

HEXCEL CORP /DE/  
Form 10-K  
February 09, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the Fiscal Year Ended December 31, 2016

or

Transition Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934  
For the transition period from                      to

Commission File Number 1-8472

Hexcel Corporation

(Exact name of registrant as specified in its charter)

Delaware                      94-1109521  
(State of Incorporation) (I.R.S. Employer Identification No.)  
281 Tresser Boulevard

Stamford, Connecticut 06901

(Address of principal executive offices and zip code)

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Registrant's telephone number, including area code: (203) 969-0666

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

Title of each class	Name of each exchange on which registered
COMMON STOCK	NEW YORK STOCK EXCHANGE

Securities registered pursuant to Section 12(g) of the Act: None

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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

The aggregate market value of the registrant's common stock held by non-affiliates was \$3,823,178,724 based on the reported last sale price of common stock on June 30, 2016, which is the last business day of the registrant's most recently completed second fiscal quarter.

The number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

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Class	Outstanding as of January 31, 2017
COMMON STOCK	91,508,774

Documents Incorporated by Reference:

Proxy Statement for Annual Meeting of Stockholders (to the extent specified herein) — Part III.

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## PART I

### ITEM 1. Business.

#### General Development of Business

Hexcel Corporation, founded in 1946, was incorporated in California in 1948, and reincorporated in Delaware in 1983. Hexcel Corporation and its subsidiaries (herein referred to as “Hexcel”, “the Company”, “we”, “us”, or “our”), is a leading advanced composites company. We develop, manufacture, and market lightweight, high-performance structural materials, including carbon fibers, specialty reinforcements, prepregs and other fiber-reinforced matrix materials, honeycomb, adhesives, engineered honeycomb and composite structures, for use in Commercial Aerospace, Space & Defense and Industrial markets. Our products are used in a wide variety of end applications, such as commercial and military aircraft, space launch vehicles and satellites, wind turbine blades, automotive, recreational products and other industrial applications.

We serve international markets through manufacturing facilities, sales offices and representatives located in the Americas, Asia Pacific, Europe, Russia and Africa.

We are also a partner in a joint venture in Malaysia, which manufactures composite structures for Commercial Aerospace applications.

On January 5, 2016, we acquired the remaining 50% interest in Formax, which specializes in lightweight multi-axial fabrics. In 2016, we also made \$30 million of investments including acquiring an interest in Oxford Performance Materials (“OPM”) for \$15.0 million. OPM produces thermoplastic, carbon fiber reinforced 3D printed parts primarily for Commercial Aerospace and Space and Defense applications. We also issued an 8% convertible secured promissory note to Luminati Aerospace LLC (“Luminati”), in the amount of \$10 million. Luminati is an aerospace technology company focusing on research, development, testing, and manufacturing of next generation solar-electric unmanned aerial vehicles, or UAVs. Lastly, we invested \$5 million in Carbon Conversions Incorporated (“CCI”). CCI is a leader in carbon fiber recycling and repurposing.

#### Narrative Description of Business and Segments

We are a manufacturer of products within a single industry: Advanced Composites. Hexcel has two reportable segments: Composite Materials and Engineered Products. The Composite Materials segment is comprised of our carbon fiber, specialty reinforcements, resins, prepregs and other fiber-reinforced matrix materials, and honeycomb core product lines. The Engineered Products segment is comprised of lightweight high strength composite structures, molded components, engineered core and honeycomb products with added functionality.

The following summaries describe the ongoing activities related to the Composite Materials and Engineered Products segments as of December 31, 2016.

#### Composite Materials

The Composite Materials segment manufactures and markets carbon fibers, fabrics and specialty reinforcements, prepregs and other fiber-reinforced matrix materials, structural adhesives, honeycomb, molding compounds, tooling

materials, polyurethane systems and laminates that are incorporated into many applications, including military and commercial aircraft, wind turbine blades, recreational products, transport (cars, boats, trains) and other industrial applications.

The following table identifies the principal products and examples of the primary end-uses from the Composite Materials segment:

SEGMENT	PRODUCTS	PRIMARY END-USES
COMPOSITE MATERIALS	Carbon Fibers	Raw materials for prepregs, fabrics and specialty reinforcements
		Filament winding for various aerospace, defense and industrial applications
	Fabrics, Multi-axials and Specialty Reinforcements	Raw materials for prepregs and honeycomb  Composites and components used in aerospace, defense, wind energy, automotive, recreation, marine and other industrial applications
	Prepregs, Other Fiber-Reinforced Matrix Materials and Resins	Composite structures
		Commercial and military aircraft components
		Satellites and launchers
		Aero-engines
		Wind turbine and helicopter blades
		Cars, boats and trains
		Skis, snowboards, bicycles and hockey sticks
	Structural Adhesives	Bonding of metals, honeycomb and composite materials
	Honeycomb	Composite structures and interiors
		Impact and shock absorption systems
		Helicopter blades

**Carbon Fibers:** HexTow® carbon fibers are manufactured for sale to third-party customers as well as for our own use in manufacturing certain reinforcements and composite materials. Carbon fibers are also woven into carbon fabrics, used as reinforcement in conjunction with a resin matrix to produce pre-impregnated composite materials (referred to as “prepregs”). Carbon fiber is also used in filament winding to produce finished composite components. Key product applications include structural components for commercial and military aircraft, space launch vehicles, and certain other applications such as recreational and industrial equipment.

**Fabrics, Multi-axials and Specialty Reinforcements:** HexForce® fabrics, multiaxials and specialty reinforcements are made from a variety of fibers, including carbon, glass, aramid and other high strength polymers, quartz, ceramic and other specialty fibers. These reinforcements are used in the production of prepregs and other matrix materials for

third-party customers as well as for our own use. They are also used in the manufacture of a variety of industrial and recreational products such as wind energy blades, automotive components, oil exploration and production equipment, boats, surfboards, skis and other sporting goods equipment.

**Prepregs:** HexPly® prepregs are manufactured for sale to third-party customers and for internal use by our Engineered Products segment in manufacturing composite laminates and monolithic structures. Prepregs are used in primary and secondary structural aerospace applications such as wing components, horizontal and vertical stabilizer components, fairings, radomes and engine fan blades and cases, engine nacelles as well as overhead storage bins and other interior components. They are also used in many of the industrial and recreational products noted above. Prepregs are manufactured by combining high-performance reinforcement fabrics or unidirectional fibers with a resin matrix to form a composite material that, when cured, has exceptional structural properties not present in either of the constituent materials. Prepregs are applied via hand layup, automatic tape layup and advanced fiber placement to produce finished composite components. Prepreg reinforcements include glass, carbon, aramid, quartz, ceramic and other specialty fibers. Resin matrices include bismaleimide, cyanate ester, epoxy, phenolic, polyimide and other specialty resins.

**Other Fiber-Reinforced Matrix Materials:** Fiber reinforced matrix developments include HexMC®, a form of quasi-isotropic carbon fiber prepreg that enables small to medium sized, complex-shaped, composite components to be mass produced. HexTool® is a specialized form of HexMC® for use in the cost-effective construction of high temperature resistant composite tooling. HexFIT® film infusion material is a product that combines resin films and dry fiber reinforcements to save lay-up time in production and enables the manufacture of large contoured composite structures, such as wind turbine blades.

**Resins:** HexFlow® polymer matrix materials are sold in liquid and film form for use in direct process manufacturing of composite parts. Resins can be combined with fiber reinforcements in manufacturing processes such as resin transfer molding (“RTM”), resin film infusion (“RFI”) or vacuum assisted resin transfer molding (“VARTM”) to produce high quality composite components for both aerospace and industrial applications, without the need for customer investment in autoclaves.

**Structural Adhesives:** We manufacture and market a comprehensive range of Redux® film and paste adhesives. These structural adhesives, which bond metal to metal and composites and honeycomb structures, are used in the aerospace industry and for many industrial applications.

**Honeycomb:** HexWeb® honeycomb is a lightweight, cellular structure generally composed of a sheet of nested hexagonal cells. It can also be manufactured in over-expanded and asymmetric cell configurations to meet special design requirements such as contours or complex curvatures. Honeycomb is primarily used as a lightweight core material and acts as a highly efficient energy absorber. When sandwiched between composite or metallic facing skins, honeycomb significantly increases the stiffness of the structure, while adding very little weight.

We produce honeycomb from a number of metallic and non-metallic materials. Most metallic honeycomb is made from aluminum and is available in a selection of alloys, cell sizes and dimensions. Non-metallic materials used in the manufacture of honeycomb include fiberglass, carbon fiber, thermoplastics, non-flammable aramid papers, aramid fiber and other specialty materials.

We sell honeycomb as standard blocks and in slices cut from a block. Honeycomb is also used in Acousti-Cap® where a non-metallic, permeable cap material is embedded into honeycomb core that is used in aircraft engine nacelles to dramatically reduce noise during takeoff and landing without adding a structural weight penalty. Aerospace is the largest market for honeycomb products. In addition, we produce honeycomb for our Engineered Products segment for use in manufacturing finished parts for airframe Original Equipment Manufacturers (“OEMs”).

