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TPI COMPOSITES, INC

FORM 10-Q
(Quarterly Report)

Filed 08/06/20 for the Period Ending 06/30/20

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CIK	0001455684
Symbol	TPIC
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Industry	Renewable Energy Equipment & Services
Sector	Energy

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2020

OR

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

Commission File Number 001-37839

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

Delaware	20-1590775
(State or other jurisdiction of incorporation or organization)	(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	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01	TPIC	NASDAQ Global Market

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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

As of July 31, 2020, there were 35,346,565 shares of common stock outstanding.

TPI COMPOSITES, INC. AND SUBSIDIARIES

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the federal securities law. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, 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," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar words. Forward-looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- the potential impact of the Coronavirus on our business and results of operations;
- growth of the wind energy market and our addressable market;
- 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;
- 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;
- 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 and product recalls;
- 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 in wind energy markets;
- 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;
- worldwide economic conditions and their impact on customer demand;
- 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 in the "Risk Factors" section of our Annual Report on Form 10-K filed with the United States Securities and Exchange Commission (SEC) on March 2, 2020 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 Quarterly Report on Form 10-Q represent our views as of the date of this Quarterly Report on Form 10-Q. 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 Quarterly Report. 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—FINANCIAL INFORMATION

ITEM l. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

TPI COMPOSITES, INC. AND SUBSIDIARIES

Condensed Consolidated Balance Sheets
(In thousands, except par value data)

	June 30, 2020	December 31, 2019
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 96,657	$ 70,282
Restricted cash	312	992
Accounts receivable	133,147	184,012
Contract assets	214,556	166,515
Prepaid expenses	15,983	10,047
Other current assets	25,900	29,843
Inventories	12,368	6,731
Total current assets	498,923	468,422
Property, plant, and equipment, net	211,175	205,007
Operating lease right of use assets	162,767	122,351
Other noncurrent assets	22,420	30,897
Total assets	$ 895,285	$ 826,677
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 267,833	$ 293,104
Accrued warranty	56,772	47,639
Current maturities of long-term debt	25,285	13,501
Current operating lease liabilities	21,918	16,629
Contract liabilities	2,447	3,008
Total current liabilities	374,255	373,881
Long-term debt, net of debt issuance costs and current maturities	212,617	127,888
Noncurrent operating lease liabilities	154,759	113,883
Other noncurrent liabilities	24,809	5,975
Total liabilities	766,440	621,627
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Common shares, $0.01 par value, 100,000 shares authorized, 35,516 shares issued and 35,340 shares outstanding at June 30, 2020 and 100,000 shares authorized, 35,326 shares issued and 35,181 shares outstanding at December 31, 2019	355	353
Paid-in capital	329,433	322,906
Accumulated other comprehensive loss	(39,245)	(23,612)
Accumulated deficit	(157,282)	(90,689)
Treasury stock, at cost, 176 shares at June 30, 2020 and 145 shares at December 31, 2019	(4,416)	(3,908)
Total stockholders' equity	128,845	205,050
Total liabilities and stockholders' equity	$ 895,285	$ 826,677

See accompanying notes to unaudited condensed consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Operations
(In thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(Unaudited)			
Net sales	$ 373,817	$ 330,771	$ 730,453	$ 630,551
Cost of sales	367,644	285,319	716,119	568,357
Startup and transition costs	10,920	22,901	22,954	41,079
Total cost of goods sold	378,564	308,220	739,073	609,436
Gross profit (loss)	(4,747)	22,551	(8,620)	21,115
General and administrative expenses	6,887	9,208	16,383	17,193
Realized loss on sale of assets and asset impairments	1,440	4,972	3,358	7,207
Restructuring charges, net	181	3,874	298	3,874
Income (loss) from operations	(13,255)	4,497	(28,659)	(7,159)
Other income (expense):				
Interest income	8	31	40	82
Interest expense	(2,553)	(2,274)	(4,356)	(4,273)
Realized loss on foreign currency remeasurement	(1,928)	(967)	(968)	(4,769)
Miscellaneous income	939	1,016	1,634	1,718
Total other expense	(3,534)	(2,194)	(3,650)	(7,242)
Income (loss) before income taxes	(16,789)	2,303	(32,309)	(14,401)
Income tax benefit (provision)	(49,312)	(475)	(34,284)	4,125
Net income (loss)	$ (66,101)	$ 1,828	$ (66,593)	$ (10,276)
Weighted-average common shares outstanding:				
Basic	35,299	35,033	35,256	34,970
Diluted	35,299	36,369	35,256	34,970
Net income (loss) per common share:				
Basic	$ (1.87)	$ 0.05	$ (1.89)	$ (0.29)
Diluted	$ (1.87)	$ 0.05	$ (1.89)	$ (0.29)

See accompanying notes to unaudited condensed consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Comprehensive Loss
(In thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(Unaudited)			
Net income (loss)	$ (66,101)	$ 1,828	$ (66,593)	$ (10,276)
Other comprehensive income (loss):				
Foreign currency translation adjustments	(2,289)	(4,203)	(11,513)	(2,870)
Unrealized gain (loss) on hedging derivatives, net of taxes of $(939), $284, $1,100 and $765, respectively	3,549	(1,071)	(4,120)	(2,881)
Comprehensive loss	$ (64,841)	$ (3,446)	$ (82,226)	$ (16,027)

See accompanying notes to unaudited condensed consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Condensed Consolidated Statement of Changes in Stockholders’ Equity
(In thousands)

	Common Shares	Common Amount	Paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Treasury stock, at cost	Total stockholders' equity
				(Unaudited)			
Balance at December 31, 2019	35,326	$ 353	$ 322,906	$ (23,612)	$ (90,689)	$ (3,908)	$ 205,050
Net loss	—	—	—	—	(492)	—	(492)
Share-based compensation expense	—	—	2,970	—	—	—	2,970
Issuances under share-based compensation plan	109	1	861	—	—	—	862
Common stock repurchased for treasury	—	—	—	—	—	(459)	(459)
Other comprehensive loss	—	—	—	(16,893)	—	—	(16,893)
Balance at March 31, 2020	35,435	354	326,737	(40,505)	(91,181)	(4,367)	191,038
Net loss	—	—	—	—	(66,101)	—	(66,101)
Share-based compensation expense	—	—	2,186	—	—	—	2,186
Issuances under share-based compensation plan	81	1	510	—	—	—	511
Common stock repurchased for treasury	—	—	—	—	—	(49)	(49)
Other comprehensive loss	—	—	—	1,260	—	—	1,260
Balance at June 30, 2020	35,516	$ 355	$ 329,433	$ (39,245)	$ (157,282)	$ (4,416)	$ 128,845

See accompanying notes to unaudited condensed consolidated financial statements.

TPI COMPOSITES, INC. AND SUBSIDIARIES

Condensed Consolidated Statements of Cash Flows
(In thousands)

	Six Months Ended June 30,	
	2020	2019
	(Unaudited)	
Cash flows from operating activities:		
Net loss	$ (66,593)	$ (10,276)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	22,644	17,784
Realized loss on sale of assets and asset impairments	3,358	7,207
Restructuring charges, net	298	3,874
Share-based compensation expense	5,316	2,922
Amortization of debt issuance costs	122	103
Changes in assets and liabilities:		
Accounts receivable	44,864	17,936
Contract assets and liabilities	(53,089)	(46,721)
Operating lease right of use assets and operating lease liabilities	5,749	6,123
Inventories	(5,899)	(4,102)
Prepaid expenses	(6,272)	(6,773)
Other current assets	3,396	(14,401)
Other noncurrent assets	10,252	(18,419)
Accounts payable and accrued expenses	(19,117)	35,341
Accrued warranty	9,133	6,069
Other noncurrent liabilities	18,833	1,815
Net cash used in operating activities	(27,005)	(1,518)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(42,030)	(37,739)
Net cash used in investing activities	(42,030)	(37,739)
Cash flows from financing activities:		
Proceeds from revolving loans	80,000	6,000
Net proceeds (repayments) of accounts receivable financing	(3,829)	5,062
Proceeds from working capital loans	—	2,909
Principal repayments of finance leases	(2,837)	(5,471)
Net proceeds (repayments) of other debt	23,788	(2,211)
Debt issuance costs	(730)	—
Proceeds from exercise of stock options	1,371	4,716
Repurchase of common stock including shares withheld in lieu of income taxes	(508)	(559)
Net cash provided by financing activities	97,255	10,446
Impact of foreign exchange rates on cash, cash equivalents and restricted cash	(2,525)	696
Net change in cash, cash equivalents and restricted cash	25,695	(28,115)
Cash, cash equivalents and restricted cash, beginning of year	71,749	89,376
Cash, cash equivalents and restricted cash, end of period	$ 97,444	$ 61,261
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 3,976	$ 4,236
Cash paid for income taxes, net	7,393	9,699
Supplemental disclosures of noncash investing and financing activities:		
Accrued capital expenditures in accounts payable	7,970	6,690

See accompanying notes to unaudited condensed consolidated financial statements.

Note 1. Summary of Operations and Significant Accounting Policies

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). The Company was founded in 1968 and has been producing composite wind blades since 2001. The Company's knowledge and experience of composite materials and manufacturing originates with its predecessor company, Tillotson Pearson Inc., a leading manufacturer of high-performance sail and powerboats along with a wide range of composite structures used in other industrial applications. Following the separation from the boat building business in 2004, the Company reorganized in Delaware as LCSI Holding, Inc. and then changed its corporate name to TPI Composites, Inc. in 2008. The Company is 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 and Berlin, Germany.

References to TPI Composites, Inc, the "Company," "we," "us" or "our" in these notes refer to TPI Composites, Inc. and its consolidated subsidiaries.

Basis of Presentation

We divide our business operations into four geographic operating segments—(1) the United States (U.S.), (2) Asia, (3) Mexico and (4) Europe, the Middle East, Africa and India (EMEAI) 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 to manufacture wind blades at our Warren, Rhode Island facility, (3) the manufacturing of composite solutions for the transportation industry, which we also conduct at our Rhode Island facility, (4) wind blade inspection and repair services in North America, (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 which we purchased in July 2019 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, the latter of which commenced operations in March 2019, (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 manufactures wind blades from three facilities in Juárez, Mexico and a facility in Matamoros, Mexico. In addition, we have a facility which manufactures precision molding and assembly systems and composite solutions for the transportation industry in Juárez, Mexico and we commenced operations at this facility in March 2019. This segment also performs wind blade inspection and repair services.
- Our EMEAI segment manufactures wind blades from two facilities in Izmir, Turkey and also performs wind blade inspection and repair services. In February 2019, we entered into a new lease agreement with a third party for a new manufacturing facility that was built in Chennai, India and we commenced operations at this facility in the first quarter of 2020.

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

The condensed consolidated financial statements included herein have been prepared by us without audit, pursuant to the rules and regulations of the SEC and should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2019 included in our Annual Report on Form 10-K. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States (GAAP) have been condensed or omitted, as permitted by the SEC, although we believe the disclosures that are made are adequate to make the information presented herein not misleading. The accompanying condensed consolidated financial statements reflect, in the opinion of our management, all normal recurring adjustments necessary to present fairly our financial position at June 30, 2020, and the results of our operations, comprehensive loss and cash flows for the periods presented. Interim results for the three and six months ended June 30, 2020 and 2019 are not necessarily indicative of the results to be expected for the full years.

Recently Issued Accounting Pronouncements

Accounting Pronouncements Adopted in 2020

Financial Instruments

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The new standard is intended to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held at each reporting date.

We adopted this standard on January 1, 2020 and it did not have a material effect on our condensed consolidated financial statements.

Fair Value Measurement

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements in Topic 820.

We adopted this standard on January 1, 2020 and it did not have a material effect on our condensed consolidated financial statements.

Income Taxes

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes,* which primarily removes specific exemptions to the general principles in Topic 740 in GAAP and improves the financial statement preparers' application of income tax-related guidance and simplifies GAAP.

We adopted this standard on January 1, 2020 and it did not have a material effect on our condensed consolidated financial statements.

Accounting Pronouncements Not Yet Adopted

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*. The amendments provide optional guidance for a limited time to ease the potential burden in accounting for reference rate reform. The new guidance 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. The amendments apply only to contracts and hedging relationships that reference LIBOR or another reference rate expected to be discontinued due to reference rate reform. These amendments are effective immediately and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022.

We are currently evaluating our contracts and the optional expedients provided by the new standard.

Significant Accounting Policies

Revenue Recognition

The majority of our revenue is generated from long-term contracts associated with manufacturing of wind blades and related services. We account for a long-term contract 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 long-term contract, 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 intellectual property; 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.

Determining the revenue to be recognized for services performed under our manufacturing contracts 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. We use historical experience, customer commitments and forecasted future production based on the capacity of the manufacturing facility to estimate the total revenue to be received to complete the performance obligation. In addition, the amount of revenue 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. Additionally, certain of our customer contracts provide for us to make concessions, such as in the form of liquidated damages, for missed production deadlines which are paid over a negotiated timeline.

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, cost incurred to date, and an estimate of the expected future revenue and costs to be incurred to complete the performance obligation. Based on this analysis, any changes in estimates of revenue, cost of sales, contract assets and liabilities and the related impact to operating income 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 customer contracts 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 related revenue.

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.

