Mistras Group, Inc.
Form 10-K
March 14, 2018

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

Form 10-K

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

For the fiscal year ended December 31, 2017

Commission File Number 001-34481

Mistras Group, Inc.
(Exact name of registrant as specified in its charter)

Delaware	22-3341267
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

195 Clarksville Road
Princeton Junction, New Jersey 08550
(609) 716-4000
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $.01 par value	New York Stock Exchange

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

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933. Yes o No ý

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"). Yes o No ý

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act 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 ý No o

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No o

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. o

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. (Check one):

Large accelerated filer o	Accelerated filer x
Non-accelerated filer o	Smaller reporting company o
	Emerging growth company o

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

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the Registrant as of June 30, 2017, based upon the closing price of the common stock as reported by New York Stock Exchange on such date was approximately $377.7 million.

As of March 5, 2018, the Registrant had 28,301,598 shares of common stock outstanding

DOCUMENTS INCORPORATED BY REFERENCE

Information required by Part III (Items 10, 11, 12, 13 and 14) is incorporated by reference to portions of the registrant's definitive Proxy Statement for its 2018 Annual Meeting of Shareholders (the "Proxy Statement"), which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2017. Except as expressly incorporated by reference, the Proxy Statement shall not be deemed to be a part of this report on Form 10-K.

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ITEM 1. BUSINESS

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements regarding us and our business, financial condition, results of operations and prospects within the meaning of Section 27A of the Securities Act of 1933 (Securities Act), and Section 21E of the Securities Exchange Act of 1934 (Exchange Act). Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events and they are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “goals,” “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates,” “may,” “could,” “should,” “would,” “predicts,” “appears,” “projects,” or t such terms or other similar expressions. Factors that could cause or contribute to differences in results and outcomes from those in our forward-looking statements include, without limitation, those discussed elsewhere in this Report in Part I, Item 1A. “Risk Factors,” Part 2, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in this Item 1, as well as those discussed in our other Securities and Exchange Commission (SEC) filings. We undertake no obligation to (and expressly disclaim any obligation to) revise or update any forward-looking statements made herein whether as a result of new information, future events or otherwise. However, you should consult any further disclosures we may make on these or related topics in our reports on Form 8-K or Form 10-Q filed with the SEC.

The following discussions should be read in conjunction with the sections of this Report entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Risk Factors.”

Transition Period

On January 3, 2017, the Company's Board of Directors approved a change in the Company's fiscal year end from May 31 to December 31, effective December 31, 2016. In connection with this change, we previously filed a Transition Report on Form 10-K to report the results of the seven-month transition period from June 1, 2016 to December 31, 2016. In this Annual Report, the periods presented are the year ended December 31, 2017, the seven-month transition period from June 1, 2016 to December 31, 2016 (which we sometimes refer to as the "transition period ended December 31, 2016") and the years ended May 31, 2016 and 2015 (which we sometimes refer to as "fiscal 2016 and fiscal 2015", respectively). For comparison purposes, we have also included unaudited data for the year ended December 31, 2016 and for the seven months ended December 31, 2015.

Our Business

We offer our customers “one source for asset protection solutions®” and are a leading global provider of technology-enabled asset protection solutions used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure.
We deliver value through a comprehensive “OneSource” portfolio of customized solutions, utilizing a proven systematic method that creates a closed-loop lifecycle for addressing continuous asset protection and improvement. These mission critical solutions enhance our customers’ ability to comply with governmental safety and environmental regulations, extend the useful life of their assets, increase productivity, minimize repair costs, manage risk and avoid catastrophic disasters.

Given the role our solutions play in ensuring the safe and efficient operation of infrastructure, we have historically provided a majority of our solutions to our customers on a regular, recurring basis. We perform these services largely at our customers' facilities, while primarily servicing our aerospace customers at our growing network of state-of-the-art, in-house laboratories. These solutions typically include Non-Destructive Testing (NDT) and inspection services, and can also include a wide range of mechanical services, including engineering assessments, heat tracing, pre-inspection insulation stripping, inspections, coating applications, re-insulation, and long-term condition-monitoring. Under this business model, many customers outsource their inspection to us on a "run and maintain" basis. We have established long-term relationships as a critical solutions provider to many of the leading companies with asset-intensive infrastructure in our target markets. These markets include oil and gas (downstream, midstream, upstream and petrochemical), commercial aerospace and defense, power generation (natural gas, fossil, nuclear, alternative, renewable, and transmission and distribution), public infrastructure, chemicals, transportation, primary metals and metalworking and research and engineering institutions.