In September 2014, the Company announced it would expand its carbon fiber capacity through the addition of new precursor and carbon fiber lines in Roussillon, France. Construction will be completed by the end of 2017 and qualifications will be completed in 2018. The following table identifies the key customers and the major manufacturing facilities of the Composite Materials segment:

**COMPOSITE MATERIALS  
KEY CUSTOMERS**

Aernnova	Daher	Sikorsky, a Lockheed Martin Company
Airbus	Embraer	Solvay
AVIC	FACC	Spirit Aerosystems
Bell	General Electric	Textron
BMW	GKN	Toray
The Boeing Company	Leonardo	Trek
Bombardier	Nordam	Triumph
CFAN	Northrop Grumman	United Technologies
CFM International	Orbital ATK	Vestas
CTRM Aero Composites	Safran	Zodiac

**MAJOR MANUFACTURING FACILITIES**



Casa Grande, Arizona	Neumarkt, Austria
Dagneux, France	Parla, Spain
Decatur, Alabama	Salt Lake City, Utah
Duxford, England	Seguin, Texas
Illescas, Spain	Stade, Germany
Leicester, England	Tianjin, China
Les Avenieres, France	Windsor, Colorado
Nantes, France	

Net sales for the Composite Materials segment to third-party customers were \$1,610 million in 2016, \$1,459 million in 2015 and \$1,421 million in 2014, which represented about 78% to 80%, of our net sales each year. Net sales for composite materials are highly dependent upon the number of large commercial aircraft produced as further discussed under the captions “Significant Customers”, “Markets” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations”. In addition, about 5% of our total production of composite materials in 2016 was used internally by the Engineered Products segment.

## Engineered Products

The Engineered Products segment manufactures and markets composite structures and precision machined honeycomb parts primarily for use in the aerospace industry. Composite structures are manufactured from a variety of composite and other materials, including prepregs, honeycomb, structural adhesives and advanced molding materials, using such manufacturing processes as autoclave processing, multi-axis numerically controlled machining, heat forming, compression molding and other composite manufacturing techniques.

The following table identifies the principal products and examples of the primary end-uses from the Engineered Products segment:

SEGMENT	PRODUCTS	PRIMARY END-USES
ENGINEERED PRODUCTS	Composite Structures	Aircraft structures and finished aircraft components, including wing to body fairings, wing panels, flight deck panels, door liners, helicopter blades, spars and tip caps
	Engineered Honeycomb	Aircraft structural sub-components and semi-finished components used in helicopter blades, engine nacelles, and aircraft surfaces (flaps, wings, elevators and fairings)
	HexMC® molded composite parts	Complex geometric parts for commercial aircraft to replace traditionally metal parts including window frames, primary structure brackets and fittings as well as for certain industrial applications
	HexTool® Tooling	•Mold tools made from carbon fiber and high temperature resistant BMI or epoxy resin. Used in the manufacture of composite aircraft structures, providing a lower weight, easier to handle alternative to traditional metal tooling.

Net sales for the Engineered Products segment to third-party customers were \$394 million in 2016, \$403 million in 2015, and \$435 million in 2014, which represented about 19% to 22% of our net sales each year.

The Engineered Products segment has a 50% ownership interest in a Malaysian joint venture, Aerospace Composites Malaysia Sdn. Bhd. (“ACM”) with Boeing Worldwide Operations Limited. Under the terms of the joint venture agreement, Hexcel and The Boeing Company (“Boeing”) have transferred the manufacture of certain semi-finished composite components to this joint venture. Hexcel purchases the semi-finished composite components from the joint venture, and inspects and performs additional skilled assembly work before delivering them to Boeing. The joint venture also manufactures composite components for other aircraft component manufacturers. ACM had revenue of \$58 million in 2016, and \$69 million and \$64 million in 2015 and 2014, respectively.

In January 2016, the Company announced it would expand its global engineered honeycomb capacity by building a manufacturing plant in Casablanca, Morocco. The facility should be operational in the second half of 2017.

The following table identifies the key customers and the major manufacturing facilities of the Engineered Products segment:

ENGINEERED PRODUCTS

KEY CUSTOMERS	MAJOR MANUFACTURING FACILITIES
The Boeing Company	Burlington, Washington
Bombardier	Kent, Washington
CTRM Aero Composites	Pottsville, Pennsylvania
General Electric	Welkenraedt, Belgium
GKN	Alor Setar, Malaysia (JV)
Sikorsky, a Lockheed Martin Company	
Spirit Aerosystems	
United Technologies	

## Financial Information About Segments and Geographic Areas

Financial information and further discussion of our segments and geographic areas, including external sales and long-lived assets, are contained under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in Note 16 to the accompanying consolidated financial statements of this Annual Report on Form 10-K.

## Significant Customers

Approximately 41%, 35% and 31% of our 2016, 2015 and 2014 net sales, respectively, were to Airbus and its subcontractors. Of the 41% of overall sales to Airbus and its subcontractors in 2016, 37% related to Commercial Aerospace market applications and 4% related to Space & Defense market applications. Approximately 28%, 31% and 32% of our 2016, 2015 and 2014 net sales, respectively, were to Boeing and related subcontractors. Of the 28% of overall sales to Boeing and its subcontractors in 2016, 26% related to Commercial Aerospace market applications and 2% related to Space & Defense market applications.

## Markets

Our products are sold for a broad range of end-uses. The following tables summarize our net sales to third-party customers by market and by geography for each of the three years ended December 31:

	2016	2015	2014
Net Sales by Market			
Commercial Aerospace	71 %	69 %	66 %
Space & Defense	16	18	20
Industrial	13	13	14
Total	100 %	100 %	100 %
Net Sales by Geography (a)			
United States	48 %	51 %	50 %
Europe and China	52	49	50
Total	100 %	100 %	100 %

(a) Net sales by geography based on the location in which the product sold was manufactured.

	2016	2015	2014
Net Sales to External Customers (b)			
United States	42 %	46 %	45 %
Europe	41	37	39
All Others	17	17	16
Total	100 %	100 %	100 %

(b) Net sales to external customers based on the location to which the product sold was delivered.

## Commercial Aerospace

The Commercial Aerospace industry is our largest user of advanced composites. Commercial Aerospace represented 71% of our 2016 net sales. Approximately 89% of these revenues can be identified as sales to Airbus, Boeing and their subcontractors for the production of commercial aircraft. The remaining 11% of these revenues were for regional and business aircraft. The economic benefits airlines can obtain from weight savings in both fuel economy and aircraft range, combined with the design enhancement that comes from the advantages of advanced composites over traditional materials, have caused the industry to be the leader in the use of these materials. While military aircraft and spacecraft have championed the development of these materials, Commercial Aerospace has had the greater production volumes and has commercialized the use of these products. Accordingly, the demand for advanced structural material products is closely correlated to the demand for new commercial aircraft.

The use of advanced composites in Commercial Aerospace is primarily in the manufacture of new commercial aircraft. The aftermarket for these products is very small as many of these materials are designed to last for the life of the aircraft. The demand for new commercial aircraft is driven by two principal factors, the first of which is airline passenger traffic (the number of revenue passenger miles flown by the airlines) which affects the required size of airline fleets. The International Air Transport Association (IATA) estimates 2016 revenue passenger miles were 6.3% higher than 2015. Growth in passenger traffic requires growth in the size of the fleet of commercial aircraft operated by airlines worldwide.

A second factor, which is less sensitive to the general economy, is the replacement rates for existing aircraft. The rates of retirement of passenger and freight aircraft, resulting mainly from obsolescence, are determined in part by the regulatory requirements established by various civil aviation authorities worldwide as well as public concern regarding aircraft age, safety and noise. These rates may also be affected by the desire of the various airlines to improve operating costs with higher payloads and more fuel-efficient aircraft (which in turn is influenced by the price of fuel) and by reducing maintenance expense. In addition, there is expected to be increasing pressure on airlines to replace their aging fleet with more fuel efficient and quieter aircraft to be more environmentally responsible. When aircraft are retired from commercial airline fleets, they may be converted to cargo freight aircraft or scrapped.

An additional factor that may cause airlines to defer or cancel orders is their ability to obtain financing, including leasing, for new aircraft orders. This will be dependent both upon the financial health of the airline operators, as well as the overall availability of financing in the marketplace.

Each new generation of commercial aircraft has used increasing quantities of advanced composites, replacing metals. This follows the trend previously seen in military fighter aircraft where advanced composites may now exceed 50% of the weight of the airframe. Early versions of commercial jet aircraft, such as the Boeing 707, which was developed in the early 1950's, contained almost no composite materials. One of the first commercial aircraft to use a meaningful amount of composite materials, the Boeing 767 entered into service in 1983, and was built with an airframe containing approximately 6% composite materials. The airframe of Boeing's 777 aircraft, which entered service in 1995, is approximately 11% composite. The Airbus A380, which was first delivered in 2007, has approximately 23% composite content by weight. Boeing's B787, which entered into service in 2011, has a content of more than 50% composite materials by weight. The Airbus A350 XWB ("A350") which has a composite content of 53% by weight was first delivered in December 2014. In 2011, both Airbus and Boeing announced new versions of their narrow body aircraft which will have new engines. Airbus's A320neo had its first customer delivery in January 2016, with 68 planes delivered in 2016 and 4,876 orders in backlog at December 31, 2016. Boeing's B737 MAX had its first flight on January 29, 2016 and is expected to enter service in 2017. In 2014, Airbus announced a new version of its A330, the A330neo, which will have new engines, and Boeing announced the B777X, a new version of the B777 with composite wings and new engines. It is expected that these new aircraft will offer more opportunities for composite materials than their predecessors, as the Commercial Aerospace industry continues to utilize a greater proportion of advanced composite materials with each new generation of aircraft. We refer to this steady expansion of the use of composites in aircraft as the "secular penetration of composites" as it increases our average sales per airplane over time.