Contract assets primarily relate to our rights to consideration for work completed but not billed at the reporting date on manufacturing services contracts. 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, when factoring in supply chain financing arrangements, range from 5 to 25 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 condensed 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 long-term 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 the wind blade product revenue.

Revenue related to non-recurring engineering and freight services provided under our customer contracts 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 costs, 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.

Warranty Expense

We provide a limited warranty for our wind blades and related precision molding and assembly systems, 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. We also provide a limited warranty for our transportation products, including materials and workmanship, with terms and conditions that vary depending on the product sold, generally for a period of approximately two 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. For example, as of June 30, 2020, a 1% change in the estimated warranty accrual rate across all products would increase the warranty accrual by approximately $36.4 million.

The warranty accrual activity for the periods noted consisted of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Warranty accrual at beginning of period	$ 51,528	$ 39,533	$ 47,639	$ 36,765
Accrual during the period	4,509	5,697	8,374	11,023
Cost of warranty services provided during the period	(5,267)	(1,456)	(8,482)	(2,445)
Changes in estimate for pre-existing warranties, including expirations during the period	6,002	(940)	9,241	(2,509)
Warranty accrual at end of period	$ 56,772	$ 42,834	$ 56,772	$ 42,834

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 condensed consolidated balance sheets. Finance

leases are included in property, plant and equipment, current maturities of long-term debt, and long-term debt, net of debt issuance costs and current maturities in the condensed 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.

Restructuring Charges

Our restructuring charges 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. Liabilities for costs associated with a restructuring activity are measured at fair value and are recognized when the liability is incurred, except for one-time termination benefits. One-time termination benefits are expensed at the date the entity notifies the employee, unless the employee must provide future service, in which case the benefits are expensed ratably over the future service period. Ongoing benefits are expensed when restructuring activities are probable and the benefit amounts are estimable.

Treasury Stock

Common stock purchased for treasury is recorded at historical cost. Transactions in treasury shares relate to share-based compensation plans and are recorded at weighted-average cost.

Net Income (Loss) Per Common Share Calculation

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of common shares outstanding during a period. Diluted net income per common share is computed by giving effect to all potentially dilutive securities, unless there is a net loss for the period. In computing diluted net income per common share, we use the treasury stock method. The table below reflects the calculation of the weighted-average number of common shares outstanding, using the treasury stock method, used in computing basic and diluted net income (loss) per common share:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Basic weighted-average shares outstanding	35,299	35,033	35,256	34,970
Effect of dilutive awards	—	1,336	—	—
Diluted weighted-average shares outstanding	35,299	36,369	35,256	34,970

Share-based compensation awards of approximately 6,000 and 19,000 shares were excluded from the computation of net income (loss) per share for the three months ended June 30, 2020 and 2019, respectively, because their effect would be anti-dilutive. Further, since there were net losses for the three months ended June 30, 2020, approximately 1,154,000 potentially dilutive shares were excluded from the calculation. Additionally, since there were net losses for the six months ended June 30, 2020 and 2019, approximately 1,117,000 and 1,455,000 potentially dilutive shares were excluded from the calculation.

Financial Instruments

Interest Rate Swap

We use interest rate swap contracts to mitigate our exposure to interest rate fluctuations associated with our credit agreement (the Credit Agreement) that we entered into in April 2018. We do not use such swap contracts for speculative or trading purposes.

To partially offset the variability of future interest payments on the Credit Agreement arising from changes in the London Interbank Offered Rate (LIBOR), in April 2018, we entered into an interest rate swap agreement with a financial institution for a notional amount of $75.0 million with an expiration date of April 2023. This interest rate swap effectively hedges $75.0 million of the future variable rate LIBOR interest expense to a fixed rate interest expense. The derivative instrument qualified for accounting as a cash flow hedge in accordance with FASB Accounting Standard Codification (ASC) Topic 815, *Derivatives and Hedging,* and we designated it as such.

The settlement value of the interest rate swap is $5.3 million as of June 30, 2020 and is included in other noncurrent liabilities in the condensed consolidated balance sheet. The unrealized loss on the swap of $4.2 million, net of taxes, as of June 30, 2020 is included in accumulated other comprehensive loss in the condensed consolidated balance sheet. The settlement value of the interest rate swap was $2.7 million as of December 31, 2019 and was included in other noncurrent liabilities in the condensed consolidated balance sheet. The unrealized loss on the swap of $2.2 million, net of taxes, as of December 31, 2019 is included in accumulated other comprehensive loss in the condensed consolidated balance sheet.

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. In September 2019 we entered into the first of these foreign exchange forward contracts. We do not use such forward contracts for speculative or trading purposes.

We expect certain of our subsidiaries to have future cash flows that will be denominated in currencies other than the subsidiaries' functional currencies. Changes in the exchange rates between the functional currencies of our subsidiaries and the other currencies in which they transact will cause fluctuations in the cash flows we expect to receive or pay when these cash flows are realized or settled. Accordingly, we enter into foreign exchange forward contracts to hedge a portion of these forecasted cash flows. As of June 30, 2020, these foreign exchange forward contracts hedged our forecasted cash flows for periods up to six months. These foreign exchange forward contracts qualified for accounting as cash flow hedges in accordance with ASC Topic 815, and we designated them as such.

As of June 30, 2020, the notional values associated with our foreign exchange forward contracts qualifying as cash flow hedges were 0.8 billion Mexican Pesos. The fair value of the foreign exchange forward contracts is $2.0 million as of June 30, 2020 and is included in accounts payable and accrued expense in the condensed consolidated balance sheet. The unrealized loss on the foreign exchange forward contracts of $1.6 million, net of taxes, as of June 30, 2020 is included in accumulated other comprehensive loss in the condensed consolidated balance sheet. As of December 31, 2019, the notional values associated with our foreign exchange forward contracts qualifying as cash flow hedges were approximately 1.1 billion Mexican Pesos. The fair value of the foreign exchange forward contracts is $0.7 million as of December 31, 2019 and includes $0.8 million in other current assets and $0.1 million in accounts payable and accrued expenses in the condensed consolidated balance sheet. The unrealized gain on the foreign exchange forward contracts of $0.5 million, net of taxes, as of December 31, 2019 is included in accumulated other comprehensive loss in the condensed consolidated balance sheet.

All of our derivate assets and liabilities measured at fair value are classified as Level 2 within the fair value hierarchy.

Restricted Cash

We provide for cash deposits for letters of guarantee used for customs clearance related to our China locations which are reported as restricted cash in our condensed consolidated balance sheets. We also maintain a long-term deposit in interest bearing accounts, related to fully cash-collateralized letters of credit in connection with an equipment lessor in Iowa which is reported within other noncurrent assets in our condensed consolidated balance sheets. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheets which total the same such amounts in the condensed consolidated statements of cash flows:

	June 30, 2020	December 31, 2019	June 30, 2019	December 31, 2018
	(in thousands)			
Cash and cash equivalents	$ 96,657	$ 70,282	$ 58,664	$ 85,346
Restricted cash	312	992	2,122	3,555
Restricted cash included within other noncurrent assets	475	475	475	475
Total cash, cash equivalents and restricted cash shown in the condensed consolidated statements of cash flows	$ 97,444	$ 71,749	$ 61,261	$ 89,376

Other Current Assets

Other current assets primarily include refundable value-added taxes and deposits. As of June 30, 2020, we had $21.9 million of refundable value-added taxes and $3.2 million of deposits. As of December 31, 2019, we had $22.7 million of refundable value-added taxes and $6.1 million of deposits.

Use of Estimates

The preparation of these condensed consolidated financial statements in conformity with 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 condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Note 2. Revenue From Contracts with Customers

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

	Three Months Ended June 30, 2020				
	U.S.	Asia	Mexico	EMEAI	Total
			(in thousands)		
Wind blade sales	$ 26,309	$ 141,540	$ 78,193	$ 102,021	$ 348,063
Precision molding and assembly systems sales	—	3,576	3,318	—	6,894
Transportation sales	14,539	—	363	—	14,902
Other sales	1,231	802	1,546	379	3,958
Total net sales	$ 42,079	$ 145,918	$ 83,420	$ 102,400	$ 373,817

	Three Months Ended June 30, 2019				
	U.S.	Asia	Mexico	EMEAI	Total
			(in thousands)		
Wind blade sales	$ 26,580	$ 78,413	$ 87,792	$ 108,979	$ 301,764
Precision molding and assembly systems sales	1,222	5,726	5,971	—	12,919
Transportation sales	6,440	—	—	—	6,440
Other sales	5,616	560	1,599	1,873	9,648
Total net sales	$ 39,858	$ 84,699	$ 95,362	$ 110,852	$ 330,771

	Six Months Ended June 30, 2020				
	U.S.	Asia	Mexico	EMEAI	Total
	(in thousands)				
Wind blade sales	$ 62,242	$ 227,416	$ 193,379	$ 201,363	$ 684,400
Precision molding and assembly systems sales	—	8,637	5,020	—	13,657
Transportation sales	21,218	—	573	—	21,791
Other sales	6,050	1,002	2,698	855	10,605
Total net sales	$ 89,510	$ 237,055	$ 201,670	$ 202,218	$ 730,453

	Six Months Ended June 30, 2019				
	U.S.	Asia	Mexico	EMEAI	Total
	(in thousands)				
Wind blade sales	$ 58,471	$ 140,541	$ 166,830	$ 212,872	$ 578,714
Precision molding and assembly systems sales	1,366	11,941	10,820	—	24,127
Transportation sales	12,656	—	—	—	12,656
Other sales	8,993	935	2,377	2,749	15,054
Total net sales	$ 81,486	$ 153,417	$ 180,027	$ 215,621	$ 630,551

In addition, most of our net sales are made directly to our customers, primarily large multi-national wind turbine manufacturers, under our long-term contracts which are typically five years in length.

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 contract assets are recorded as current assets in the condensed consolidated balance sheets. Contract liabilities consist of advance payments in excess of revenue earned. These amounts were historically recorded as customer deposits which usually relate to progress payments received as precision molding and assembly systems were being manufactured. The contract liabilities are recorded as current liabilities in the condensed consolidated balance sheets and are reduced as we record revenue over time.

These contract assets and liabilities are reported on the condensed 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 consisted of the following:

	June 30, 2020	December 31, 2019	$ Change
	(in thousands)		
Gross contract assets	$ 217,162	$ 170,973	$ 46,189
Less: reclassification from contract liabilities	(2,606)	(4,458)	1,852
Contract assets	$ 214,556	$ 166,515	$ 48,041

	June 30, 2020	December 31, 2019	$ Change
	(in thousands)		
Gross contract liabilities	$ 5,053	$ 7,466	$ (2,413)
Less: reclassification to contract assets	(2,606)	(4,458)	1,852
Contract liabilities	$ 2,447	$ 3,008	$ (561)

Contract assets increased by $48.0 million from December 31, 2019 to June 30, 2020 due to incremental unbilled production, which includes materials acquired under long-term contracts, during the six months ended June 30, 2020. Contracts liabilities decreased by $0.6 million from December 31, 2019 to June 30, 2020 due to the revenue earned related to precision molding and assembly systems and wind blades being produced exceeding the amounts billed to customers in the six months ended June 30, 2020.

The time it takes to produce a single blade is typically between 5 to 7 days. The time it takes to produce a mold is typically between 3 to 6 months.

For the three and six months ended June 30, 2020, we recognized no revenue and $3.0 million of revenue related to precision molding and assembly systems and wind blades, which were 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 Significant Accounting Policies*, 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.

As of June 30, 2020, the aggregate amount of the transaction price allocated to the remaining performance obligations to be satisfied in future periods was approximately $3.5 billion. We estimate that we will recognize the remaining performance obligations as revenue as follows: 26 percent in the remainder of 2020, 36 percent in 2021, 23 percent in 2022 and the remaining 15 percent in 2023. The transaction price allocated to the remaining performance obligations excludes approximately $63.4 million of variable consideration over the contractual guaranteed minimum volume obligations under current contracts with customers which has been constrained primarily due to uncertainty associated with production volume during the remaining term of the agreements. We estimate the constraint will be resolved in subsequent periods when our customers provide additional information relevant to forecasted future production.

For the three and six months ended June 30, 2020, net revenue recognized from our performance obligations satisfied in previous periods increased by $5.8 million and $0.6 million, respectively, as compared to an increase of $2.2 million and a decrease of $12.5 million, respectively, in the same periods of 2019. The current year increase primarily related to changes in certain of our estimated total contract values and related percentage of completion estimates.

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 June 30, 2020, the cost and accumulated amortization of such assets totaled $5.7 million and $2.9 million, respectively. As of December 31, 2019, the cost and accumulated amortization of such assets totaled $5.6 million and $2.7 million, respectively. These amounts are included in other noncurrent assets in the condensed consolidated balance sheets and in cost of goods sold within the condensed consolidated statements of operations.

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 12, *Concentration of Customers*.

The COVID-19 pandemic adversely impacted our operations and results of operations for the three and six months ended June 30, 2020 due primarily to reduced production levels at a majority of our manufacturing facilities.

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. 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. However, several of our manufacturing facilities, in particular our Mexico and India manufacturing facilities, are operating in regions with high levels of reported COVID-19 positive cases. As such, we may be required to reinstate temporary production suspensions or volume reductions at these manufacturing facilities or 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.

