One National Association, as Co-Syndication Agents, and the lenders from time to time party thereto \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K \(File No. 001-37839\) filed on February 27, 2020\)](#)
- 10.37 [Form of Employee Restricted Stock Unit Award \(Time-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.38 [Form of Executive Restrictive Stock Unit Award \(Time-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.39 [Form of Employee Restricted Stock Unit Award \(Adjusted EBITDA Performance-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.40 [Form of Executive Restricted Stock Unit Award \(Adjusted EBITDA Performance-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.41 [Form of Employee Restricted Stock Unit Award \(Stock Price Performance-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.42 [Form of Executive Restricted Stock Unit Award \(Stock Price Performance-Based Vesting\) under the Amended and Restated 2015 Stock Option And Incentive Plan \(incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q \(File No. 001-37839\) filed on May 3, 2018\)](#)
- 10.43 [Series A Preferred Stock Purchase Agreement, dated November 8, 2021, by and among the Registrant, Oaktree Power Opportunities Fund V \(Delaware\) Holdings, L.P., Opps TPIC Holdings, LLC and Oaktree Phoenix Investment Fund, L.P. \(incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K \(File No. 001-37839\) filed on November 10, 2021\)](#)
- 10.44 [Investor Rights Agreement, dated as of November 22, 2021, among the Registrant, Oaktree Power Opportunities Fund V \(Delaware\) Holdings, L.P., Opps TPIC Holdings, LLC and Oaktree Phoenix Investment Fund, L.P. \(incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K \(File No. 001-37839\) filed on November 24, 2021\)](#)
- 10.45 [Warrant Certificate, dated as of November 22, 2021, issued to Oaktree Power Opportunities Fund V \(Delaware\) Holdings, L.P. \(incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K \(File No. 001-37839\) filed on November 24, 2021\)](#)
- 10.46 [Warrant Certificate, dated as of November 22, 2021, issued to Oaktree Phoenix Investment Fund, L.P. \(incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K \(File No. 001-37839\) filed on November 24, 2021\)](#)
- 10.47 [Warrant Certificate, dated as of November 22, 2021, issued to Opps TPIC Holdings LLC \(incorporated by reference to Exhibit 10.4 to the Registrant's Form 8-K \(File No. 001-37839\) filed on November 24, 2021\)](#)

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

10.48	<u>Limited Waiver to Credit Agreement, dated as of November 8, 2021, among the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.3 to the Registrant’s Form 8-K (File No. 001-37839) filed on November 10, 2021)</u>
21.1*	<u>List of Subsidiaries</u>
23.1*	<u>Consent of KPMG LLP, Independent Registered Public Accounting Firm</u>
24.1	<u>Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K)</u>
31.1*	<u>Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
31.2*	<u>Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>
32.1**	<u>Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>
32.2**	<u>Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data file because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104 *	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*)

* Filed herewith.

** The certifications furnished in Exhibits 32.1 and 32.2 hereto are deemed to accompany this Annual Report on Form 10-K and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

† Confidential treatment has been granted for certain provisions of this Exhibit pursuant to Rule 406 promulgated under the Securities Act of 1933.

‡ Indicates compensatory plan or arrangement

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

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.

TPI COMPOSITES, INC.

Date: February 25, 2022

By: /s/ Adan Gossar
Adan Gossar
Interim Chief Financial Officer
(Principal Financial Officer)

We, the undersigned officers and directors of TPI Composites, Inc., hereby severally constitute and appoint William E. Siwek and Adan Gossar and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him or her and, place and stead, and in any and all capacities, to sign conformed for us and in our names in the capacities indicated below any and all signatures and amendments to this report, and to file the same, with all exhibits thereto, filing date and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements

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

Name	Title	Date
/s/ William E. Siwek William E. Siwek	President, Chief Executive Officer and Director (Principal Executive Officer)	February 25, 2022
/s/ Adan Gossar Adan Gossar	Interim Chief Financial Officer (Principal Financial Officer)	February 25, 2022
/s/ Jayshree S. Desai Jayshree S. Desai	Director	February 25, 2022
/s/ Philip J. Deutch Philip J. Deutch	Director	February 25, 2022
/s/ Paul G. Giovacchini Paul G. Giovacchini	Lead Independent Director	February 25, 2022
/s/ Jack A. Henry Jack A. Henry	Director	February 25, 2022
/s/ Bavan M. Holloway Bavan M. Holloway	Director	February 25, 2022
/s/ Linda P. Hudson Linda P. Hudson	Director	February 25, 2022
/s/ James A. Hughes James A. Hughes	Director	February 25, 2022
/s/ Tyrone M. Jordan Tyrone M. Jordan	Director	February 25, 2022
<hr/> /s/ Peter Jonna Peter Jonna	Director	February 25, 2022
/s/ Steven C. Lockard Steven C. Lockard	Director and Chairman of the Board	February 25, 2022
/s/ Daniel G. Weiss Daniel G. Weiss	Director	February 25, 2022

Subsidiaries of Registrant

<u>Name</u>	<u>Jurisdiction of Incorporation/Organization</u>
Composite Solutions, Inc.	Delaware
TPI Inc.	Delaware
TPI Technology, Inc.	Delaware
TPI Arizona, LLC	Delaware
TPI Iowa, LLC	Delaware
TPI China, LLC	Delaware
TPI Composites (Taicang) Company Limited	People's Republic of China
TPI Wind Blade Dafeng Company Limited	People's Republic of China
TPI Mexico, LLC	Delaware
TPI Mexico II, LLC	Delaware
TPI Composites S. de R.L. de C.V.	Mexico
TPI Composites II, S. de R.L. de C.V.	Mexico
TPI Turkey, LLC	Delaware
TPI Kompozit Kanat Sanayi Ve Ticaret A.S.	Turkey
TPI Holdings Switzerland GmbH	Switzerland
TPI Composites India Private Limited	India

Consent of Independent Registered Public Accounting Firm

The Board of Directors
TPI Composites, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-212648, 333-216936, 333-223587, 333-230203, and 333-236941 on Form S-8, No. 333-2220307 on Form S-3/A, and No. 333-248952 on Form S-3/ASR) on Form 10-K of our report dated February 25, 2022, with respect to the consolidated financial statements of TPI Composites, Inc., and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Phoenix, Arizona
February 25, 2022

CERTIFICATION

I, William E. Siwek, certify that:

1. I have reviewed this annual report on Form 10-K of TPI Composites, Inc.;
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 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 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: February 25, 2022

By: /s/ William E. Siwek
William E. Siwek
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

I, Adan Gossar, certify that:

1. I have reviewed this annual report on Form 10-K of TPI Composites, Inc.;
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 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 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: February 25, 2022

By: /s/ Adan Gossar
Adan Gossar
Interim Chief Financial Officer
(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**

I, William E. Siwek, Chief Executive Officer of TPI Composites, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the report on Form 10-K of TPI Composites, Inc. for the fiscal year ended December 31, 2021 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or 78o(d)); and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of TPI Composites, Inc.

Date: February 25, 2022

By: /s/ William E. Siwek
William E. Siwek
Chief Executive Officer
(Principal Executive Officer)

**Certification Pursuant To
18 U.S.C. Section 1350,
As Adopted Pursuant To
Section 906 of the Sarbanes-Oxley Act of 2002**

I, Adan Gossar, Interim Chief Financial Officer of TPI Composites, Inc., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the report on Form 10-K of TPI Composites, Inc. for the fiscal year ended December 31, 2021 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or 78o(d)); and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of TPI Composites, Inc.

Date: February 25, 2022

By: /s/ Adan Gossar
Adan Gossar
Interim Chief Financial Officer
(Principal Financial Officer)