The impact on Hexcel of Airbus and Boeing's production rate changes is typically influenced by two factors: the mix of aircraft produced and the inventory supply chain effects of increases or reductions in aircraft production. We have products on all Airbus and Boeing planes. The dollar value of our materials varies by aircraft type — twin aisle aircraft use more of our materials than narrow body aircraft and newer designed aircraft use more of our materials than older generations. On average, for established programs, we deliver products into the supply chain about six months prior to aircraft delivery, with a range between one and eighteen months depending on the product. For aircraft that are in the development or ramp-up stage, such as the B737 MAX, A330neo and the B777X, we will have sales as much as several years in advance of the delivery. Increased aircraft deliveries combined with the secular penetration of composites resulted in our Commercial Aerospace revenues increasing, year over year, by approximately 11.1% (11.3% in constant currency) in 2016 and 6% in 2015 and 12% in 2014.

Set forth below are historical aircraft deliveries as announced by Airbus and Boeing:

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Airbus	303	305	320	378	434	453	483	498	510	534	588	626	629	635	688

Boeing	381	281	285	290	398	441	375	481	462	477	601	648	723	762	748
Total	684	586	605	668	832	894	858	979	972	1,011	1,189	1,274	1,352	1,397	1,436

Approximately 89% of our Commercial Aerospace revenues can be identified as sales to Airbus, Boeing and their subcontractors for the production of commercial aircraft. Airbus and Boeing combined deliveries in 2016 were 1,436 aircraft, surpassing the previous high of 1,397 in 2015. Based on Airbus and Boeing public estimates, the combined deliveries in 2017 are expected to be just above 2016 levels. In 2016, the combined net orders reported by Airbus and Boeing were for 1,399 planes, bringing their backlog at December 31, 2016 to 12,589 planes or about nine years based on 2016 deliveries. The balance of our Commercial Aerospace sales is related to regional and business aircraft manufacture, and other commercial aircraft applications. These applications also exhibit increasing utilization of composite materials with each new generation of aircraft.

#### Space & Defense

The Space & Defense market has historically been an innovator in the use of, and source of significant demand for, advanced composites. The aggregate demand by Space & Defense customers is primarily a function of procurement of military aircraft that

utilize advanced composites by the United States and certain European governments, including both commercial and military helicopters. We are currently qualified to supply materials to a broad range of helicopter, military aircraft and space programs, including the V-22 (Osprey) tilt rotor aircraft, A400M military transport, F-35 (joint strike fighter or JSF), and Blackhawk. No one program accounts for more than 12% of our revenues in this market. The sales that we obtain from these programs will depend upon which are funded and the extent of such funding. Space applications for advanced composites include solid rocket booster cases, fairings and payload doors for launch vehicles, and satellite buss and solar arrays for military and commercial satellites.

Another trend providing positive growth for Hexcel is the further penetration of composites in helicopter blades. Numerous new helicopter programs in development, as well as upgrade or retrofit programs, have an increased reliance on Composite Materials products such as carbon fiber, prepregs, and honeycomb core to improve blade performance. In addition, our Engineered Products segment provides specialty value added services such as machining, sub-assembly, and even full blade manufacturing.

Contracts for military and some commercial programs may contain provisions applicable to both U.S. Government contracts and subcontracts. For example, a prime contractor may flow down a “termination for convenience” clause to materials suppliers such as Hexcel. According to the terms of a contract, we may be subject to U.S. government Federal Acquisition Regulations, the Department of Defense Federal Acquisition Regulations Supplement, and associated procurement regulations.

#### Industrial

The revenue for this market includes wind turbine blades, automotive, a wide variety of recreational products and other industrial applications. A number of these applications represent emerging opportunities for our products. In developing new applications, we seek those opportunities where advanced composites technology offers significant benefits to the end user, often applications that demand high engineering performance. Within the Industrial markets, wind energy comprises over 50% of the sales and our primary customer is Vestas Wind Systems A/S. The Industrial markets also include sales to major end user sub-markets, in order of size based on our 2016 sales: general industrial applications (including those sold through distributors), transportation (e.g., automobiles, mass transit and high-speed rail, and marine applications) and recreational equipment (e.g., skis and snowboards, bicycles and hockey sticks). Our participation in Industrial applications complements our commercial and military aerospace businesses, and in many instances, technology or products now used in aerospace were started in Industrial. We are committed to pursuing the utilization of advanced structural material technology where it can generate significant value and we can maintain a sustainable competitive advantage.

Further discussion of our markets, including certain risks, uncertainties and other factors with respect to “forward-looking statements” about those markets, is contained under the captions “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Risk Factors”.

#### Backlog

In recent years, our customers have demanded shorter order lead times and “just-in-time” delivery performance. While we have many multi-year contracts with our major aerospace customers, most of these contracts specify the proportion of the customers’ requirements that will be supplied by us and the terms under which the sales will occur, not the specific quantities to be procured. Our Industrial customers have always desired to order their requirements on as short a lead-time as possible. As a result, twelve-month order backlog is not a meaningful trend indicator for us. As noted above, our Commercial Aerospace sales to Airbus and Boeing and their subcontractors accounted for 63% of our total 2016 sales, and they have backlogs of 12,589 airplanes, or nearly nine years based on 2016 deliveries.



## Raw Materials and Production Activities

Our manufacturing operations are in many cases vertically integrated. We produce and internally use carbon fibers, industrial fabrics, composite materials and composite structures as well as sell these materials to third-party customers for their use in the manufacture of their products.

We manufacture high performance carbon fiber from polyacrylonitrile precursor (“PAN”). The primary raw material for PAN is acrylonitrile. All of the PAN we produce is for internal carbon fiber production. We consume more than 80% by value of the carbon fiber we produce and sell the remainder of our output to third-party customers. However, as one of the world’s largest consumers of high performance carbon fiber, we also purchase significant quantities of carbon fiber from external sources for our own use. The sources of carbon fiber we can use in any product or application are generally dictated by customer qualifications or certifications. Otherwise, we select a carbon fiber based on performance, price and availability. With the increasing demand for carbon fiber, particularly in aerospace applications, we have tripled our PAN and carbon fiber capacity since 2007 to serve the growing needs of our customers and our own downstream products and we are continuing to expand our capacity to meet our customers’ forecasted

requirements. After a new production line starts operating, it can take up to a year to be certified for aerospace qualifications. However, these lines can start supplying carbon fiber for many industrial applications within a shorter time period.

We purchase glass yarn from a number of suppliers in the United States, Europe and Asia. We also purchase aramid and high strength fibers which are produced by only a few companies, and during periods of high demand, can be in short supply. In addition, epoxy and other specialty resins, aramid paper and aluminum specialty foils are used in the manufacture of composite products. A number of these products have only one or two sources qualified for use, so an interruption in their supply could disrupt our ability to meet our customer requirements. When entering into multi-year contracts with aerospace customers, we attempt to get back-to-back commitments from key raw material suppliers.

Our manufacturing activities are primarily based on “make-to-order”, or “demand pull” based on customer schedules, and to a lesser extent, “make-to-forecast” production requirements. We coordinate closely with key suppliers in an effort to avoid raw material shortages and excess inventories. However, many of the key raw materials we consume are available from relatively few sources, and in many cases the cost of product qualification makes it impractical to develop multiple sources of supply. The lack of availability of these materials could under certain circumstances have a material adverse effect on our consolidated results of operations.

#### Research and Technology; Patents and Know-How

Research and Technology (“R&T”) departments support our businesses worldwide. Through R&T activities, we maintain expertise in precursor and carbon fiber, chemical and polymer formulation and curatives, fabric forming and textile architectures, advanced composite structures, process engineering, application development, analysis and testing of composite materials, computational design, and other scientific disciplines related to our worldwide business base.

Our products rely primarily on our expertise in materials science, textiles, process engineering and polymer chemistry. Consistent with market demand, we have been placing more emphasis on higher performing products and cost effective production processes while seeking to improve the consistency of our products and our capital efficiency. Towards this end, we have entered into formal and informal alliances, as well as licensing and teaming arrangements, with several customers, suppliers, external agencies and laboratories. We believe that we possess unique capabilities to design, develop, manufacture and qualify composite materials and structures. We have over 1,450 patents and pending applications worldwide, and have granted technology licenses and patent rights to several third parties primarily in connection with joint ventures and joint development programs. It is our policy to actively enforce our proprietary rights. We believe that the patents and know-how rights currently owned or licensed by Hexcel are adequate for the conduct of our business. We do not believe that our business would be materially affected by the expiration of any single patent or series of related patents, or by the termination of any single license agreement or series of related license agreements.