We maintain our U.S. cash in bank deposit 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 2020 and 2019. At June 30, 2020 and December 31, 2019, we had $42.2 million and $45.8 million, respectively, of cash in deposit accounts in 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. At June 30, 2020, this included $29.7 million in China, $10.9 million in India, $10.6 million in Turkey, $2.9 million in Mexico and $0.4 million in other countries. We have not experienced losses in these accounts. In addition, at June 30, 2020, we had short-term deposits in interest bearing accounts of $0.3 million in China, which are reported as restricted cash in our condensed consolidated balance sheets. At June 30, 2020, we also had long-term deposits in interest bearing accounts of $0.5 million in Iowa which are reported as restricted cash within the caption other noncurrent assets in our condensed consolidated balance sheets.

Note 4. Accounts Receivable

Accounts receivable consisted of the following:

	June 30, 2020	December 31, 2019
	(in thousands)	
Trade accounts receivable	$ 128,602	$ 180,051
Other accounts receivable	4,545	3,961
Total accounts receivable	$ 133,147	$ 184,012

Note 5. Property, Plant and Equipment, Net

Property, plant and equipment, net consisted of the following:

	June 30, 2020	December 31, 2019
	(in thousands)	
Machinery and equipment	$ 177,773	$ 159,176
Buildings	14,286	14,495
Leasehold improvements	56,783	56,414
Office equipment and software	34,255	32,284
Furniture	24,903	22,429
Vehicles	562	562
Construction in progress	22,613	20,677
Total property, plant and equipment, gross	331,175	306,037
Accumulated depreciation	(120,000)	(101,030)
Property, plant and equipment, net	$ 211,175	$ 205,007

Total depreciation expense for the three months ended June 30, 2020 and 2019 was $11.4 million and $6.1 million, respectively, and $22.3 million and $16.6 million for the six months ended June 30, 2020 and 2019, respectively.

As of June 30, 2020, the cost and accumulated depreciation of property, plant and equipment that we are leasing under finance lease arrangements were $43.5 million and $19.0 million, respectively. As of December 31, 2019, the cost and accumulated depreciation of property, plant and equipment that we are leasing under finance lease arrangements were $45.0 million and $17.0 million, respectively.

Note 6. Long-Term Debt, Net of Debt Issuance Costs and Current Maturities

Long-term debt, net of debt issuance costs and current maturities, consisted of the following:

	June 30, 2020	December 31, 2019
	(in thousands)	
Senior revolving loan—U.S.	$ 192,414	$ 112,414
Accounts receivable financing—EMEAI	—	3,805
Unsecured financing—EMEA	25,791	—
Equipment financing—EMEAI	5,964	7,903
Equipment finance lease—U.S.	163	288
Equipment finance lease—EMEAI	4,776	5,732
Equipment finance lease—Mexico	10,073	11,919
Total debt - principal	239,181	142,061
Less: Debt issuance costs	(1,279)	(672)
Total debt, net of debt issuance costs	237,902	141,389
Less: Current maturities of long-term debt	(25,285)	(13,501)
Long-term debt, net of debt issuance costs and current maturities	$ 212,617	$ 127,888

In February 2020, we entered into an Incremental Facility Agreement with the current lenders to our Credit Agreement and an additional lender, pursuant to which the aggregate principal amount of our revolving credit facility under the Credit Agreement was increased from $150.0 million to $205.0 million.

In June 2020, we entered into an amendment to our Credit Agreement which made certain adjustments to one of the financial covenants, added new covenants related to minimum liquidity and mandatory repayment triggers, provided for certain modifications to the affirmative and negative covenants and changed the interest rate during the Adjustment Period (as defined in the Credit Agreement) to a LIBOR floor of 0.75% plus a margin of 3.0% per annum. The interest rate following the end of the Adjustment Period would be equal to a LIBOR floor of 0.75% plus a margin ranging between 1.75% to 2.50% per annum. All other material terms and conditions of the Credit Agreement remained the same.

In the first quarter of 2020, we entered into a credit agreement, as amended, with a Turkish financial institution to provide up to $18.0 million of unsecured financing. Interest accrues at a fixed rate of 3.0% and is payable monthly. The maturity date for amounts currently outstanding is March 2023. The credit agreement does not have a maturity date, however the limits are reviewed in April of each year to establish available capacity. As of June 30, 2020, there was $15.5 million outstanding under this credit agreement.

In the first quarter of 2020, we entered into a credit agreement with a Turkish financial institution to provide up to 5.0 million Euro (approximately $5.6 million as of June 30, 2020) of unsecured financing. Interest accrues at a fixed rate of 5.0% and is payable at the end of the term when the loan is repaid. The credit agreement does not have a maturity date, however the limits are reviewed in October of each year to establish available capacity. As of June 30, 2020, there were no amounts outstanding under this credit agreement.

In the second quarter of 2020, we amended an existing credit agreement with a Turkish financial institution to provide up to 10.0 million Euro (approximately $11.2 million as of June 30, 2020) of unsecured financing. Interest on the unsecured financing accrues at the one month EURIBOR plus 1.50% (1.50% as of June 30, 2020) and is payable monthly. The maturity date for amounts currently outstanding is April 2021. The unsecured financing agreement does not have a maturity date, however the limits are reviewed in April of each year to establish available capacity. As of June 30, 2020, there was $10.3 million outstanding under the unsecured financing facility.

Note 7. Share-Based Compensation Plans

Our Amended and Restated 2015 Stock Option and Incentive Plan (the 2015 Plan) provides for the issuance of incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock units, restricted stock awards, unrestricted stock

awards, cash-based awards, performance share awards and dividend equivalent rights to certain employees, non-employee directors and consultants. Under the 2015 Plan, we have granted awards of stock options, restricted stock units (RSUs) and performance-based restricted stock units (PSUs) to certain employees and non-employee directors.

During the six months ended June 30, 2020, we issued to certain employees and non-employee directors an aggregate of 456,858 timed-based RSUs, 122,752 PSUs that vest upon achievement of a cumulative, three-year Adjusted EBITDA target measured from January 1, 2020 through December 31, 2022, and 198,826 PSUs that vest upon achievement of certain stock price hurdles for the period of the grant date through December 31, 2022. All of the time-based RSUs vest on the third anniversary date of the grant date. Each of the time-based and performance-based awards are subject to the recipient's continued service with us, the terms and conditions of the 2015 Plan and the applicable award agreement. In addition, during the six months ended June 30, 2020, we issued 27,082 stock options to certain employees.

The share-based compensation expense recognized in the condensed consolidated statements of operations was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Cost of goods sold	$ 465	$ 171	$ 636	$ 348
General and administrative expenses	1,909	1,766	4,680	2,574
Total share-based compensation expense	$ 2,374	$ 1,937	$ 5,316	$ 2,922

The share-based compensation expense recognized by award type was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
RSUs	$ 1,181	$ 1,009	$ 2,137	$ 1,931
Stock options	599	294	2,252	730
PSUs	594	634	927	261
Total share-based compensation expense	$ 2,374	$ 1,937	$ 5,316	$ 2,922

Included in total share-based compensation expense for the six months ended June 30, 2020 is $1.7 million of compensation expense associated with the modification of certain employee and non-employee awards during the quarter. 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 six months ended June 30, 2020.

As of June 30, 2020, the unamortized cost of the outstanding RSUs and PSUs was $9.7 million and $4.9 million, respectively, which we expect to recognize in the condensed consolidated financial statements over weighted-average periods of approximately 2.3 years and 2.3 years, respectively. Additionally, the total unrecognized cost related to non-vested stock option awards was $1.7 million, which we expect to recognize in the condensed consolidated financial statements over a weighted-average period of approximately 1.4 years.

The summary of activity under 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, 2019	6,621,512	2,594,228	$ 14.29	1,697,272	354,427	$ 24.99	491,718	$ 26.20
Increase in shares authorized	1,407,228	—	—		—	—	—	—
Granted	(805,518)	27,082	19.70		456,858	22.36	321,578	22.40
Exercised/vested	—	(71,885)	11.59		(117,683)	22.81	—	—
Forfeited/cancelled	188,927	(153,751)	20.02		(14,664)	25.96	(20,512)	28.19
Balance as of June 30, 2020	7,412,149	2,395,674	14.07	1,863,364	678,938	23.58	792,784	24.61

The fair value of RSUs which vested during the six months ended June 30, 2020 was $2.1 million. In addition, during the six months ended June 30, 2020, we repurchased 28,830 shares for $0.5 million related to tax withholding requirements on vested RSU awards. The total intrinsic value of stock options outstanding and exercisable as of June 30, 2020 was $22.5 million and $19.7 million, respectively.

The following table summarizes the outstanding and exercisable stock option awards as of June 30, 2020:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices:	Shares	Weighted-Average Remaining Contractual Life (*in years*)	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
$8.49	12,914	0.2	$ 8.49	12,914	$ 8.49
$10.87	1,411,720	4.9	10.87	1,311,271	10.87
$11.00 to $17.06	321,683	5.7	15.96	291,200	15.96
$18.70	181,059	6.0	18.70	169,481	18.70
$18.77 to $29.26	468,298	8.9	20.76	78,498	21.78
$8.49 to $29.26	2,395,674	5.9	14.07	1,863,364	12.82

Note 8. 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 15 years, some of which may include options to extend the leases up to five years.

The components of lease cost were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Operating lease cost	$ 9,148	$ 8,184	$ 17,719	$ 15,937
Finance lease cost				
Amortization of assets under finance leases	$ 1,413	$ 1,707	$ 2,960	$ 3,221
Interest on finance leases	256	388	535	796
Total finance lease cost	$ 1,669	$ 2,095	$ 3,495	$ 4,017

Future minimum lease payments under noncancelable leases as of June 30, 2020 were as follows:

	Operating Leases	Finance Leases
	(in thousands)	
Year Ending December 31,		
2020	$ 15,003	$ 3,262
2021	29,808	6,429
2022	29,089	5,661
2023	28,701	822
2024	25,579	201
Thereafter	121,718	—
Total future minimum lease payments	249,898	16,375
Less: interest	(73,221)	(1,363)
Total lease liabilities	$ 176,677	$ 15,012

Total lease liabilities as of June 30, 2020 were as follows:

	Operating Leases	Finance Leases
	(in thousands)	
Current operating lease liabilities	$ 21,918	$ —
Current maturities of long-term debt	—	5,526
Noncurrent operating lease liabilities	154,759	—
Long-term debt, net of debt issuance costs and current maturities	—	9,486
Total lease liabilities	$ 176,677	$ 15,012

See Note 5, *Property, Plant and Equipment, Net* for a discussion of the cost and accumulated depreciation of assets financed through finance leases.

Other information related to leases was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Supplemental Cash Flow Information				
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	$ 7,143	$ 7,849	$ 14,651	$ 15,391
Operating cash flows from finance leases	256	388	535	796
Financing cash flows from finance leases	1,345	2,542	2,837	5,471
Right of use assets obtained in exchange for new lease obligations:				
Operating leases	(830)	322	54,326	12,205
Finance leases	—	219	—	4,922

	June 30, 2020	December 31, 2019
Weighted-Average Remaining Lease Term (In Years):		
Operating leases	8.2	7.6
Finance leases	2.7	3.2
Weighted-Average Discount Rate:		
Operating leases	8.1%	7.5%
Finance leases	6.4%	6.4%

As of June 30, 2020, we have additional leases related to new manufacturing facilities that have not yet commenced totaling approximately $10 million.

Note 9. Income Taxes

Income taxes for the three and six months ended June 30, 2020 were higher than for the corresponding periods ended June 30, 2019 primarily due to the impact of a change in the forecasted annual effective tax rate as of June 30, 2020 in comparison to the forecast at March 31, 2020, and the earnings mix by jurisdiction in 2020 as compared to 2019. More specifically, income taxes for the three months ended June 30, 2020 was the result of applying a revised forecasted annual effective tax rate to a quarter that was significantly impacted by losses in several jurisdictions due to the COVID-19 pandemic. The forecasted effective tax rate for the current year differs from the U.S. statutory income tax rate primarily due to earnings in foreign jurisdictions with income tax rates that exceed the U.S. statutory income tax rate, losses incurred by an entity in a tax-free zone and taxes on Global Intangible Low Tax Income (GILTI) earned by foreign subsidiaries.

We do not record a deferred tax liability related to unremitted foreign earnings as we maintain our assertion to indefinitely reinvest our unremitted foreign earnings.

An ownership change under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the Code) was deemed to occur in June 2018. In general, a Section 382 and 383 ownership change occurs if there is a cumulative change in our ownership by “5% shareholders” (as defined in the Code) that exceeds 50 percentage points over a rolling three-year period. Based on the analysis performed, however, we do not believe that the Section 382 and 383 annual limitation will materially impact our ability to utilize the tax attributes that existed as of the date of the ownership change. Additional ownership changes in the future could result in additional limitations to our net operating loss carryforwards and credits.

No changes in tax law occurred during the quarter which have a material impact on our income tax provision.

Note 10. Restructuring Charges

In May 2019, we announced plans to consolidate certain of our manufacturing facilities, including our plan to shut down the two blade lines operating in our Taicang Port facility and move our tooling operation from Taicang City to the larger Taicang Port facility, thereby expanding our tooling capacity for larger blades and reducing overall costs. We substantially completed these plans by the end of 2019.