We spent \$46.9 million, \$44.3 million and \$47.9 million for R&T in 2016, 2015 and 2014, respectively. Our spending, on a constant currency basis, in 2016 was more than 10% higher than 2015 and in 2015 was about the same as 2014. Our spending on a quarter to quarter basis fluctuates depending upon the amount of new product development and qualification activities, particularly in relation to commercial aircraft applications, that are in progress. These expenditures are expensed as incurred.

#### Environmental Matters

We are subject to federal, state, local and foreign laws and regulations designed to protect the environment and to regulate the discharge of materials into the environment. We believe that our policies, practices, and procedures are

properly designed to prevent unreasonable risk of environmental damage and associated financial liability. To date, environmental control regulations have not had a significant adverse effect on our overall operations.

Our aggregate environmental related accruals at December 31, 2016 and 2015 were \$3.2 million and \$2.9 million, respectively. As of December 31, 2016 and December 31, 2015, \$1.4 million and \$1.1 million, respectively, were included in "Other current accrued liabilities", with the remainder included in "Other non-current liabilities". As related to certain of our environmental matters, our accruals were estimated at the low end of a range of possible outcomes since there was no better point within the range. If we had accrued, for those sites where we are able to estimate our liability, at the high end of the range of possible outcomes, our accruals would have been \$16 million higher at December 31, 2016 and 2015. Environmental remediation spending charged directly to our reserve balance for 2016, 2015 and 2014, was \$0.8 million, \$2.6 million and \$4.9 million, respectively. In addition, our operating costs relating to environmental compliance were \$10.1 million, \$10.7 million and \$14.2 million, for 2016, 2015, and 2014, respectively, and were charged directly to expense. Capital expenditures for environmental matters approximated \$13.2 million, \$7.1 million and \$7.3 million for 2016, 2015 and 2014 respectively.

These accruals can change significantly from period to period due to such factors as additional information on the nature or extent of contamination, the methods of remediation required, changes in the apportionment of costs among responsible parties and other actions by governmental agencies or private parties, as well as the impact, if any, of Hexcel being named in a new matter. A

discussion of environmental matters is contained in Item 3, “Legal Proceedings,” and in Note 13 to the accompanying consolidated financial statements included in this Annual Report on Form 10-K.

#### Sales and Marketing

A staff of salaried marketing managers, product managers and sales personnel, sell and market our products directly to customers worldwide. We also use independent distributors and manufacturer representatives for certain products, markets and regions. In addition, we operate various sales representation offices in the Americas, Europe, Asia Pacific, Russia and Africa.

#### Competition

In the production and sale of advanced composites, we compete with a number of U.S. and international companies on a worldwide basis. The broad markets for composites are highly competitive, and we have focused on both specific submarkets and specialty products within markets. In addition to competing directly with companies offering similar products, we compete with producers of substitute composites such as structural foam, infusion technology, wood and metal. Depending upon the material and markets, relevant competitive factors include approvals, database of usage, technology, product performance, delivery, service, price, customer preference for sole sourcing and customer preferred processes.

#### Employees

As of December 31, 2016, we employed 6,155 full-time employees and contract workers, 3,346 in the United States and 2,809 in other countries. Of the 6,155 full-time employees, approximately 17% were represented by collective bargaining agreements. We believe that our relations with employees and unions are good. The number of full-time employees and contract workers as of December 31, 2015 and 2014 was 5,897 and 5,663, respectively.

#### Other Information

Our internet website is [www.hexcel.com](http://www.hexcel.com). We make available, free of charge through our website, our Form 10-Ks, 10-Qs and 8-Ks, and any amendments to these forms, as soon as reasonably practicable after filing with the Securities and Exchange Commission.

#### ITEM 1A. Risk Factors

An investment in our common stock or debt securities involves risks and uncertainties. You should consider the following risk factors carefully, in addition to the other information contained in this Annual Report on Form 10-K, before deciding to purchase any of our securities.

The markets in which we operate can be cyclical, and downturns in them may adversely affect the results of our operations.

Some of the markets in which we operate have been, to varying degrees, cyclical and have experienced downturns. A downturn in these markets could occur at any time as a result of events that are industry specific or macroeconomic and in the event of a downturn; we have no way of knowing if, when and to what extent there might be a recovery.

Any deterioration in any of the cyclical markets we serve could adversely affect our financial performance and operating results.

At December 31, 2016, Airbus and Boeing had a combined backlog of 12,589 aircraft or nearly nine years of production at 2016 delivery rates. To the extent any significant deferrals, cancellations or reduction in demand results in decreased aircraft build rates, it would reduce net sales for our Commercial Aerospace products and as a result reduce our operating income. Approximately 71% of our net sales for 2016 were derived from sales to the Commercial Aerospace industry, which includes 89% from Airbus and Boeing aircraft and 11% from regional and business aircraft. Reductions in demand for commercial aircraft or a delay in deliveries could result from many factors, including delays in the startup or ramp-up of new programs, changes in the propensity for the general public to travel by air (including as a result of terrorist events and any subsequent military response), a significant change in the cost of aviation fuel, a change in technology resulting in the use of alternative materials, consolidation and liquidation of airlines, availability of funding for new aircraft purchases or leases, inventory corrections or disruptions throughout the supply chain and slower macroeconomic growth.

The A350 had its first customer delivery in December 2014. Our content per plane is approximately \$5 million and it is our largest program. We expect sales of \$600 million per year when Airbus reaches its projected buildrates of 120 per year. Both Airbus and Boeing have experienced various delays in the start and ramp up of several aircraft programs, including the A380, B787, B747-8, A400M, and A350. In the past, these have delayed our expected growth or our effective utilization of capacity installed for such growth. Future delays in these or other major new customer programs could similarly impact our results.

In addition, our customers continue to emphasize the need for cost reduction or other improvements in contract terms throughout the supply chain. In response to these pressures, we may be required to accept increased risk or face the prospects of margin compression on some products in the future. Where possible, we seek to offset or mitigate the impact of such pressures through productivity and performance improvements, index clauses, currency hedging and other actions.

A significant decline in business with Airbus, Boeing, Vestas, or other significant customers could materially impact our business, operating results, prospects and financial condition.

We have concentrated customers in the Commercial Aerospace and wind energy markets. In the Commercial Aerospace market, approximately 89%, and in the Space & Defense market, approximately 33%, of our 2016 net sales were made to Airbus and Boeing and their related subcontractors. For the years ended December 31, 2016 and December 31, 2015, approximately 41% and 35% of our total consolidated net sales, respectively, were to Airbus, and its related subcontractors and approximately 28% and 31% of our total consolidated net sales were to Boeing and its related subcontractors, respectively. In the wind energy market, our primary customer is Vestas. Significant changes in the demand for our customers' end products, program delays, the share of their requirements that is awarded to us or changes in the design or materials used to construct their products could result in a significant loss of business with these customers. The loss of, or significant reduction in purchases by Airbus, Boeing and Vestas or any of our other significant customers could materially impair our business, operating results, prospects and financial condition. The level of purchases by our customers is often affected by events beyond their control, including general economic conditions, demand for their products, disruptions in deliveries, business disruptions, strikes and other factors.

A decrease in supply, interruptions at key facilities or an increase in cost of raw materials could result in a material decline in our profitability.

Our profitability depends largely on the price and continuity of supply of raw materials, which may be supplied through a sole source or a limited number of sources. We purchase large volumes of raw materials, such as epoxy and phenolic resins, carbon fiber, fiberglass yarn, aluminum foil and aramid paper. Any restrictions on the supply, or an increase in the cost, of our raw materials could significantly reduce our profit margins. Efforts to mitigate restrictions on the supply or price increases of these raw materials by long-term purchase agreements, productivity improvements or by passing cost increases to our customers may not be successful.

The occurrence of material operational problems, including but not limited to failure of, or interruption to, key equipment or natural disasters, or inability to install, staff and qualify necessary capacity, achievement of planned manufacturing improvements, or inability to meet customer specifications, may have a material adverse effect on the productivity and profitability of a particular manufacturing facility. With respect to certain facilities, such events could have a material effect on our company as a whole.

Reductions in space and defense spending could result in a decline in our net sales.

Space and defense production that has occurred in recent years may not be sustained, individual programs important to Hexcel may be cancelled, production may not continue to grow and the increased demand for composite-intensive

programs may not continue. In addition, the production of military aircraft depends upon defense budgets and the related demand for defense and related equipment. Approximately 16% of our net sales in 2016 were to the Space & Defense market of which about 85% were related to military programs in the United States and other countries.

We have substantial international operations subject to uncertainties which could affect our operating results.

We believe that revenue from sales outside the U.S. will continue to account for a material portion of our total revenue for the foreseeable future. In 2016, 49% of our production and 58% of our customer sales occurred outside of the United States. Additionally, we have invested significant resources in our international operations and we intend to continue to make such investments in the future. Our international operations are subject to numerous risks, including: (a) general economic and political conditions in the countries where we operate may have an adverse effect on our operations in those countries or not be favorable to our growth strategy; (b) the difficulty of enforcing agreements and collecting receivables through some foreign legal systems; (c) foreign customers may have longer payment cycles than customers in the U.S.; (d) cost of compliance with international trade laws of all of the countries in which we do business, including export control laws, relating to sales and purchases of goods and equipment and transfers of technology; (e) tax rates may vary and foreign earnings may be subject to withholding requirements or the imposition of tariffs, exchange controls or other restrictions; (f) governments may adopt regulations or take other actions that would have a direct or

indirect adverse impact on our business and market opportunities; and (g) the potential difficulty in enforcing our intellectual property rights in some foreign countries, and the potential for the intellectual property rights of others to affect our ability to sell product in certain markets. Any one of these could adversely affect our financial condition and results of operations.

In addition, fluctuations in currency exchange rates may influence the profitability and cash flows of our business. For example, our European operations sell a portion of the products they produce in U.S. dollars, yet the labor, overhead costs and portions of material costs incurred in the manufacture of those products are primarily denominated in Euros, British pound sterling or U.S. dollars. As a result, the local currency margins of goods manufactured with costs denominated in local currency, yet sold in U.S. dollars, will vary with fluctuations in currency exchange rates, reducing when the U.S. dollar weakens against the Euro and British pound sterling. In addition, the reported U.S. dollar value of the local currency financial statements of our foreign subsidiaries will vary with fluctuations in currency exchange rates. While we enter into currency exchange and hedge agreements from time to time to mitigate these types of fluctuations, we cannot remove all fluctuations or hedge all exposures, and our earnings are impacted by changes in currency exchange rates.

We currently do not have political risk insurance in the countries in which we conduct business. While we carefully consider these risks when evaluating our international operations, we cannot provide assurance that we will not be materially adversely affected as a result of such risks.

We could be adversely affected by environmental and safety requirements.

Our operations require the handling, use, storage and disposal of certain regulated materials and wastes. As a result, we are subject to various laws and regulations pertaining to pollution and protection of the environment, health and safety. These requirements govern, among other things, emissions to air, discharge to waters and the generation, handling, storage, treatment and disposal of waste and remediation of contaminated sites. We have made, and will continue to make, capital and other expenditures in order to comply with these laws and regulations. These laws and regulations are complex, change frequently and could become more stringent in the future.

We have been named as a “potentially responsible party” under the U.S. Superfund law or similar state laws at several sites requiring clean up. These laws generally impose liability for costs to investigate and remediate contamination without regard to fault. Under certain circumstances liability may be joint and several, resulting in one responsible party being held responsible for the entire obligation. Liability may also include damages to natural resources. We have incurred and likely will continue to incur expenses to investigate and clean up certain of our existing and former facilities, for which we believe we have adequate reserves. The ongoing operation of our manufacturing plants also entails environmental risks, and we may incur material costs or liabilities in the future which could adversely affect us. Although most of our properties have been the subject of environmental site assessments, there can be no assurance that all potential instances of soil and groundwater contamination have been identified, even at those sites where assessments have been conducted. Accordingly, we may discover previously unknown environmental conditions and the cost of remediating such conditions may be material. See “Legal Proceedings” below and Note 13 to the consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

In addition, we may be required to comply with evolving environmental, health and safety laws, regulations or requirements that may be adopted or imposed in the future or to address newly discovered information or conditions that require a response. In particular, climate change is receiving increased attention worldwide, which has led to significant legislative and regulatory efforts to limit greenhouse gas emissions. The U.S. Congress has considered climate change-related legislation and may retake the issue in the near future. Specific policy measures could include cap and trade provisions or a carbon tax. The European Union has instituted the Greenhouse Gas Emission Trading System (EU-ETS). Our manufacturing plants use energy, including electricity and natural gas, and some of our plants



may in the future emit amounts of greenhouse gas that could be affected by these legislative and regulatory efforts. Potential consequences could include increased energy, transportation and raw material costs and may require the Company to make additional investments in its facilities and equipment or limit our ability to grow.

Acquisitions, divestitures, mergers, business combinations or joint ventures by the Company may entail certain operational and financial risks.

Over the past several years we have completed the strategic acquisition of a complementary manufacturing company, Formax (UK) Limited, as well as strategic investments in companies like Oxford Performance Materials and Carbon Conversions Inc. We expect to continue to explore complementary acquisitions, investments and joint ventures and may also pursue divestitures of business lines that do not fit with our core strategy. We may also engage in further vertical integration. From time to time, we have evaluated, and we expect that we will continue to evaluate, possible acquisition, investment, joint venture and/or divestiture transactions. At any given time we may be engaged in discussions or negotiations with respect to these types of activities or may have entered into non-

binding letters of intent. However, we may face competition for attractive targets and may not be able to source appropriate acquisition targets at prices acceptable to us, if at all. In addition, these types of transactions may require significant liquidity, which may not be available on terms favorable to us, or at all. There can be no assurance that we will realize the intended benefits from such transactions or that such transactions will not present risks that could result in increased expenditures and could materially adversely affect our revenues and profitability.

Our forward-looking statements and projections may turn out to be inaccurate.

This Form 10-K includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements relate to analyses and other information that are based on forecasts of future results and estimates of amounts not yet determinable. These statements also relate to future prospects, developments and business strategies. These forward-looking statements are identified by their use of terms and phrases such as “anticipate”, “believe”, “could”, “estimate”, “expect”, “intend”, “may”, “plan”, “predict”, “project”, “should”, “would”, “will” and phrases, including references to assumptions. Such statements are based on current expectations, are inherently uncertain, and are subject to changing assumptions.

Such forward-looking statements include, but are not limited to: (a) the estimates and expectations based on aircraft production rates made publicly available by Airbus, Boeing and others; (b) the revenues we may generate from an aircraft model or program; (c) the impact of the possible push-out in deliveries of the Airbus and Boeing backlog and the impact of delays in the startup or ramp-up of new aircraft programs or the final Hexcel composite material content once the design and material selection has been completed; (d) expectations of composite content on new commercial aircraft programs and our share of those requirements; (e) expectations of growth in revenues from space and defense applications, including whether certain programs might be curtailed or discontinued; (f) expectations regarding growth in sales for wind energy, recreation, automotive and other industrial applications; (g) expectations regarding working capital trends and expenditures; (h) expectations as to the level of capital expenditures and when we will complete the construction and qualification of capacity expansions; (i) our ability to maintain and improve margins in light of the ramp-up of capacity and new facilities and the current economic environment; (j) the outcome of legal matters; (k) our projections regarding the realizability of net operating loss and tax credit carryforwards; and (l) the impact of various market risks, including fluctuations in interest rates, currency exchange rates, environmental regulations and tax codes, fluctuations in commodity prices, and fluctuations in the market price of our common stock, the impact of work stoppages or other labor disruptions and the impact of the above factors on our expectations of 2017 financial results and beyond. In addition, actual results may differ materially from the results anticipated in the forward looking statements due to a variety of factors, including but not limited to changing market conditions, increased competition, product mix, inability to achieve planned manufacturing improvements or to meet customer specifications, cost reductions and capacity additions, and conditions in the financial markets.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different. Such factors include, but are not limited to, the following: changes in general economic and business conditions; changes in current pricing and cost levels; changes in political, social and economic conditions and local regulations; foreign currency fluctuations; changes in aerospace delivery rates; reductions in sales to any significant customers, particularly Airbus, Boeing or Vestas; changes in sales mix; changes in government defense procurement budgets; changes in military aerospace programs technology; industry capacity; competition; disruptions of established supply channels, particularly where raw materials are obtained from a single or limited number of sources and cannot be substituted by unqualified alternatives; manufacturing capacity constraints; uncertainty regarding the likely exit of the U.K. from the European Union; and unforeseen vulnerability of our network and systems to interruptions or failures.

If one or more of these risks or uncertainties materialize, or if underlying assumptions prove incorrect, actual results may vary materially from those expected, estimated or projected. In addition to other factors that affect our operating

results and financial position, neither past financial performance nor our expectations should be considered reliable indicators of future performance. Investors should not use historical trends to anticipate results or trends in future periods. Further, our stock price is subject to volatility. Any of the factors discussed above could have an adverse impact on the price of our securities. In addition, failure of sales or income in any quarter to meet the investment community's expectations, as well as broader market trends, can have an adverse impact on the price of our securities. We do not undertake an obligation to update our forward-looking statements or risk factors to reflect future events or circumstances.

ITEM 1B. Unresolved Staff Comments

None.

## ITEM 2. Properties

We own and lease manufacturing facilities and sales offices located throughout the United States and in other countries, as noted below. The corporate offices and principal corporate support activities are located in leased facilities in Stamford, Connecticut. Our research and technology administration and principal laboratories are located in Dublin, California; Duxford, England; Les Avenieres, France; Salt Lake City, Utah and Decatur, Alabama.

The following table lists our manufacturing facilities by geographic location, related segment, and principal products manufactured. This table does not include manufacturing facilities owned by our joint venture.