In accordance with these plans, during the three and six months ended June 30, 2020, we incurred total charges of $0.2 million and $0.3 million, respectively. These charges are located within the caption “Restructuring charges, net” in the accompanying condensed consolidated statements of operations. We do not expect to incur any material additional charges under these plans throughout the remainder of 2020.

Note 11. Commitments and Contingencies

Legal Proceedings

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 or our insurance policy limits. 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.

Note 12. Concentration of Customers

Revenues from certain customers (in thousands) in excess of 10 percent of our total consolidated revenues are as follows:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2020		2019		2020		2019	
Customer	Revenues	% of Total	Revenues	% of Total	Revenues	% of Total	Revenues	% of Total
Vestas	$ 193,426	51.7%	$ 142,101	43.0%	$ 350,838	48.0%	$ 270,715	42.9%
GE	71,176	19.0%	92,018	27.8%	171,308	23.5%	176,547	28.0%
Nordex	62,258	16.7%	53,662	16.2%	115,515	15.8%	108,530	17.2%

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

	June 30, 2020	December 31, 2019
Customer	% of Total	% of Total
Vestas	44.9%	41.9%
Nordex	27.9%	31.3%

Note 13. Segment Reporting

Our operating segments are defined geographically as the U.S., Asia, Mexico and EMEAI. Financial results are aggregated into four reportable segments based on quantitative thresholds. All of our segments operate in their local currency, however a portion of the revenue attributable to our Asia and Mexico segments is derived in U.S. dollars because certain of our domestic subsidiaries are the contracting parties to the associated customer supply agreements.

The following tables set forth certain information regarding each of our segments:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Revenues by segment:				
U.S.	$ 42,079	$ 39,858	$ 89,510	$ 81,486
Asia	145,918	84,699	237,055	153,417
Mexico	83,420	95,362	201,670	180,027
EMEAI	102,400	110,852	202,218	215,621
Total revenues	$ 373,817	$ 330,771	$ 730,453	$ 630,551
Revenues by geographic location (1):				
U.S.	$ 42,079	$ 39,858	$ 89,510	$ 81,486
China	145,918	84,699	237,055	153,417
Mexico	83,420	95,362	201,670	180,027
Turkey and India	102,400	110,852	202,218	215,621
Total revenues	$ 373,817	$ 330,771	$ 730,453	$ 630,551
Income (loss) from operations:				
U.S. (2)	$ (12,045)	$ (22,222)	$ (27,631)	$ (36,725)
Asia	18,492	131	23,564	(8,669)
Mexico	(11,324)	4,120	(13,092)	3,696
EMEAI	(8,378)	22,468	(11,500)	34,539
Total loss from operations	$ (13,255)	$ 4,497	$ (28,659)	$ (7,159)

	June 30, 2020	December 31, 2019
	(in thousands)	
Property, plant and equipment, net:		
U.S.	$ 33,482	$ 36,410
Asia (China)	49,074	50,603
Mexico	77,793	81,654
EMEAI (Turkey and India)	50,826	36,340
Total property, plant and equipment, net	$ 211,175	$ 205,007

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

(2) The losses from operations in our U.S. segment includes corporate general and administrative costs of $6.9 million and $9.2 million for the three months ended June 30, 2020 and 2019, respectively, and $16.4 million and $17.2 million for the six months ended June 30, 2020 and 2019, respectively.

ITEM 2. 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 condensed consolidated financial statements and the related notes and other financial information appearing elsewhere in this Quarterly Report on Form 10-Q (Form 10-Q). Some of the information contained in this discussion and analysis or set forth elsewhere in this Form 10-Q, including information with respect to plans and strategy for our business, 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 Form 10-Q or in our previously filed Annual Report on Form 10-K, particularly those under "Risk Factors."

OVERVIEW

Our Company

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), who have historically relied on in-house production, 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 have become 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 long-term 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, which consist of three wind blades. As of August 5, 2020, our long-term wind and transportation supply agreements provide for minimum aggregate volume commitments from our customers of approximately $2.9 billion and encourage our customers to purchase additional volume up to, in the aggregate, a total contract value of approximately $5.4 billion through the end of 2024. 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. Our wind blade and precision molding and assembly systems manufacturing businesses accounted for approximately 95% of our total net sales for both the three months ended June 30, 2020 and 2019, respectively, and 96% of our net sales for both the six months ended June 30, 2020 and 2019, respectively. We also leverage our advanced composite technology and history of innovation to supply high strength, lightweight and durable composite products to the transportation market.

We divide our business operations into four geographic operating segments - (1) the United States (U.S.), (2) Asia, (3) Mexico and (4) Europe, the Middle East, Africa and India (EMEAI) 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 to manufacture wind blades at our Warren, Rhode Island facility, (3) the manufacturing of composite solutions for the transportation industry, which we also conduct at our Rhode Island facility , (4) wind blade inspection and repair services in North America, (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 which we purchased in July 2019 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, the latter of which commenced operations in March 2019, (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 manufactures wind blades from three facilities in Juárez, Mexico and a facility in Matamoros, Mexico. In addition, we have a facility which manufactures precision molding and assembly systems and composite solutions for the transportation industry in Juárez, Mexico and we commenced operations at this facility in March 2019. This segment also performs wind blade inspection and repair services.
- Our EMEAI segment manufactures wind blades from two facilities in Izmir, Turkey and also performs wind blade inspection and repair services. In February 2019, we entered into a new lease agreement with a third party for a new manufacturing facility that was built in Chennai, India and we commenced operations at this facility in the first quarter of 2020.

KEY TRENDS AND RECENT DEVELOPMENTS AFFECTING OUR BUSINESS

The COVID-19 pandemic adversely impacted our operations and results of operations for the three and six months ended June 30, 2020 due primarily to reduced production levels at all of our manufacturing facilities. 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. 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. However, several of our manufacturing facilities, in particular our Mexico and India manufacturing facilities, are operating in regions with high levels of reported COVID-19 positive cases. As such, we may be required to reinstate temporary production suspensions or volume reductions at these manufacturing facilities or 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. As a result of the uncertainty relating to: (i) the rapidly evolving nature, magnitude and duration of the COVID-19 pandemic, (ii) the variety of measures implemented by governments around the world to address its effects and (iii) the impact on our manufacturing operations, we, however, are unable to currently estimate and quantify the actual impact of COVID-19 on our business, results of operations and financial condition for the balance of 2020.

As a result of such uncertainty, we are managing our liquidity to ensure our long-term viability until the COVID-19 pandemic abates. During the six months ended June 30, 2020, we drew down $80.0 million under our Credit Agreement. In addition, during the six months ended June 30, 2020, we entered into three unsecured credit facilities with three Turkish financial institutions resulting in aggregate gross proceeds of $27.2 million and current availability of $9.0 million.

For the three and six months ended June 30, 2020, we estimate that our net sales were adversely impacted by approximately $96 million and $134 million, based upon 230 and 329 wind blade sets which we had forecasted to produce in those periods under non-cancellable purchase orders associated with our long-term contracts but were unable to do so as a result of the COVID-19 pandemic.

For the three and six months ended June 30, 2020, we estimate that our net loss was adversely impacted by approximately $39 million, net of taxes, and $47 million, net of taxes, based upon the forecasted gross margin on the forecasted wind blade sets which we were to produce in those periods but were unable to do so as a result of the COVID-19 pandemic. In addition, for the three and six months ended June 30, 2020, we incurred approximately $16 million, net of taxes, and $17 million, net of taxes, of COVID-19 related costs associated with the health and safety of our associates and non-productive labor.

For the three and six months ended June 30, 2020, we estimate that our Adjusted EBITDA was adversely impacted by approximately $36 million and $47 million, based upon the forecasted Adjusted EBITDA margin on the forecasted wind blade sets which we were to produce in those periods but were unable to do so as a result of the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor.

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.

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 manufacturing facilities, including engineering, finance, information technology, human resources and plant management. 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.

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 research and development expenses incurred at our Warren, Rhode Island location, our Kolding, Denmark advanced engineering center and our Berlin, Germany engineering center are also included in general and administrative expenses. For the three months ended June 30, 2020 and 2019 and for the six months ended June 30, 2020 and 2019, research and development expenses totaled $0.3 million, $0.3 million, $0.5 million and $0.5 million, respectively.

Realized Loss on Sale of Assets and Asset Impairments

Realized loss on sale of assets represents the realized losses on the sale of receivables under supply chain financing arrangements with our customers and realized gains and losses on the sale of other assets and asset impairments 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 primarily of interest expense on our debt borrowings and the amortization of deferred financing costs on such borrowings. Other income (expense) also includes realized gains and losses on foreign currency remeasurement, interest income, losses on extinguishment of debt and miscellaneous income and expense.

Income Taxes

Income taxes consist 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 composite 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 condensed consolidated financial statements in accordance with GAAP, we use certain other financial 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 invoiced, estimated megawatts of energy capacity for wind blade sets invoiced, utilization percentage, manufacturing lines dedicated to customers under long-term supply agreements 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 METRICS

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Net sales	$ 373,817	$ 330,771	$ 730,453	$ 630,551
Net income (loss)	$ (66,101)	$ 1,828	$ (66,593)	$ (10,276)
EBITDA (1)	$ (2,628)	$ 11,671	$ (5,349)	$ 7,574
Adjusted EBITDA (1)	$ 3,295	$ 23,421	$ 4,591	$ 26,346
Capital expenditures			$ 42,030	$ 37,739
Free cash flow (1)			$ (69,035)	$ (39,257)

	June 30, 2020	December 31, 2019
	(in thousands)	
Total debt, net of debt issuance costs	$ 237,902	$ 141,389
Net debt (1)	$ (142,524)	$ (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 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 (including losses on extinguishment of debt and net of interest income), income taxes and depreciation and amortization. We define adjusted EBITDA as EBITDA plus any share-based compensation expense, any realized gains or losses from foreign currency remeasurement, any gains or losses from the sale of assets and asset impairments and 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. In addition, our credit agreement (the Credit Agreement) that we entered into in April 2018 contains minimum EBITDA (as defined in the Credit Agreement) covenants with which we must comply. 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 EBITDA and adjusted EBITDA has limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under GAAP.

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 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

condensed consolidated balance sheets adding back any debt issuance costs and discounts. 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 tables reconcile our non-GAAP key financial measures to the most directly comparable GAAP measures:

EBITDA and adjusted EBITDA are reconciled as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)			
Net income (loss)	$ (66,101)	$ 1,828	$ (66,593)	$ (10,276)
Adjustments:				
Depreciation and amortization	11,616	7,125	22,644	17,784
Interest expense (net of interest income)	2,545	2,243	4,316	4,191
Income tax provision (benefit)	49,312	475	34,284	(4,125)
EBITDA	(2,628)	11,671	(5,349)	7,574
Share-based compensation expense	2,374	1,937	5,316	2,922
Realized loss on foreign currency remeasurement	1,928	967	968	4,769
Realized loss on sale of assets and asset impairments	1,440	4,972	3,358	7,207
Restructuring charges, net	181	3,874	298	3,874
Adjusted EBITDA	$ 3,295	$ 23,421	$ 4,591	$ 26,346

Free cash flow is reconciled as follows:

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Net cash used in operating activities	$ (27,005)	$ (1,518)
Less capital expenditures	(42,030)	(37,739)
Free cash flow	$ (69,035)	$ (39,257)

Net debt is reconciled as follows:

	June 30, 2020	December 31, 2019
	(in thousands)	
Cash and cash equivalents	$ 96,657	$ 70,282
Less total debt, net of debt issuance costs	(237,902)	(141,389)
Less debt issuance costs	(1,279)	(672)
Net debt	$ (142,524)	$ (71,779)

KEY OPERATING METRICS

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Sets	787	716	1,518	1,376
Estimated megawatts	2,650	2,016	4,979	3,878
Utilization	69%	70%	70%	68%
Dedicated manufacturing lines	52	54	52	54
Manufacturing lines installed	54	50	54	50

Key operating metrics consist of sets invoiced, estimated megawatts of energy capacity for wind blade sets invoiced, utilization, dedicated manufacturing lines and manufacturing lines installed.

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 in 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 invoiced during the period compared to the total potential wind blade capacity of manufacturing lines installed at the end of the period.

Dedicated manufacturing lines are the number of wind blade manufacturing lines that we have dedicated to our customers pursuant to our long-term 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 long-term supply agreements in any given period. We believe that dedicated manufacturing lines provide an understanding of additional capacity within an existing facility. Dedicated manufacturing lines primarily impacts our net sales.

Manufacturing lines installed represents the number of wind blade manufacturing lines installed and either in operation, startup or transition at the end of 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.

Results of Operations

Three Months Ended June 30, 2020 Compared to Three Months Ended June 30, 2019

The following table summarizes certain information relating to our operating results and related percentage of net sales for the three months ended June 30, 2020 and 2019 that has been derived from our unaudited condensed consolidated financial statements.