## Manufacturing Facilities

Facility Location	Segment	Principal Products
United States:		
Burlington, Washington	Engineered Products	Engineered Honeycomb Parts
Casa Grande, Arizona	Composite Materials	Honeycomb and Honeycomb Parts
Decatur, Alabama	Composite Materials	PAN Precursor (used to produce Carbon Fibers)
Kent, Washington	Engineered Products	Composite structures
Pottsville, Pennsylvania	Engineered Products	Engineered Honeycomb Parts
Salt Lake City, Utah	Composite Materials	Carbon Fibers; Prepregs
Seguin, Texas	Composite Materials	Industrial Fabrics; Specialty Reinforcements
Windsor, Colorado	Composite Materials	Prepregs
International:		
Casablanca, Morocco	Engineered Products	Engineered Honeycomb Parts
Dagneux, France	Composite Materials	Prepregs
Duxford, England	Composite Materials	Prepregs; Adhesives; Honeycomb and Honeycomb Parts
Illescas, Spain	Composite Materials	Carbon Fibers
Leicester, England	Composite Materials	Lightweight Multiaxials Fabrics
Les Avenieres, France	Composite Materials	Industrial Fabrics; Specialty Reinforcements
Nantes, France	Composite Materials	Prepregs
Neumarkt, Austria	Composite Materials	Prepregs
Parla, Spain	Composite Materials	Prepregs
Roussillon, France	Composite Materials	PAN Precursor and Carbon Fibers
Stade, Germany	Composite Materials	Prepregs
Tianjin, China	Composite Materials	Prepregs
Welkenraedt, Belgium	Engineered Products	Engineered Honeycomb Parts

The Casablanca and Roussillon facilities are currently under construction and both facilities should be operational in 2017, with qualifications for the Roussillon facility to be completed in 2018. We lease the land and buildings in Nantes, France and Tianjin, China; and the land on which the Burlington, Washington facility is located. We also lease portions of the facilities located in Casa Grande, Arizona, Pottsville, Pennsylvania, Kent, Washington and Leicester, England. We own all other remaining facilities. For further information, refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and to Note 6 to the accompanying consolidated financial statements of this Annual Report on Form 10-K.

### ITEM 3. Legal Proceedings

We are involved in litigation, investigations and claims arising out of the normal conduct of our business, including those relating to commercial transactions, environmental, employment and health and safety matters. We estimate and accrue our liabilities resulting from such matters based on a variety of factors, including the stage of the proceeding; potential settlement value; assessments by internal and external counsel; and assessments by environmental engineers and consultants of potential environmental liabilities and remediation costs. Such estimates are not discounted to reflect the time value of money due to the uncertainty in estimating the timing of the expenditures, which may extend over several years.

While it is impossible to ascertain the ultimate legal and financial liability with respect to certain contingent liabilities and claims, we believe, based upon our examination of currently available information, our experience to date, and advice from legal counsel, that the individual and aggregate liabilities resulting from the ultimate resolution of these contingent matters, after taking into consideration our existing insurance coverage and amounts already provided for, will not have a material adverse impact on our consolidated results of operations, financial position or cash flows.

## Environmental Matters

We are subject to various U.S. and international federal, state and local environmental, and health and safety laws and regulations. We are also subject to liabilities arising under the Federal Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA” or “Superfund”), the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and similar state and international laws and regulations that impose responsibility for the control, remediation and abatement of air, water and soil pollutants and the manufacturing, storage, handling and disposal of hazardous substances and waste.

We have been named as a potentially responsible party (“PRP”) with respect to several hazardous waste disposal sites that we do not own or control, which are included on, or proposed to be included on, the Superfund National Priority List of the U.S. Environmental Protection Agency (“EPA”) or on equivalent lists of various state governments. Because CERCLA allows for joint and several liability in certain circumstances, we could be responsible for all remediation costs at such sites, even if we are one of many PRPs. We believe, based on the amount and nature of our waste, and the number of other financially viable PRPs, that our liability in connection with such matters will not be material.

### Lodi, New Jersey Site

Pursuant to the New Jersey Industrial Site Recovery Act, Hexcel entered into an Administrative Consent Order for the environmental remediation of a manufacturing facility we own and formerly operated in Lodi, New Jersey. Hexcel has completed all active investigation and remediation activities, including restoration of the river embankment and installation of a barrier to prevent contaminant migration and have received a Response Action Outcome. Hexcel is in the process of monitoring contaminant levels to support a Monitored Natural Attenuation program and therefore we believe the spending on this program is largely complete.

### Lower Passaic River Study Area

Hexcel and a group of approximately 52 other PRPs comprise the Lower Passaic Cooperating Parties Group (the “CPG”). Hexcel and the CPG are subject to a May 2007 Administrative Order on Consent (“AOC”) to perform a Remedial Investigation/Feasibility Study (“RI/FS”) of environmental conditions in the Lower Passaic River watershed. We were included in the CPG based on our operations at our former manufacturing site in Lodi, New Jersey.

In March 2016, the EPA issued a Record of Decision (“ROD”) setting forth the EPA’s selected remedy for the lower eight miles of the river, in addition to a “no action” option. The ROD calls for capping and dredging of the lower eight miles of the Passaic River, with the placement of an engineered cap over the entire eight miles, at an expected cost ranging from \$0.97 billion to \$2.07 billion, according to the EPA. Because the EPA has not yet selected a remedy for the upper nine miles of the Lower Passaic River, this estimate range does not include any costs related to a future remedy for the upper portion of the river. Now that it has issued the final ROD, the EPA will seek to hold some combination of the PRPs liable to perform the work selected through the ROD. At this point, we have not yet determined our allocable share of performing the selected remedy. However, based on a review of the Company’s position, and as no point within the range is a more probable outcome than any other point, the Company has

determined that its accrual is sufficient at this time. The total accrued liability related to this matter was \$2.1 million at December 31, 2016 and \$1.9 million at December 31, 2015. Despite the issuance of the final ROD, there continue to be many uncertainties associated with the selected remedy and the Company's allocable share of the remediation. Given those uncertainties, the amounts accrued may not be indicative of the amounts for which the Company is ultimately responsible and will be refined as events in the remediation process develop.

#### Kent, Washington Site

We were party to a cost-sharing agreement regarding the operation of certain environmental remediation systems necessary to satisfy a post-closure care permit issued to a previous owner of our Kent, Washington site by the EPA. Under the terms of the cost-sharing agreement, we were obligated to reimburse the previous owner for a portion of the cost of the required remediation activities. The previous owner, who also continues to own an adjacent site, has installed certain remediation and isolation technologies and is operating those in accordance with an order agreed with the State of Washington. This isolation is expected to ultimately prevent further migration of contaminants to our site and enable us to perform a cleanup of our site. We and the Washington Department of Ecology have reached an agreed order to perform certain cleanup activities on our site by certain deadlines, and we are in full compliance with the order as modified. The Department of Ecology has recently approved a reduced number of monitoring wells, to cease operation of the extraction wells and agreed with a plan for more active remediation going forward. The total accrued liability related to this matter was \$0.3 million and \$0.5 million at December 31, 2016 and December 31, 2015, respectively.

## Omega Chemical Corporation Superfund Site, Whittier, California

We are a PRP at a former chemical waste site in Whittier, California. The PRPs at Omega have established a PRP Group, the “Omega PRP Group”, and are currently investigating and remediating soil and groundwater at the site pursuant to a Consent Decree with the EPA. The Omega PRP Group has attributed approximately 1.07% of the waste tonnage sent to the site to Hexcel. In addition to the Omega site specifically, the EPA is investigating the scope of regional groundwater contamination in the vicinity of the Omega site and issued a Record of Decision; the Omega PRP Group members have been noticed by the EPA as PRPs who will be required to be involved in the remediation of the regional groundwater contamination in that vicinity as well. As a member of the Omega PRP Group, Hexcel will incur costs associated with the investigation and remediation of the Omega site and the regional groundwater remedy, although our ultimate liability, if any, in connection with this matter cannot be determined at this time. The total accrued liability relating to potential liability for both the Omega site and regional groundwater remedies was \$0.6 million at December 31, 2016 and \$0.3 million at December 31, 2015.

Environmental remediation reserve activity for the three years ended December 31, 2016 was as follows:

(In millions)	For the year ended December 31,		
	2016	2015	2014
Beginning remediation accrual balance	\$ 2.9	\$ 5.0	\$ 3.9
Current period expenses	1.2	0.5	6.0
Cash expenditures	(0.9 )	(2.6 )	(4.9 )
Ending remediation accrual balance	\$ 3.2	\$ 2.9	\$ 5.0
Capital expenditures for environmental matters	\$ 13.2	\$ 7.1	\$ 7.3

## Environmental Summary

Our estimate of liability as a PRP and our remaining costs associated with our responsibility to remediate the Lower Passaic River in New Jersey; Kent, Washington; and other sites are accrued in the consolidated balance sheets. As of December 31, 2016 and 2015, our aggregate environmental related accruals were \$3.2 million and \$2.9 million, respectively. As of December 31, 2016 and 2015, \$1.4 million and \$1.1 million, respectively, were included in current other accrued liabilities, with the remainder included in other non-current liabilities. As related to certain environmental matters, the accruals were estimated at the low end of a range of possible outcomes since no amount within the range is a better estimate than any other amount. If we had accrued, for those sites where we are able to estimate our liability, at the high end of the range of possible outcomes, our accrual would have been \$16 million higher at December 31, 2016 and 2015.

These accruals can change significantly from period to period due to such factors as additional information on the nature or extent of contamination, the methods of remediation required, changes in the apportionment of costs among responsible parties and other actions by governmental agencies or private parties, or the impact, if any, of being named in a new matter.

Environmental remediation spending charged directly to our reserve balance was \$0.9 million and \$2.6 million for the years ended December 31, 2016 and 2015, respectively. In addition, our operating costs relating to environmental compliance charged directly to expense were \$10.1 million and \$10.7 million for the years ended December 31, 2016 and 2015.



ITEM 4. Mine Safety Disclosure

Not applicable.

## PART II

## ITEM 5. Market for Registrant's Common Equity and Related Stockholder Matters

Hexcel common stock is traded on the New York Stock Exchange. The range of high and low sales prices of our common stock on the New York Stock Exchange is contained in Note 20 to the accompanying consolidated financial statements of this Annual Report on Form 10-K and is incorporated herein by reference.

On January 25, 2017, the Board of Directors declared a \$0.11 quarterly dividend. The dividend will be payable to stockholders of record as of February 8, 2017, with a payment date of February 15, 2017. The Company announced programs to repurchase common stock of \$250 million in 2015 and \$150 million in each of the years 2014 and 2013. During 2016, 2015 and 2014 the Company repurchased a total of \$111 million, \$146 million and \$160 million of shares, respectively. There was \$93 million remaining under the authorized 2015 share repurchase program at December 31, 2016. On February 9, 2017, the Board of Directors authorized an additional \$300 million share repurchase program.

On January 31, 2017, there were 658 holders of record of our common stock.

The following chart provides information regarding repurchases of Hexcel common stock:

Period	(a)		(c)		(d)
	Total Number of Shares (or Units) Purchased	(b) Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs	
October 1 — October 31, 2016	607,483	\$ 43.16	607,483	\$ 92,776,000	
November 1 — November 30, 2016	—	\$ —	—	\$ 92,776,000	
December 1 — December 31, 2016	—	\$ —	—	\$ 92,776,000	
Total	607,483	(1) \$ 43.16	607,483	\$ 92,776,000	

1) In October 2015, our Board authorized us to repurchase an additional \$250 million of our outstanding common stock. The Company repurchased \$26.2 million of common stock during the fourth quarter of 2016. There was \$92.8 million remaining under the current authorized share repurchase program at December 31, 2016. On February 9, 2017, our Board authorized us to repurchase an additional \$300 million of our outstanding common stock.

#### ITEM 6. Selected Financial Data

The information required by Item 6 is contained on page 25 of this Annual Report on Form 10-K under the caption “Selected Financial Data” and is incorporated herein by reference.

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

The information required by Item 7 is contained on pages 26 to 36 of this Annual Report on Form 10-K under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and is incorporated herein by reference.

#### ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk

The information required by Item 7A is contained under the heading “Market Risks” on pages 36 to 38 of this Annual Report on Form 10-K and is incorporated herein by reference.

#### ITEM 8. Financial Statements and Supplementary Data

The information required by Item 8 is contained on pages 44 to 78 of this Annual Report on Form 10-K under “Consolidated Financial Statements and Supplementary Data” and is incorporated herein by reference. The Reports of Independent Registered Public Accounting Firms are contained on page 41 to 43 of this Annual Report on Form 10-K under the caption “Reports of Independent Registered Public Accounting Firms” and is incorporated herein by reference.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer have evaluated our disclosure controls and procedures as of December 31, 2016 and have concluded that these disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports we file or submit is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Our Chief Executive Officer and Chief Financial Officer have concluded that there have not been any changes in our internal control over financial reporting during the fourth quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's report on our internal control over financial reporting is contained on page 42 of this Annual Report on Form 10-K and is incorporated herein by reference.

ITEM 9B. Other Information

None.

## PART III

### ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by Item 10 will be contained in our definitive proxy statement for the 2017 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended December 31, 2016. Such information is incorporated herein by reference.

### ITEM 11. Executive Compensation

The information required by Item 11 will be contained in our definitive proxy statement for the 2017 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended December 31, 2016. Such information is incorporated herein by reference.

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

The information required by Item 12 will be contained in our definitive proxy statement for the 2017 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended December 31, 2016. Such information is incorporated herein by reference.

### ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Item 13 will be contained in our definitive proxy statement for the 2017 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended December 31, 2016. Such information is incorporated herein by reference.

### ITEM 14. Principal Accountant Fees and Services

The information required by Item 14 will be contained in our definitive proxy statement for the 2017 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended December 31, 2016. Such information is incorporated herein by reference.

PART IV

ITEM 15. Exhibits and Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules and Exhibits

(1) Financial Statements:

Reports of Independent Registered Public Accounting Firms

Consolidated Balance Sheets as of December 31, 2016 and 2015

Consolidated Statements of Operations for each of the three years ended December 31, 2016, 2015, and 2014

Consolidated Statements of Comprehensive Income for each of the three years ended December 31, 2016, 2015 and 2014

Consolidated Statements of Stockholders' Equity for each of the three years ended December 31, 2016, 2015 and 2014

Consolidated Statements of Cash Flows for each of the three years ended December 31, 2016, 2015 and 2014

Notes to the Consolidated Financial Statements

(2) Financial Statement Schedule for the three years ended December 31, 2016, 2015 and 2014:

Schedule II — Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

(3) Exhibits:

The following list of exhibits includes exhibits submitted with this Form 10-K as filed with the SEC and those incorporated by reference to other filings.

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Hexcel Corporation (incorporated herein by reference to

- Exhibit 1 to the  
Company's  
Registration  
Statement on  
Form 8-A dated  
July 9, 1996,  
Registration  
No. 1-08472).
- 3.2 Certificate of  
Amendment of the  
Restated Certificate  
of Incorporation of  
Hexcel Corporation  
(incorporated herein  
by reference to  
Exhibit 3.2 to the  
Company's Annual  
Report on  
Form 10-K/A for the  
fiscal year ended  
December 31, 2002,  
filed on March 31,  
2003).
- 3.3 Amended and  
Restated Bylaws of  
Hexcel Corporation  
(incorporated by  
reference to  
Exhibit 3 to the  
Company's Current  
Report on Form 8-K  
dated September 23,  
2014).
- 4.1 Form of Indenture  
between Hexcel  
Corporation and U.S.  
Bank National  
Association  
(incorporated by  
reference to Exhibit  
4.1 to the Company's  
Registration  
Statement on Form  
S-3 dated October  
21, 2014,  
Registration No.  
333-199500).



- 4.2 Indenture, dated as of August 3, 2015, between Hexcel Corporation and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated August 3, 2015).
- 4.3 First Supplemental Indenture, dated as of August 3, 2015, between Hexcel Corporation and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K dated August 3, 2015).
- 4.4 Form of Note for 4.700% Senior Notes due 2025 (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K dated August 3, 2015).
- 10.1 Credit Agreement, dated as of September 24, 2014, by and among Hexcel Corporation, Hexcel Holdings Luxembourg S.à.r.l., the financial institutions from time to time party thereto, Citizens Bank, National

Association, as  
administrative agent  
for the lenders,  
Citizens Bank,  
National  
Association, HSBC  
Bank USA, National  
Association, Merrill  
Lynch, Pierce,  
Fenner & Smith  
Incorporated and  
Wells Fargo  
Securities, LLC, as  
joint book managers  
and joint lead  
arrangers, Bank of  
America, N.A.,  
HSBC Bank USA,  
National Association  
and Wells Fargo  
Bank, National  
Association, as  
syndication agents,  
and Fifth Third  
Bank, SunTrust  
Bank, TD Bank,  
N.A. and U.S. Bank  
National  
Association, as  
documentation  
agents (incorporated  
by reference to  
Exhibit 99.1 to the  
Company's Current  
Report on Form 8-K  
dated September 29,  
2014).

Exhibit No.	Description
10.2	Company Guaranty, dated as of September 24, 2014, by Hexcel Corporation in favor of and for the benefit of Citizens Bank, National Association, as administrative agent for each of the Lender Group (as defined in the Credit Agreement) (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K dated September 29, 2014).
10.3*	Hexcel Corporation 2013 Incentive Stock Plan (incorporated herein by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-188292), filed on May 2, 2013).
10.4*	Hexcel Corporation 2003 Incentive Stock Plan (incorporated herein by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002, filed on March 31, 2003).
10.5(a)*	Hexcel Corporation 2003 Incentive Stock Plan as amended and restated December 11, 2003 (incorporated herein by reference to Exhibit 10.3(a) to the Company's Annual Report

on Form 10-K for the fiscal  
year ended  
December 31, 2003).

10.5(b)\* Hexcel Corporation 2003  
Incentive Stock Plan as  
amended and restated  
May 19, 2005  
(incorporated herein by  
reference to Exhibit 99.2 to  
the Company's Current  
Report on Form 8-K dated  
May 24, 2005).

10.5(c)\* Hexcel Corporation 2003  
Incentive Stock Plan as  
amended and restated  
December 31, 2008  
(incorporated herein by  
reference to Exhibit 99.12  
to the Company's Current  
Report on Form 8-K dated  
January 7, 2009).