	Three Months Ended June 30,			
	2020		2019	
	(dollars in thousands)			
Net sales	$ 373,817	100.0%	$ 330,771	100.0%
Cost of sales	367,644	98.4	285,319	86.3
Startup and transition costs	10,920	2.9	22,901	6.9
Total cost of goods sold	378,564	101.3	308,220	93.2
Gross profit (loss)	(4,747)	(1.3)	22,551	6.8
General and administrative expenses	6,887	1.8	9,208	2.8
Realized loss on sale of assets and asset impairments	1,440	0.4	4,972	1.5
Restructuring charges, net	181	0.1	3,874	1.2
Income (loss) from operations	(13,255)	(3.6)	4,497	1.3
Other expense	(3,534)	(0.9)	(2,194)	(0.6)
Income (loss) before income taxes	(16,789)	(4.5)	2,303	0.7
Income tax provision	(49,312)	(13.2)	(475)	(0.1)
Net income (loss)	$ (66,101)	(17.7)%	$ 1,828	0.6%

Net sales for the three months ended June 30, 2020 increased by $43.0 million or 13.0% to $373.8 million compared to $330.8 million in the same period in 2019. Net sales of wind blades increased by 15.3% to $348.1 million for the three months ended June 30, 2020 as compared to $301.8 million in the same period in 2019. The increase in net sales was primarily driven by a 10% increase in the number of wind blades produced during the three months ended June 30, 2020 compared to the same period in 2019 largely as a result of increased production at our China facilities and our Matamoros, Mexico facility. This increase was also due to a higher average sales price due to the mix of wind blade models produced during the three months ended June 30, 2020 compared to the same period in 2019. Net sales from the manufacturing of precision molding and assembly systems during the three months ended June 30, 2020

were $6.9 million as compared to $12.9 million in the same period in 2019. Additionally, there was a $2.8 million increase in transporation and other sales during the three months ended June 30, 2020 as compared to the same period in 2019. The impact of the fluctuating U.S. dollar against the Euro in our Turkey operations and the Chinese Renminbi in our China operations on consolidated net sales for the three months ended June 30, 2020 was a decrease of 0.3% as compared to the same period in 2019. Although our net sales increased for the three months ended June 30, 2020 compared to the same period in 2019, we estimate that our net sales were adversely impacted by approximately $96 million, based upon 230 wind blade sets which we had forecasted to produce at our Mexico, Iowa, Turkey and India manufacturing facilities in the period under non-cancellable purchase orders associated with our long-term contracts but were unable to do so as a result of the COVID-19 pandemic. The COVID-19 pandemic required these manufacturing facilities to either 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.

Total cost of goods sold for the three months ended June 30, 2020 was $378.6 million and included $6.9 million related to lines in startup and $4.0 million of transition costs related to lines in transition during the quarter. This compares to total cost of goods sold for the three months ended June 30, 2019 of $308.2 million and included $14.7 million related to lines in startup and $8.2 million of transition costs related to lines in transition during the quarter. Total cost of goods sold as a percentage of net sales increased by approximately 8% during the three months ended June 30, 2020 as compared to the same period in 2019, driven primarily by the increase in direct materials and warranty costs primarily relating to a warranty remediation campaign for a specific wind blade model for one of our customers, and COVID-19 related costs associated with the health and safety of our associates and non-productive labor, partially offset by a decrease in startup and transition costs, the impact of savings in raw material costs and foreign currency fluctuations. The impact of the fluctuating U.S. dollar against the Euro, Turkish Lira, Chinese Renminbi and Mexican Peso decreased consolidated cost of goods sold by 3.2% for three months ended June 30, 2020 as compared to the same period in 2019.

General and administrative expenses for the three months ended June 30, 2020 totaled $6.9 million, or 1.8% of net sales, compared to $9.2 million, or 2.8% of net sales, for the same period in 2019. The decrease as a percentage of net sales was primarily driven by lower travel and training costs due to the COVID-19 pandemic.

Realized loss on sale of assets and asset impairments for the three months ended June 30, 2020 totaled $1.4 million and was comprised primarily of realized losses on the sale of receivables under supply chain financing arrangements with our customers. Realized loss on sale of assets and asset impairments for the three months ended June 30, 2019 totaled $5.0 million and was comprised of $3.1 million of realized losses on the sale of assets at our corporate and manufacturing facilities and $1.9 million of realized losses on the sale of receivables under supply chain financing arrangements with our customers.

Restructuring charges for the three months ended June 30, 2020 totaled $0.2 million compared to $3.9 million for the same period in 2019. The prior year restructuring costs primarily related to the closing of our Taicang City, China manufacturing facility.

Other expense totaled $3.5 million for the three months ended June 30, 2020 as compared to other expense totaling $2.2 million for the same period in 2019. The increase in the expense was primarily due to a $1.0 million increase in realized losses on foreign currency remeasurement and a $0.3 million increase in interest expense in the three months ended June 30, 2020 as compared to the same period in 2019.

Income taxes reflected a provision of $49.3 million for the three months ended June 30, 2020 as compared to a provision of $0.5 million for the same period in 2019. The increase in the provision was primarily due to a change in the forecasted annual effective tax rate as of June 30, 2020 in comparison to the forecast at March 31, 2020 and the earnings mix by jurisdiction in the three months ended June 30, 2020 as compared to the same period in 2019. More specifically, income taxes for the three months ended June 30, 2020 was the result of applying a revised forecasted annual effective tax rate to a quarter that was significantly impacted by losses in several jurisdictions due to the COVID-19 pandemic.

Net loss for the three months ended June 30, 2020 was $66.1 million as compared to net income of $1.8 million in the same period in 2019. The decrease in the net income was primarily due to the reasons set forth above. In addition, we estimate that our net loss was adversely impacted by approximately $39 million, net of taxes, based upon the forecasted gross margin on the wind blade sets we had forecasted to produce at our Mexico, Iowa, Turkey and India manufacturing facilities in the period under non-cancellable purchase orders associated with our long-term contracts but were unable to do so as a result of the COVID-19 pandemic. The COVID-19 pandemic required these manufacturing facilities to either 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. In addition, we incurred $16 million, net of taxes, of COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The net loss per share was $1.87 for the three months ended June 30, 2020, compared to a net income per share of $0.05 for the three months ended June 30, 2019.

Segment Discussion

The following table summarizes our net sales and income (loss) from operations by our four geographic operating segments for the three months ended June 30, 2020 and 2019 that has been derived from our unaudited condensed consolidated financial statements.

	Three Months Ended June 30,	
	2020	**2019**
Net Sales	**(in thousands)**	
U.S.	$ 42,079	$ 39,858
Asia	145,918	84,699
Mexico	83,420	95,362
EMEAI	102,400	110,852
Total net sales	$ 373,817	$ 330,771

	Three Months Ended June 30,	
	2020	**2019**
Income (Loss) from Operations	**(in thousands)**	
U.S. (1)	$ (12,045)	$ (22,222)
Asia	18,492	131
Mexico	(11,324)	4,120
EMEAI	(8,378)	22,468
Total income (loss) from operations	$ (13,255)	$ 4,497

(1) Includes the costs of our corporate headquarters, our advanced engineering center in Kolding, Denmark and our engineering center in Berlin, Germany totaling $6.9 million and $9.2 million for the three months ended June 30, 2020 and 2019, respectively.

U.S. Segment

Net sales for the three months ended June 30, 2020 increased by $2.2 million or 5.6% to $42.1 million compared to $39.9 million in the same period in 2019. Net sales of wind blades decreased slightly to $26.3 million during the three months ended June 30, 2020 as compared to $26.6 million in the same period of 2019. There were no net sales from the manufacturing of precision molding and assembly systems during the three months ended June 30, 2020 compared to $1.2 million during the same period in 2019. Additionally, there was a $3.7 million increase in transportation and other sales during the three months ended June 30, 2020 as compared to the same period in 2019. Although our total U.S. net sales increased for the three months ended June 30, 2020 compared to the same period in 2019, our U.S. net sales were adversely impacted due to reduced production levels at our U.S. manufacturing facilities due to the COVID-19 pandemic.

The loss from operations in the U.S. segment for the three months ended June 30, 2020 was $12.0 million as compared to a loss from operations of $22.2 million in the same period in 2019. As previously discussed, the loss amounts include corporate general and administrative costs of $6.9 million and $9.2 million for the three months ended June 30, 2020 and 2019, respectively. Although our U.S. loss from operations decreased for the three months ended June 30, 2020 compared to the same period in 2019, our income from operations for the three months ended June 30, 2020 were adversely impacted due to reduced production levels at our U.S. manufacturing facilities due to the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The decrease in the loss from operations was primarily due to the decreased costs related to the shutdown of our Newton, Iowa transportation facility and the decrease in transition costs, partially offset by increased direct labor and direct material costs at our Newton, Iowa blade facility.

Asia Segment

Net sales for the three months ended June 30, 2020 increased by $61.2 million or 72.3% to $145.9 million compared to $84.7 million in the same period in 2019. Net sales of wind blades were $141.5 million in the three months ended June 30, 2020 compared to $78.4 million in the same period of 2019. This increase reflects a 87% net increase in overall wind blade volume and an increase in the average sales price of wind blades due to a change in the mix of wind blades between the two periods. This increase was partially offset by a decrease in the year over year number of wind blades still in the production process at the end of the period. Net sales from the manufacturing of precision molding and assembly systems totaled $3.6 million during the three months ended June 30, 2020 compared to $5.7 million during the same period in 2019. There was no net impact of the fluctuating U.S. dollar against the Chinese Renminbi on net sales during the three months ended June 30, 2020 as compared to the same period in 2019.

The income from operations in the Asia segment for the three months ended June 30, 2020 was $18.5 million as compared to income from operations of $0.1 million in the same period in 2019. This increase in the income from operations was primarily due to the net increase in overall wind blade volume, an increase in the average sales price of wind blades noted above, a decrease in startup and transition costs, foreign currency fluctuations and the impact of savings in raw material costs. The impact of the fluctuating U.S. dollar against the Chinese Renminbi had a favorable impact of 2.7% on cost of goods sold for the three months ended June 30, 2020 as compared to the same period in 2019.

Mexico Segment

Net sales in the three months ended June 30, 2020 decreased by $11.9 million or 12.5% to $83.4 million compared to $95.4 million in the same period in 2019. The decrease reflects a 28% net decrease in overall wind blade volume which was primarily related to reduced production levels at our Mexico manufacturing facilities due to the COVID-19 pandemic. The decrease was partially offset by an increase in the average sales price of wind blades due to a change in the mix of wind blades between the two periods and the Matamoros strike in 2019. Net sales from the manufacturing of precision molding and assembly systems during the three months ended June 30, 2020 were $3.3 million compared to $6.0 million during the same period in 2019.

The loss from operations in the Mexico segment for the three months ended June 30, 2020 was $11.3 million as compared to income from operations of $4.1 million in the same period in 2019. The decrease in the income from operations was primarily due to reduced production levels at our Mexico manufacturing facilities due to the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The decrease was partially offset by a decrease in startup and transition costs, favorable foreign currency fluctuations, as well as from savings in raw material costs. The fluctuating U.S. dollar relative to the Mexican Peso had a favorable impact of 4.4% on cost of goods sold for the three months ended June 30, 2020 as compared to 2019.

EMEAI Segment

Net sales during the three months ended June 30, 2020 decreased by $8.5 million or 7.6% to $102.4 million compared to $110.9 million in the same period in 2019. The decrease was driven by a 23% decrease in wind blade volume primarily at our two Turkey manufacturing facilities due to transitions and reduced production levels at our two Turkey manufacturing facilities due to the COVID-19 pandemic as well as a decrease in the average sales price of wind blades delivered in the comparative periods. The decrease was partially offset by an increase in the year over year number of wind blades still in the production process at the end of the period. The fluctuating U.S. dollar relative to the Euro had an unfavorable impact of 1.1% on net sales during the three months ended June 30, 2020 as compared to 2019.

The loss from operations in the EMEAI segment for the three months ended June 30, 2020 was $8.4 million as compared to income from operations of $22.5 million in the same period in 2019. The decrease in the income from operations was primarily driven by increased warranty costs at our second Turkey manufacturing facility, the decreased wind blade production at our two Turkey manufacturing facilities due to the COVID-19 pandemic, COVID-19 related costs associated with the health and safety of our associates and non-productive labor, and the increased startup costs at our India manufacturing facility and transition costs at our second Turkey manufacturing facility, partially offset by favorable foreign currency fluctuations. The fluctuating U.S. dollar relative to the Turkish Lira and Euro had a favorable impact of 4.0% on cost of goods sold for the three months ended June 30, 2020 as compared to 2019.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

The following table summarizes certain information relating to our operating results and related percentage of net sales for the six months ended June 30, 2020 and 2019 that has been derived from our unaudited condensed consolidated financial statements.

	Six Months Ended June 30,			
	2020		2019	
	(dollars in thousands)			
Net sales	$ 730,453	100.0%	$ 630,551	100.0%
Cost of sales	716,119	98.0	568,357	90.2
Startup and transition costs	22,954	3.2	41,079	6.5
Total cost of goods sold	739,073	101.2	609,436	96.7
Gross profit (loss)	(8,620)	(1.2)	21,115	3.3
General and administrative expenses	16,383	2.2	17,193	2.7
Realized loss on sale of assets and asset impairments	3,358	0.5	7,207	1.1
Restructuring charges	298	0.0	3,874	0.6
Loss from operations	(28,659)	(3.9)	(7,159)	(1.1)
Other expense	(3,650)	(0.5)	(7,242)	(1.2)
Loss before income taxes	(32,309)	(4.4)	(14,401)	(2.3)
Income tax benefit (provision)	(34,284)	(4.7)	4,125	0.7
Net loss	$ (66,593)	(9.1)%	$ (10,276)	(1.6)%

Net sales for the six months ended June 30, 2020 increased by $99.9 million or 15.8% to $730.5 million compared to $630.6 million in the same period in 2019. Net sales of wind blades increased by 18.3% to $684.4 million for the six months ended June 30, 2020 as compared to $578.7 million in the same period in 2019. The increase was primarily driven by a 10% increase in the number of wind blades produced during the six months ended June 30, 2020 compared to the same period in 2019 largely as a result of increased production at our China and Mexico facilities. The increase was also due to a higher average sales price due to the mix of wind blade models produced during the six months ended June 30, 2020 compared to the same period in 2019. Net sales from the manufacturing of precision molding and assembly systems during the six months ended June 30, 2020 were $13.7 million as compared to $24.1 million in the same period in 2019. Additionally, there was a $4.7 million increase in transporation and other sales during the six months ended June 30, 2020 as compared to the same period in 2019. The impact of the fluctuating U.S. dollar against the Euro in our Turkey operations and the Chinese Renminbi in our China operations on consolidated net sales for the six months ended June 30, 2020 was a net decrease of 0.4% as compared to 2019. Although our net sales increased for the six months ended June 30, 2020 compared to the same period in 2019, we estimate that our net sales were adversely impacted by approximately $134 million, based upon 329 wind blade sets which we had forecasted to produce at our Mexico, China, Iowa, Turkey and India manufacturing facilities in the period under non-cancellable purchase orders associated with our long-term contracts but were unable to do so as a result of the COVID-19 pandemic. The COVID-19 pandemic required these manufacturing facilities to either 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.

Total cost of goods sold for the six months ended June 30, 2020 was $739.1 million and included $14.8 million related to lines in startup and $8.2 million of transition costs related to the lines in transition during the period. This compares to total cost of goods sold for the six months ended June 30, 2019 of $609.4 million and included $30.8 million related to startup costs and $10.3 million of transition costs related to lines in transition during the period. Cost of goods sold as a percentage of net sales increased by approximately 4% during the six months ended June 30, 2020 as compared to the same period in 2019, driven primarily by the increase in direct materials and warranty costs primarily relating to a warranty remediation campaign for a specific wind blade model for one of our customers, and COVID-19 related costs associated with the health and safety of our associates and non-productive labor, partially offset by a decrease in startup and transition costs, the impact of savings in raw material costs and foreign currency fluctuations. The impact of the fluctuating U.S. dollar against the Euro, Turkish Lira, Chinese Renminbi and Mexican Peso decreased consolidated cost of goods sold by 2.6% for the six months ended June 30, 2020 as compared to 2019.

General and administrative expenses for the six months ended June 30, 2020 totaled $16.4 million, or 2.2% of net sales, compared to $17.2 million, or 2.7% of net sales, for the same period in 2019. The decrease as a percentage of net sales was primarily driven by lower travel and training costs due to the COVID-19 pandemic.

Realized loss on sale of assets and asset impairments for the six months ended June 30, 2020 totaled $3.4 million and was comprised primarily of realized losses on the sale of receivables under supply chain financing arrangements with our customers. Realized loss on sale of assets and asset impairments for six months ended June 30, 2019 totaled $7.2 million and was comprised of $4.1 million of realized losses on the sale of assets at our corporate and manufacturing facilities and $3.1 million of realized losses on the sale of receivables under supply chain financing arrangements with our customers.

Restructuring charges for the six months ended June 30, 2020 totaled $0.3 million compared to $3.9 million for the same period in 2019. The prior year restructuring costs primarily related to the closing of our Taicang City, China manufacturing facility.

Other expense totaled $3.7 million for the six months ended June 30, 2020 as compared to other expense totaling $7.2 million for the same period in 2019. The decrease was primarily due to a $3.8 million decrease in realized losses on foreign currency remeasurement in the six months ended June 30, 2020 as compared to the same period in 2019.

Income taxes reflected a provision of $34.3 million for the six months ended June 30, 2020 as compared to a benefit of $4.1 million for the same period in 2019. The increase in the provision was primarily due to a change in the forecasted annual effective tax rate as of June 30, 2020 in comparison to the forecast at March 31, 2020 and the earnings mix by jurisdiction in the six months ended June 30, 2020 as compared to the same period in 2019. More specifically, income taxes for the six months ended June 30, 2020 was the result of applying a revised forecasted annual effective tax rate to a six month period that was significantly impacted by losses in several jurisdictions due to the COVID-19 pandemic.

Net loss for the six months ended June 30, 2020 was $66.6 million as compared to a net loss of $10.3 million in the same period in 2019. The increase was primarily due to the reasons set forth above. In addition, we estimate that our net loss was adversely impacted by approximately $47 million, net of taxes, based upon the forecasted gross margin on the wind blade sets we had forecasted to produce at our Mexico, China, Iowa, Turkey and India manufacturing facilities in the period under non-cancellable purchase orders associated with our long-term contracts but were unable to do so as a result of the COVID-19 pandemic. The COVID-19 pandemic required these manufacturing facilities to either 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. In addition, we incurred $17 million, net of taxes, of COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The net loss per share was $1.89 for the six months ended June 30, 2020, compared to a net loss per share of $0.29 for the six months ended June 30, 2019.

Segment Discussion

The following table summarizes our net sales and income (loss) from operations by our four geographic operating segments for the six months ended June 30, 2020 and 2019 that has been derived from our unaudited condensed consolidated financial statements.

	Six Months Ended June 30,	
	2020	2019
Net Sales	(in thousands)	
U.S.	$ 89,510	$ 81,486
Asia	237,055	153,417
Mexico	201,670	180,027
EMEAI	202,218	215,621
Total net sales	$ 730,453	$ 630,551

	Six Months Ended June 30,	
	2020	2019
Income (loss) from Operations	(in thousands)	
U.S. (1)	$ (27,631)	$ (36,725)
Asia	23,564	(8,669)
Mexico	(13,092)	3,696
EMEAI	(11,500)	34,539
Total loss from operations	$ (28,659)	$ (7,159)

(1) Includes the costs of our corporate headquarters, our advanced engineering center in Kolding, Denmark and our engineering center in Berlin, Germany totaling $16.4 million and $17.2 million for the six months ended June 30, 2020 and 2019, respectively.

U.S. Segment

Net sales in the six months ended June 30, 2020 increased by $8.0 million or 9.8% to $89.5 million compared to $81.5 million in the same period in 2019. Net sales of wind blades increased to $62.2 million during the six months ended June 30, 2020 from $58.5 million in the same period of 2019. Although our U.S. net sales increased for the six months ended June 30, 2020 compared to the same period in 2019, our U.S. net sales were adversely impacted due to reduced production levels at our U.S. manufacturing facilities due to the COVID-19 pandemic. The increase was primarily due to a higher average sales price due to the mix of wind blade models produced in both periods as well as a 2% increase in the number of wind blades produced in the six months ended June 30, 2020 as compared to the same period in 2019. There were no net sales from the manufacturing of precision molding and assembly systems during the six months ended June 30, 2020 compared to $1.4 million during the same period in 2019. Additionally, there was a $5.6 million increase in transportation and other sales during the six months ended June 30, 2020 as compared to the same period in 2019.

The loss from operations in the U.S. segment for the six months ended June 30, 2020 was $27.6 million as compared to a loss of $36.7 million in the same period in 2019. As previously discussed, the loss amounts include corporate general and administrative costs of $16.4 million and $17.2 million for the six months ended June 30, 2020 and 2019, respectively. Although our U.S. loss from operations decreased for the six months ended June 30, 2020 compared to the same period in 2019, our income from operations for the six months ended June 30, 2020 were adversely impacted due to reduced production levels at our U.S. manufacturing facilities due to the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The decrease in the loss from operations was primarily due to the decreased costs related to the shutdown of our Newton, Iowa transportation facility and the decrease in transition costs, partially offset by increased direct labor and direct material costs at our Newton, Iowa blade facility.

Asia Segment

Net sales in the six months ended June 30, 2020 increased by $83.6 million or 54.5% to $237.1 million compared to $153.4 million in the same period in 2019. Net sales of wind blades were $227.4 million in the six months ended June 30, 2020 as compared to $140.5 million in the same period of 2019. The increase in the net sales of wind blades was primarily due to a 41% increase in in the number of wind blades produced produced in the six months ended June 30, 2020 as compared to the same period in 2019 and an increase in the average sales price of wind blades due to a change in the mix of wind blades between the two periods. The increase was partially offset by a decrease in the year over year number of wind blades still in the production process at the end of the period. Although our Asia net sales increased for the six months ended June 30, 2020 compared to the same period in 2019, our Asia net sales were adversely impacted due to reduced production levels at our Asia manufacturing facilities due to the COVID-19 pandemic. Net sales from the manufacturing of precision molding and assembly systems totaled $8.6 million during the 2020 period compared to $11.9 million during the six months ended June 30, 2019. There was no net impact of the fluctuating U.S. dollar against the Chinese Renminbi on net sales during the during the six months ended June 30, 2020 as compared to the same period in 2019.

The income from operations in the Asia segment for the six months ended June 30, 2020 was $23.6 million as compared to a loss from operations of $8.7 million in the same period in 2019. The decrease in the loss from operations was primarily due to the net increase in overall wind blade volume, an increase in the average sales price of wind blades noted above, a decrease in the startup and transition costs, foreign currency fluctuations and the impact of savings in raw material costs. Although our Asia income from operations increased for the six months ended June 30, 2020 compared to the same period in 2019, our income from operations were adversely impacted due to reduced production levels at our Asia manufacturing facilities due to the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The fluctuating U.S. dollar against the Chinese Renminbi had a favorable impact of 2.6% on cost of goods sold for the six months ended June 30, 2020 as compared to the 2019 period.

Mexico Segment

Net sales in the six months ended June 30, 2020 increased by $21.6 million or 12.0% to $201.7 million compared to $180.0 million in the same period in 2019. The increase reflects a 10% net increase in overall wind blade volume, an increase in the average sales price of wind blades due to a change in the mix of wind blades between the two periods and the Matomoros strike in 2019. Although our Mexico net sales increased for the six months ended June 30, 2020 compared to the same period in 2019, our Mexico net sales were adversely impacted due to reduced production levels at our Mexico manufacturing facilities due to the COVID-19 pandemic. Net sales from the manufacturing of precision molding and assembly systems during the six months ended June 30, 2020 were $5.0 million compared to $10.8 million during the same period in 2019.

The loss from operations in the Mexico segment for the six months ended June 30, 2020 was $13.1 million as compared to income from operations of $3.7 million in the same period in 2019. The decrease in the income from operations was due primarily to reduced production levels at our Mexico manufacturing facilities due to the COVID-19 pandemic and COVID-19 related costs associated with the health and safety of our associates and non-productive labor. The decrease was partially offset by the overall increase in wind blade volume noted above, decreased startup and transition costs, favorable foreign currency fluctuations as well as from savings in raw material costs. The fluctuating U.S. dollar relative to the Mexican Peso had a favorable impact of 2.1% on cost of goods sold for the six months ended June 30, 2020 as compared to 2019.

EMEAI Segment

Net sales during the six months ended June 30, 2020 decreased by $13.4 million or 6.2% to $202.2 million compared to $215.6 million in the same period in 2019. The decrease was driven by a 16% decrease in wind blade production primarily at our two Turkey manufacturing facilities due to transitions and reduced production levels at our two Turkey manufacturing facilities due to the COVID-19 pandemic, as well as a decrease in the average sales price of wind blades delivered in the comparative periods. The decrease was partially offset by an increase in the year over year number of wind blades still in the production process at the end of the period.The fluctuating U.S. dollar relative to the Euro had an unfavorable impact of 1.4% on net sales during the six months ended June 30, 2020 as compared to the 2019 period.

The loss from operations in the EMEAI segment for the six months ended June 30, 2020 was $11.5 million as compared to income from operations of $34.5 million in the same period in 2019. The decrease in the income from operations was primarily driven by increased warranty costs at our second Turkey manufacturing facility, the decreased wind blade production at our two Turkey manufacturing facilities due to the COVID-19 pandemic, COVID-19 related costs associated with the health and safety of our associates and non-productive labor and the increased startup costs at our India manufacturing facility and transition costs at our second Turkey manufacturing facility, partially offset by favorable foreign currency fluctuations. The fluctuating U.S. dollar relative to the Turkish Lira and Euro had a favorable impact of 4.0% on cost of goods sold for the six months ended June 30, 2020 as compared to 2019.

Liquidity and Capital Resources

As a result of the uncertainty relating to: (i) the rapidly evolving nature, magnitude and duration of the COVID-19 pandemic, (ii) the variety of measures implemented by governments around the world to address its effects and (iii) the impact on our manufacturing operations, we are managing our liquidity to ensure our long-term viability until the COVID-19 pandemic abates. During the six months ended June 30, 2020, we drew down $80.0 million under our Credit Agreement. In addition, during the six months ended June 30, 2020, we entered into three unsecured credit facilities with three Turkish financial institutions resulting in aggregate gross proceeds of $27.2 million and current availability of $9.0 million.