10.5(d)\* Hexcel Corporation 2003  
Incentive Stock Plan, as  
amended and restated as of  
May 7, 2009 (incorporated  
herein by reference to  
Exhibit 10.4(d) to the  
Company's Annual Report  
on Form 10-K for the fiscal  
year ended  
December 31, 2009).

10.6\* Hexcel Corporation  
Management Incentive  
Compensation Plan, as  
Amended and Restated on  
December 8, 2016.

10.7\* Hexcel Corporation  
Long-Term Incentive Plan  
(incorporated herein by  
reference to Exhibit 10.7 to  
the Company's Annual  
Report on Form 10-K for  
the fiscal year ended  
December 31, 2001).

10.8\*

Form of Employee Option Agreement (2014 - 2017).

10.9\* Form of Employee Option Agreement (2012 and 2013) (incorporated herein by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011).

10.10\* Form of Employee Option Agreement (2010) (incorporated herein by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009).

10.11\* Form of Employee Option Agreement (2009) (incorporated herein by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008).

10.12\* Modification to Option Agreements (incorporated herein by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008).

10.13\* Form of Employee Option Agreement (2008) (incorporated herein by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007).

10.14\*

- Form of Employee Option Agreement (2007)  
(incorporated herein by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2006).
- 10.15\* Form of Restricted Stock Unit Agreement (2014 - 2017) (incorporated herein by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K dated January 27, 2014).
- 10.16\* Form of Performance Based Award Agreement (2017) (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K dated January 30, 2017).
- 10.17\* Form of Performance Based Award Agreement (2015 and 2016) (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K dated January 26, 2015).
- 10.18\* Hexcel Corporation Nonqualified Deferred Compensation Plan, Effective as of January 1, 2005, Amended and Restated as of December 31, 2008 (incorporated herein by reference to Exhibit 99.14 to The Company's Current Report on Form 8-K dated January 7, 2009).
- 10.19\* Offer of Employment between Hexcel

Corporation and Nick L.  
Stanage dated July 22,  
2013 (incorporated herein  
by reference to Exhibit  
10.2 to the Company's  
Quarterly Report on Form  
10-Q for the quarter ended  
September 30, 2013).

Exhibit No.	Description
10.20*	Supplemental Executive Retirement Agreement dated October 28, 2009, between Nick L. Stanage and Hexcel Corporation (incorporated herein by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K dated October 28, 2009).
10.21*	Hexcel Corporation Executive Severance Policy (incorporated herein by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013).
10.22*	Amended and Restated Executive Severance Agreement between Hexcel Corporation and Wayne C. Pensky, dated December 31, 2008 (incorporated herein by reference to Exhibit 99.4 to the Company's Current Report on Form 8-K dated January 7, 2009).
10.23*	Amended and Restated Executive Deferred Compensation Agreement between Hexcel Corporation and Wayne C. Pensky, dated December 31, 2007 (incorporated herein by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K dated January 7, 2008).
10.24*	Amended and Restated Executive Severance Agreement between Hexcel Corporation and Ira J. Krakower, dated December 31, 2008 (incorporated herein by



reference to Exhibit 99.5 to the Company's Current Report on Form 8-K dated January 7, 2009).

- 10.25\* Amended and Restated Supplemental Executive Retirement Agreement dated December 31, 2008, between Ira J. Krakower and Hexcel Corporation (incorporated herein by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K dated January 7, 2009).
- 10.26\* Amended and Restated Executive Severance Agreement between Hexcel Corporation and Robert G. Hennemuth, dated December 31, 2008 (incorporated herein by reference to Exhibit 99.6 to the Company's Current Report on Form 8-K dated January 7, 2009).
- 10.27\* Amended and Restated Executive Deferred Compensation Agreement between Hexcel Corporation and Robert G. Hennemuth, dated December 31, 2007 (incorporated herein by reference to Exhibit 99.4 to the Company's Current Report on Form 8-K dated January 7, 2008).
- 10.28\* Separation and Consulting Agreement between Hexcel Corporation and Ira J. Krakower, dated September 7, 2016 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016).
- 10.29\*

	Director Compensation Program, as adopted on May 8, 2014 (incorporated herein by reference to Exhibit 10.37 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014).
10.30*	Form of Restricted Stock Unit Agreement for Non-Employee Directors (incorporated herein by reference to Exhibit 99 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013).
10.31*	Hexcel Corporation 2016 Employee Stock Purchase Plan (incorporated herein by reference to Annex B to the Company's Proxy Statement dated March 17, 2016).
21	Subsidiaries of the Company.
23.1	Consent of Ernst & Young LLP.
23.2	Consent of PricewaterhouseCoopers LLP.
24	Power of Attorney (included on signature page).
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	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to

Section 906 of the  
Sarbanes-Oxley Act of 2002.

- 101      The following materials from  
the Hexcel Corporation Annual  
Report on Form 10-K for the  
year ended  
December 31, 2016, formatted  
in Extensible Business  
Reporting Language (XBRL):  
(i) the Consolidated Statements  
of Operations, (ii)  
Consolidated Statements of  
Comprehensive Income  
(iii), Consolidated Balance  
Sheets, (iv) Consolidated  
Statements of Cash Flows, and  
(v) related notes.

\* Indicates management contract or compensatory plan or arrangement.

## 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.

Hexcel Corporation

February 9, 2017 /s/ NICK L. STANAGE

(Date) Nick L. Stanage  
Chairman of the Board of Directors,  
Chief Executive Officer and President

KNOWN TO ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints each of Nick L. Stanage, Wayne C. Pensky and Gail Lehman, individually, his attorney-in-fact, with the power of substitution, for him in any and all capacities, to sign any amendments to this report, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ NICK L. STANAGE (Nick L. Stanage)	Chairman of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer)	February 9, 2017
/s/ WAYNE PENSKY (Wayne Pensky)	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 9, 2017
/s/ KIMBERLY HENDRICKS (Kimberly Hendricks)	Senior Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	February 9, 2017
/s/ JOEL S. BECKMAN (Joel S. Beckman)	Director	February 9, 2017
/s/ LYNN BRUBAKER (Lynn Brubaker)	Director	February 9, 2017
/s/ JEFFREY C. CAMPBELL (Jeffrey C. Campbell)	Director	February 9, 2017
/s/ CYNTHIA EGNOTOVICH (Cynthia Egnotovich)	Director	February 9, 2017
/s/ W. KIM FOSTER (W. Kim Foster)	Director	February 9, 2017
/s/ THOMAS A. GENDRON (Thomas A. Gendron)	Director	February 9, 2017
/s/ JEFFREY A. GRAVES (Jeffrey A. Graves)	Director	February 9, 2017
/s/ GUY HACHEY (Guy Hachey)	Director	February 9, 2017
/s/ DAVID C. HILL (David C. Hill)	Director	February 9, 2017
/s/ DAVID L. PUGH (David L. Pugh)	Director	February 9, 2017



## Selected Financial Data

The following table summarizes selected financial data as of and for the five years ended December 31:

(In millions, except per share data)	2016	2015	2014	2013	2012
<b>Results of Operations:</b>					
Net sales	\$2,004.3	\$1,861.2	\$1,855.5	\$1,678.2	\$1,578.2
Cost of sales	1,439.7	1,328.4	1,346.7	1,224.2	1,171.5
Gross margin	564.6	532.8	508.8	454.0	406.7
Selling, general and administrative expenses	157.6	156.1	149.1	141.4	130.7
Research and technology expenses	46.9	44.3	47.9	41.7	36.7
Other expense (income), net	—	—	6.0	—	(9.5 )
Operating income	360.1	332.4	305.8	270.9	248.8
Interest expense, net	22.1	14.2	8.0	7.3	10.0
Non-operating expense, net	0.4	—	0.5	1.0	1.1
Income before income taxes and equity in earnings	337.6	318.2	297.3	262.6	237.7
Provision for income taxes	90.3	83.0	89.3	76.0	74.1
Income before equity in earnings	247.3	235.2	208.0	186.6	163.6
Equity in earnings from affiliated companies	2.5	2.0	1.4	1.3	0.7
Net income	\$249.8	\$237.2	\$209.4	\$187.9	\$164.3
Basic net income per common share	\$2.69	\$2.48	\$2.16	\$1.88	\$1.64
Diluted net income per common share	\$2.65	\$2.44	\$2.12	\$1.84	\$1.61
<b>Weighted-average shares outstanding:</b>					
Basic	92.8	95.8	96.8	100.0	100.2
Diluted	94.2	97.2	98.7	102.1	102.0
<b>Financial Position:</b>					
Total assets	\$2,400.6	\$2,187.4	\$2,036.4	\$1,836.1	\$1,603.1
Working capital	\$335.1	\$341.2	\$371.1	\$387.7	\$340.4
Long-term notes payable and capital lease obligations	\$684.4	\$576.5	\$415.0	\$292.0	\$240.0
Dividends per share of common stock	\$0.44	\$0.40	\$—	\$—	\$—
Stockholders' equity	\$1,244.9	\$1,179.6	\$1,149.9	\$1,160.4	\$994.1
<b>Other Data:</b>					
Depreciation	\$93.3	\$76.4	\$71.2	\$59.3	\$57.2
Accrual basis capital expenditures	\$320.2	\$289.0	\$270.2	\$206.5	