Our primary needs for liquidity have been, and in the future will continue to be, capital expenditures, new facility startup costs, the impact of transitions, working capital, debt service costs and warranty costs. 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 borrowings under our financing arrangements of $97.1 million for the six months ended June 30, 2020 as compared to net borrowings under our financing arrangements of $6.3 million in the comparable period of 2019. As of June 30, 2020 and December 31, 2019, we had $239.2 million and $142.1 million in outstanding indebtedness, excluding debt issuance costs, respectively. As of June 30, 2020, we had an aggregate of $122.8 million of remaining capacity and $41.7 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. At June 30, 2020 and December 31, 2019, we had unrestricted cash, cash equivalents and short-term investments totaling $96.7 million and $70.3 million, respectively. The June 30, 2020 balance includes $54.5 million of cash located outside of the United States, including $29.7 million in China, $10.9 million in India, $10.6 million in Turkey, $2.9 million in Mexico and $0.4 million in other countries. In February 2020, we entered into an Incremental Facility Agreement with the current lenders to our Credit Agreement and an additional lender, pursuant to which the aggregate principal amount of our revolving credit facility under the Credit Agreement was increased from $150.0 million to $205.0 million. Our ability to repatriate funds from China to the United States 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 intellectual property 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 the People's Republic of China, including retained earnings as determined under Chinese-statutory accounting requirements. Until 50% ($26.5 million as of

December 31, 2019) of registered capital is contributed to a surplus reserve, our Chinese 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 Chinese operations can pay dividends equal to 100% of after-tax profit assuming other conditions are met. At December 31, 2019, the amount of the surplus reserve fund was $6.6 million.

Operating Cash Flows

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Net loss	$ (66,593)	$ (10,276)
Depreciation and amortization	22,644	17,784
Realized loss on sale of assets and asset impairments	3,358	7,207
Restructuring charges	298	3,874
Share-based compensation expense	5,316	2,922
Other non-cash items	122	103
Changes in assets and liabilities	7,850	(23,132)
Net cash used in operating activities	$ (27,005)	$ (1,518)

Net cash used in operating activities totaled $27.0 million for the six months ended June 30, 2020 and was primarily the result of a $66.6 million net loss, partially offset by $22.6 million of depreciation and amortization, $7.9 million in net changes in working capital, $5.3 million of share-based compensation expense and a $3.4 million realized loss on sale of assets and asset impairments. The key components of the net decrease in working capital include a $44.9 million decrease in accounts receivable, a $18.8 million increase in other noncurrent liabilities, a $10.3 million decrease in other noncurrent assets, a $9.1 million increase in accrued warranty, a $5.7 million decrease in operating lease right of use assets and operating lease liabilities, and a $3.4 million decrease in other current assets. These changes were mostly offset by $53.1 million increase in contract assets and liabilities, a $19.1 million decrease in accounts payable and accrued expenses, a $6.3 million increase in prepaid expenses and a $5.9 million increase in inventories. The changes in contract assets and liabilities, accounts receivable, accounts payable and accrued expenses and accrued warranty are primarily the result of the timing of production in the period.

Net cash used in operating activities totaled $1.5 million for the six months ended June 30, 2019 and was primarily the result of a $23.1 million in net changes in working capital and a $10.3 million net loss, partially offset by $17.8 million of depreciation and amortization, $7.2 million realized loss on sale of assets, a $3.9 million restructuring charge and $2.9 million of share-based compensation expense. The key components of the net increase in working capital include a $46.7 million increase in contract assets and liabilities, a $18.4 million increase in other noncurrent assets, a $14.4 million increase in other current assets, a $6.8 million increase in prepaid expenses, and a $4.1 million increase in inventories. These changes were partially offset by a $35.3 million increase in accounts payable and accrued expenses, a $17.9 million decrease in accounts receivable, a $6.1 million decrease in operating lease right of use assets and operating lease liabilities and a $6.1 million increase in accrued warranty. The changes in contract assets and liabilities, accounts receivable, accounts payable and accrued expenses and accrued warranty are primarily the result of the timing of production in the period.

Investing Cash Flows

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Purchases of property, plant and equipment	$ (42,030)	$ (37,739)
Net cash used in investing activities	$ (42,030)	$ (37,739)

Net cash used in investing activities totaled $42.0 million and $37.7 million for the six months ended June 30, 2020 and 2019, respectively, driven primarily by capital expenditures for new facilities and expansion or improvements at existing facilities. The capital expenditures for the six months ended June 30, 2020 primarily related to our new manufacturing facilities in Chennai, India and Yangzhou, China, our second manufacturing facility in Turkey and continued investments in our other existing facilities. The capital expenditures for the six months ended June 30, 2019 primarily related to our new manufacturing facility in Yangzhou, China, our second manufacturing facility in Turkey, our new tooling facility and the expansion of one of our blade manufacturing facilities in Juárez, Mexico and continued investments in our other existing facilities.

We anticipate fiscal year 2020 capital expenditures of between $80 million to $90 million and we estimate that the cost that we will incur after June 30, 2020 to complete our current projects in process will be approximately $16.3 million. We are deferring non-critical capital expenditures in light of the COVID-19 uncertainty. We have used, and will continue to use, cash flows from operations, the proceeds received from our credit facilities for major projects currently being undertaken, which include new manufacturing facilities in Chennai, India, the continued investment in our existing Tukey, Mexico and China facilities as well as in our pilot line in Warren, Rhode Island.

Financing Cash Flows

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Proceeds from revolving loans	$ 80,000	$ 6,000
Net proceeds (repayments) of accounts receivable financing	(3,829)	5,062
Proceeds from working capital loans	—	2,909
Principal repayments of finance leases	(2,837)	(5,471)
Net proceeds (repayments) of other debt	23,788	(2,211)
Debt issuance costs	(730)	—
Proceeds from exercise of stock options	1,371	4,716
Repurchase of common stock including shares withheld in lieu of income taxes	(508)	(559)
Net cash provided by financing activities	$ 97,255	$ 10,446

The net cash provided by financing activities totaled $97.3 million for the six months ended June 30, 2020 compared to $10.4 million of net cash provided by financing activities in the comparable period of 2019. Net cash provided by financing activities for the six months ended June 30, 2020 primarily reflects the net proceeds from revolving loans and other growth-related debt, partially offset by net repayments of accounts receivable financing and principal repayments of finance leases. Net cash provided by financing activities for the six months ended June 30, 2019 primarily reflects the net proceeds from revolving loans and accounts receivable financing, proceeds from the exercise of stock options and proceeds from working capital loans, partially offset by principal repayments of finance leases and other growth-related debt.

Share Repurchases

During the three months ended June 30, 2020, we repurchased 2,731 shares of our common stock for $0.05 million related to tax withholding requirements on restricted stock units which vested during the period.

Description of Our Indebtedness

Senior Financing Agreements (U.S.):

In April 2018, we entered into a new credit agreement (the Credit Agreement) with four lenders consisting of a multi-currency, revolving credit facility in an aggregate principal amount of $150.0 million, including a $25.0 million letter of credit sub-facility. On the closing date we drew down $75.4 million on the revolving credit facility in connection with the closing of the transactions contemplated by the Credit Agreement and used the proceeds to pay all outstanding amounts due and payable under our previous credit agreement, various fees and expenses and accrued interest. All borrowings and amounts outstanding under the Credit Agreement are scheduled to mature in April 2023. In May 2019, the Credit Agreement was further amended to revise the definition of Consolidated EBITDA as utilized in certain of the financial covenants of the Credit Agreement.

In connection with the Credit Agreement, in the second quarter of 2018 we expensed $2.0 million of deferred financing costs associated with the previous credit agreement and a $1.4 million prepayment penalty within the caption "Loss on extinguishment of debt" in the condensed consolidated statement of operations. In addition, we incurred debt issuance costs related to the Credit Agreement totaling $1.0 million which will be amortized to interest expense over the five-year term of the Credit Agreement using the effective interest method.

Interest accrues at a variable rate equal to a LIBOR floor of 0.75% plus a margin of 3.0% (3.75% as of June 30, 2020), which may vary based on our total net leverage ratio as defined in the Credit Agreement. Interest is paid monthly and we are not obligated to make any principal repayments prior to the maturity date provided we are not in default under the Credit Agreement. We may prepay the borrowings under the Credit Agreement without penalty.

In April 2018, we also entered into an interest rate swap arrangement to fix a notional amount of $75.0 million of the Credit Agreement at an effective interest rate of 4.2% for a period of five years. See Note 1, *Summary of Operations and Significant Accounting Policies - Financial Instruments,* for more details on this interest rate swap arrangement.

In February 2020, we entered into an Incremental Facility Agreement with the current lenders to our Credit Agreement and an additional lender, pursuant to which the aggregate principal amount of our revolving credit facility under the Credit Agreement was increased from $150.0 million to $205.0 million. All other material terms and conditions of the Credit Agreement remained the same. In connection with this Incremental Facility Agreement, we incurred additional debt issuance costs totaling $0.2 million which will be amortized to interest expense over the remaining term of the Credit Agreement using the effective interest method.

In June 2020, we entered into an amendment to our Credit Agreement which made certain adjustments to one of the financial covenants, added new covenants related to minimum liquidity and mandatory repayment triggers, provided for certain modifications to the affirmative and negative covenants and changed the interest rate during the Adjustment Period (as defined in the Credit Agreement) to a LIBOR floor of 0.75% plus a margin of 3.0% per annum. The interest rate following the end of the Adjustment Period would be equal to a LIBOR floor of 0.75% plus a margin ranging between 1.75% to 2.50% per annum. All other material terms and conditions of the Credit Agreement remained the same.

As of June 30, 2020 and December 31, 2019, there was $192.4 million and $112.4 million outstanding under the Credit Agreement, respectively. Additionally, as of June 30, 2020 and December 31, 2019, there was $7.9 million and $5.1 million of letters of credit outstanding under the letter of credit sub-facility of the Credit Agreement, respectively.

Due to the revolving credit facility's variable interest rate of LIBOR plus a competitive spread, we estimate that fair-value approximates the face value of these notes.

As a result of the uncertainty relating to: (i) the rapidly evolving nature, magnitude and duration of the COVID-19 pandemic, (ii) the variety of measures implemented by governments around the world to address its effects and (iii) the impact on our manufacturing operations, we are managing our liquidity to ensure our long-term viability until the COVID-19 pandemic abates. During the six months ended June 30, 2020, we drew down $80.0 million under our Credit Agreement.

Accounts Receivable, Secured and Unsecured Financing:

EMEAI: During 2014, we renewed a general credit agreement, as amended, with a financial institution in Turkey to provide up to 21.0 million Euro of short-term collateralized financing on invoiced accounts receivable of one of our customers in Turkey. Interest originally accrued annually at a fixed rate of 9.1% and was paid quarterly. In December 2014, and later amended, we obtained an additional $8.0 million of unsecured financing in Turkey under the credit agreement, with interest accruing annually at a fixed rate of 2.5% and payable at the end of the term when the loan is repaid. All other credit agreement terms remained the same. The credit

agreement does not have a maturity date, however the limits are reviewed in September of each year to establish available capacity. During the fourth quarter of 2018, we replaced the accounts receivable financing facility with the accounts receivable assignment agreement discussed below. As of June 30, 2020 and December 31, 2019, there were no amounts outstanding under the unsecured financing facility.

In 2014, we entered into a credit agreement with a Turkish financial institution to provide up to $16.0 million of short-term financing of which $10.0 million is collateralized financing on invoiced accounts receivable of one of our customers in Turkey, $5.0 million is unsecured financing and $1.0 million is related to letters of guarantee. Interest accrues at a variable rate of the three month Euro Interbank Offered Rate (EURIBOR) plus 6.5%. During the first quarter of 2018, the collateralized financing on invoiced accounts receivables and unsecured financing facilities were retired and the letters of guarantee limit was adjusted, later amended to 1.4 million Euro (approximately $1.6 million as of June 30, 2020). No amounts were outstanding under this letter of guarantee agreement as of June 30, 2020 and December 31, 2019.

In 2016, we entered into a general credit agreement, as amended, with a Turkish financial institution to provide up to 46.0 million Euro (approximately $51.7 million as of June 30, 2020) of short-term financing of which 25.0 million Euro (approximately $28.1 million as of June 30, 2020) is collateralized financing based on invoiced accounts receivables of one of our customers in Turkey, 10.0 million Euro (approximately $11.2 million as of June 30, 2020) for the collateralized financing of capital expenditures, 10.0 million Euro (approximately $11.2 million as of June 30, 2020) of unsecured financing and 1.0 million Euro (approximately $1.1 million as of June 30, 2020) related to letters of guarantee. Interest on the collateralized financing based on invoiced accounts receivables of one of our customers in Turkey accrues at a fixed rate of 4.5% as of June 30, 2020 and is paid quarterly with a maturity date equal to four months from the applicable invoice date. Interest on the collateralized capital expenditures financing accrues at the one month EURIBOR plus 6.75% (6.75% as of June 30, 2020) with monthly principal repayments beginning in October 2017 with a final maturity date of December 2021. Interest on the unsecured financing accrues at the one month EURIBOR plus 1.50% (1.50% as of June 30, 2020) and is payable monthly. The maturity date for amounts currently outstanding is April 2021. The unsecured financing agreement does not have a maturity date, however the limits are reviewed in April of each year to establish available capacity. Interest on the letters of guarantee accrues at 2.00% annually with an amended final maturity date of July 2020. As of June 30, 2020 and December 31, 2019, there was $6.0 million and $7.9 million outstanding under the collateralized financing of capital expenditures line, respectively. As of June 30, 2020 and December 31, 2019, there was none and $3.8 million, respectively, outstanding under the collateralized financing based on invoiced accounts receivables. As of June 30, 2020 and December 31, 2019, there was $10.3 million and no amount, respectively, outstanding under the unsecured financing facility.

In the first quarter of 2020, as a replacement to the original credit agreement, we entered into an unsecured financing facility with the same Turkish financial institution to provide up to 64.0 million Turkish Lira (approximately $9.4 million as of June 30, 2020). Interest accrues at a fixed rate of 1.75% and is to be paid quarterly. The credit agreement does not have a maturity date, however the limits are reviewed in October of each year to establish available capacity. All of the other terms of the original credit agreement remained the same. No amounts were outstanding under this agreement as of June 30, 2020 or December 31, 2019.

In the fourth quarter of 2019, we entered into a credit agreement with a Turkish financial institution to provide up to 10.0 million Euro (approximately $11.2 million as of June 30, 2020) of unsecured financing. Interest accrues at a fixed rate of 2.0% and is payable at the end of the term when the loan is repaid. The credit agreement does not have a maturity date, however the limits are reviewed in October of each year to establish available capacity. No amounts were outstanding under this agreement as of June 30, 2020 or December 31, 2019.

In the first quarter of 2020, we entered into a credit agreement, as amended, with a Turkish financial institution to provide up to $18.0 million of unsecured financing. Interest accrues at a fixed rate of 3.0% and is payable at the end of the term when the loan is repaid. The credit agreement does not have a maturity date, however the limits are reviewed in April of each year to establish available capacity. As of June 30, 2020, there was $15.5 million outstanding under this credit agreement.

In the first quarter of 2020, we entered into a credit agreement with a Turkish financial institution to provide up to 5.0 million Euro (approximately $5.6 million as of June 30, 2020) of unsecured financing. Interest accrues at a fixed rate of 5.0% and is payable at the end of the term when the loan is repaid. The credit agreement does not have a maturity date, however the limits are reviewed in October of each year to establish available capacity. As of June 30, 2020, there were no amounts outstanding under this credit agreement.

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

Asia: In August 2019, we entered into a credit agreement with a Chinese financial institution to provide an unsecured credit line of up to 315.0 million Renminbi (approximately $44.5 million as of June 30, 2020) related to two of our China facilities which can be used for the purpose of issuing customs letters of guarantee and covering the related deposits on such letters of guarantee, project financing 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 (4.8% as of June 30, 2020) and can be paid monthly, quarterly or at the time of the debt's maturity (August 2021). As of June 30, 2020, there were no letters of guarantee and related deposits used for customs clearance outstanding. As of December 31, 2019, there were 25.7 million Renminbi (approximately $3.7 million) of letters of guarantee and related deposits used for customs clearance outstanding.

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 $14.1 million as of June 30, 2020) which can be used as customs letters of guarantee. Interest on the credit line accrues at the Chinese central bank interest rate plus an applicable margin (4.8% at June 30, 2020) and can be paid monthly, quarterly or at the time of the debt's maturity (in March 2023). As of June 30, 2020, there were 40.5 million Renminbi (approximately $5.7 million) of letters of guarantee used for customs clearance outstanding. As of December 31, 2019, there were 71.9 million Renminbi (approximately $10.3 million) of letters of guarantee used for customs clearance outstanding.

Equipment Leases and Other Arrangements: We have entered into certain finance lease, sale-leaseback and equipment financing arrangements in the U.S., Mexico and EMEAI for equipment used in our operations as well as for office use. These leases bear interest at rates ranging from 4.6% to 9.75% annually, and principal and interest are payable monthly. As of June 30, 2020 and December 31, 2019, there was an aggregate total of $15.0 million and $17.9 million outstanding under these arrangements, respectively.

Operating Leases: We lease various facilities and equipment under non-cancelable operating lease agreements. As of June 30, 2020, we leased a total of approximately 6.8 million square feet in Dafeng, China; Yangzhou, China; Chennai, India; Izmir, Turkey; Kolding, Denmark; Berlin, Germany, Newton, Iowa; Juárez, Mexico; Matamoros, Mexico; Santa Teresa, New Mexico; Warren, Rhode Island, as well as our corporate office in Scottsdale, Arizona. The terms of these leases range from 12 months to 180 months with annual payments approximating $30 million for the full year 2020.

Off-Balance Sheet Transactions

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 consolidated financial statements and related notes.

Our Mexico segment has an existing accounts receivable assignment agreement with a financial institution under which the financial institution buys, on a non-recourse basis, the accounts receivable amounts related to one of our Mexico segment's customers at a discount calculated based on an effective annual rate of LIBOR plus 2.75%.

In September 2018, our U.S. and Mexico segments entered into an accounts receivable assignment agreement, as amended, with a financial institution. Under this agreement, the financial institution buys, on a non-recourse basis, the accounts receivable amounts related to one of our U.S. (Iowa location) and Mexico segment's customers at a discount calculated based on LIBOR plus 1.25%.

In the fourth quarter of 2018, our EMEAI segment entered into an accounts receivable assignment agreement with a financial institution. Under this agreement, the financial institution may buy, on a non-recourse revolving basis, up to 15.0 million Euro (approximately $16.9 million as of June 30, 2020) of the accounts receivable amounts related to one of our EMEAI segment's customers at a discount calculated based on EURIBOR plus 2.65%. During the first quarter of 2020, this program was discontinued by the financial institution.

In the fourth quarter of 2018, our EMEAI segment entered into an accounts receivable assignment agreement with a financial institution. Under this agreement, the financial institution buys, on a non-recourse basis, the accounts receivable amounts related to one of our EMEAI segment's customers at a discount calculated based on EURIBOR plus 0.75%.

In the first quarter of 2019, our Asia and Mexico segments entered into separate accounts receivable purchase agreements, as amended, with a financial institution. Under these agreements, the financial institution may buy, on a non-recourse basis, and hold outstanding at any time up to $60.0 million of a customer's accounts receivable amounts in our Asia segment and up to $50.0 million of a customer's accounts receivable amounts in our Mexico segment at a discount calculated based on the three month LIBOR plus 1.0% and the number of days from the date of purchase to maturity.

In the second quarter of 2019, our Asia segment entered into an accounts receivable purchase agreement, as amended, with a financial institution. Under this agreement, the financial institution may buy, on a non-recourse basis, and hold outstanding at any time up to

$45.0 million of a customer's accounts receivable amounts in our Asia segment at a discount calculated based on the three month LIBOR plus 1.0% and the number of days from the date of purchase to maturity.

In the fourth quarter of 2019, our Asia segment entered into an accounts receivable purchase agreement, as amended, with a financial institution. Under this agreement, the financial institution may buy, on a non-recourse basis, and hold outstanding at any time an unlimited amount of a customer's accounts receivable amounts in our Asia segment at a discount calculated based on a fixed rate of 4.05% and the number of days from the date of purchase to maturity.

In the first quarter of 2020, our EMEAI segment entered into an accounts receivable assignment agreement with a financial institution. Under this agreement, the financial institution buys, on a non-recourse basis, the accounts receivable amounts related to one of our EMEAI segment's customers at a discount calculated based on EURIBOR, subject to a floor of 0.0%, plus 1.95%.

As the receivables are purchased by the financial institutions under the agreements as described in the preceding paragraphs, the receivables were removed from our balance sheet. During the three and six months ended June 30, 2020, $235.7 million and $459.9 million of receivables were sold under the accounts receivable assignment agreements described above, respectively.

Critical Accounting Policies and Estimates

There have been no other significant changes to our critical accounting policies as disclosed in our Annual Report on Form 10-K.

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements, see Note 1, *Recently Issued Accounting Pronouncements* to our condensed consolidated financial statements.

Contractual Obligations

During the six months ended June 30, 2020, there have been no material changes to the contractual obligations reported in our Annual Report on Form 10-K, other than in the ordinary course of business.

Item 3. *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. We currently do not hedge our exposure to these risks.

Foreign Currency Risk. We conduct international 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 condensed 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 $21.2 million for the six months ended June 30, 2020.

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 40% of the resin and resin systems we use are purchased under contracts controlled 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. 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 $5.1 million for the six months ended June 30, 2020. Furthermore, this amount does not include the portion of any increase or decrease that would be shared with our customers under our long-term supply agreements, which is generally 70%.

In late 2019, worldwide demand for balsa wood increased as a result of shortages of other types of core materials. In addition, our supply chain for balsa wood, which is primarily sourced from Ecuador, has been further stressed due to the COVID-19 pandemic. As a result of this increased demand and supply chain disruption, we currently do not have fixed pricing for a portion of our contracts and purchases orders for balsa wood for the remainder of 2020. We believe that a 10% change in the price of balsa wood would have had an impact to income from operations of approximately $4.1 million for the six months ended June 30, 2020.

Interest Rate Risk. As of June 30, 2020, our EMEAI segment has one general credit agreement, as amended, with a Turkish financial institution which is tied to EURIBOR. This agreement had collateralized financing of capital expenditures and unsecured financing outstanding as of June 30, 2020 totaling $16.3 million. In addition, as of June 30, 2020, our Credit Agreement includes interest on the unhedged principal amount of $117.4 million which is tied to LIBOR. The EMEAI and the Credit Agreement noted above are the only variable rate debt that we had outstanding as of June 30, 2020 as all remaining working capital loans, accounts receivable financing, unsecured financing and capital lease obligations are fixed rate instruments and are not subject to fluctuations in interest rates. Due to the relatively low LIBOR and EURIBOR rates in effect as of June 30, 2020, a 10% change in the LIBOR or EURIBOR rate would not have had a material impact on our future earnings, fair values or cash flows.

Item 4. *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 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 Chief Financial Officer, evaluated the design and operating effectiveness as of June 30, 2020 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 Chief Financial Officer concluded that our disclosure controls and procedures were effective as of June 30, 2020.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the three months ended June 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. ***Legal Proceedings***

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 or our insurance policy limits. 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.

Item 1A. ***Risk Factors***

Except as noted below, there have been no material changes to the Risk Factors (Part I, Item 1A) in our Annual Report on Form 10-K, which could materially affect our business, financial condition, and/or future results.

Our business, operations and financial condition have been adversely affected by the COVID-19 pandemic and we cannot estimate the duration and magnitude of the COVID-19 pandemic on our business, operations and financial condition at this time.

The COVID-19 pandemic has adversely affected our business and operations for the three and six months ended June 30, 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. However, several of our manufacturing facilities, in particular our Mexico and India manufacturing facilities, are operating in regions with high levels of reported COVID-19 positive cases. As such, we may be required to reinstate temporary production suspensions or volume reductions at these manufacturing facilities or 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. In addition, although we currently have not experienced any significant disruptions in our global supply chain due to the COVID-19 pandemic, our global supply chain may in the future be adversely affected if the COVID-19 pandemic persists. As a result of the uncertainty relating to: (i) the rapidly evolving nature, magnitude and duration of the COVID-19 pandemic, (ii) the variety of measures implemented by governments around the world to address its effects and (iii) the impact on our manufacturing operations, we cannot quantify the total impact of the COVID-19 pandemic on our business, results of operations and financial condition for the balance of 2020 in light of such uncertainty.

Item 2. ***Unregistered Sales of Equity Securities and Use of Proceeds***

Issuer Purchases of Equity Securities

The following table summarizes the total number of shares of our common stock that we repurchased during the three months ended June 30, 2020 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
April (April 1 - April 30)	—	$ —	—	—
May (May 1 - May 31)	2,731	17.87	—	—
June (June 1 - June 30)	—	—	—	—
Total	2,731	$ 17.87	—	—

Use of Proceeds

Not applicable.

Item 3. ***Defaults Upon Senior Securities***

Not applicable.

Item 4. ***Mine Safety Disclosures***

Not applicable.

Item 5. ***Other Information***

None.

Item 6. *Exhibits*

Exhibit Number	Exhibit Description
10.1	Amendment No. 2, dated as of June 29, 2020, among TPI Composites, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent (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)
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.SCH	Inline XBRL Taxonomy Extension Schema Document (filed herewith)
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document (filed herewith)
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document (filed herewith)
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document (filed herewith)
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document (filed herewith)
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 Quarterly Report on Form 10-Q 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.

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: August 6, 2020	By:	/s/ Bryan Schumaker
		Bryan Schumaker Chief Financial Officer (Principal Financial Officer)
Date: August 6, 2020	By:	/s/ Adan Gossar
		Adan Gossar Chief Accounting Officer (Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION

I, William E. Siwek, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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: August 6, 2020

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

Exhibit 31.2

CERTIFICATION

I, Bryan Schumaker, certify that:

1. I have reviewed this quarterly report on Form 10-Q 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: August 6, 2020

By: /s/ Bryan Schumaker
Bryan Schumaker
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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-Q of TPI Composites, Inc. for the three months ended June 30, 2020 (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: August 6, 2020

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

Exhibit 32.2

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

I, Bryan Schumaker, 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-Q of TPI Composites, Inc. for the three months ended June 30, 2020 (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: August 6, 2020	By:	/s/ Bryan Schumaker
		Bryan Schumaker
		Chief Financial Officer
		(Principal Financial Officer)