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As a global asset protection leader, we provide a comprehensive range of solutions that includes:

- Traditional NDT Field Inspections: The foundation of our business, NDT is the examination of assets without impacting current and future usefulness or impairing the integrity of these assets. The ability to inspect infrastructure assets and not interfere with their operating performance makes NDT a highly-attractive alternative to many traditional intrusive inspection techniques, which may require dismantling equipment or shutting down a plant, mill or site. These services include, for example, mechanical integrity (MI) assessments, aboveground storage tank inspection, pipeline inspection, American Petroleum Institute (API) visual inspections and predictive maintenance (PdM) programs.

- Advanced NDT Field Inspections: In most cases, these involve proprietary acoustic emission (AE), digital radiography, infrared, wireless and/or automated ultrasonic inspections and sensors, which are operated by our highly-trained technicians.

- Mechanical and Maintenance Services: We perform mechanical services to prepare assets for inspection and to return them to working condition. These services include insulation, electrical, coating and heat tracing services; corrosion assessment and mitigation services, including water blasting, sand blasting, and ultra-high pressure water (UHP) blasting, used for both offshore oil and gas platforms and land-based refinery and chemical fixed equipment; and wind turbine repairs and maintenance. NDT inspection services are offered while in post-cleaning mode. Mechanical services are still a small part of our business, and we are careful to try and avoid providing any such services that conflict with our inspection services.

- Destructive Testing (DT): A definitive discipline in material testing, which takes specimens through to mechanical failure while examining a host of factors. Hardness, stiffness and strength are a few key indicators drawn from destructive tests per customer specifications. DT is performed by our German and select U.S. labs, which specializes in an array of destructive testing applications utilized throughout the materials selection and approval process in the aerospace, automotive, chemical, oil and gas and power generation industries.

- In-House Lab Testing Services: Our in-house inspection services provide cost-effective, efficient solutions that improve the integrity and lifespan of critical assets featuring a dynamic suite of testing and inspection services. With a network of in-house laboratories, we provide a one-stop shop for traditional (NDT), advanced non-destructive testing (ANDT), and destructive testing (DT) of materials and fabricated structures by offering a complete inspection package - from preparation and production all the way to post-processing. These capabilities are available through our state-of-the-art testing equipment and expertise in our grid of in-house testing laboratories across the U.S., Canada and Europe.

- Proprietary Products & Systems: A proprietary and customized portfolio of software products for testing and analyzing data captured in real-time by our technicians and sensors, including advanced features such as pattern recognition and neural networks.

- Data Management & Analysis Software: Our world-class enterprise inspection database management and analysis software (IDMS), Plant Condition Management Software (PCMS®), stores and analyzes inspection data. It compares data to prior operations and testing of similar assets, industrial standards and specific risk conditions, such as use with highly-flammable or corrosive materials. It also develops asset integrity management plans based on Risk-Based Inspections (RBI) that specify an optimal schedule for the testing, maintenance and retirement of assets.

- On-Line Monitoring and Trending Systems: Condition-monitoring systems provide secure, web-based, remote or on-site asset inspection, real-time reports and analysis of plant or enterprise structural integrity data, comparison of integrity data to our library of historical inspection data and analysis to better assess structural integrity. They also provide alerts for and prioritize future inspections and maintenance.

- Engineering Consulting Services: These services include plant operations support covering both process and equipment technologies; project planning, management and execution; expert testimony; and technical training. Our Mechanical Integrity (MI) services help improve plant safety, asset reliability and regulatory compliance through a

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systematic, engineering-based approach to ensure the on-going integrity and safety of equipment and industrial facilities. MI services can include conducting an inventory of infrastructure assets; developing, implementing, and training personnel in executing inspection and maintenance procedures; and managing inspections, testing, and assessments of customer assets. We enable customers to identify gaps between existing and desired practices, identify deficiencies and degradations, and establish quality assurance standards for fabrication, engineering and installation of infrastructure assets. Our MI solutions incorporate comprehensive (RBI) data analysis from our proprietary IDMS, providing detailed, integrated, cost-effective solutions that rate the risks of alternative maintenance approaches, recommend actions in accordance with consensus industry standards, and help establish and support key performance indicators (KPIs) to ensure continued safe and economic operations.

- Access Solutions: Much of our work is conducted in hard-to-access or confined locations. We perform NDT and mechanical services both on the ground and at height, using specialized technicians who work safely while suspended on ropes rather than using scaffolding. We employ trained and certified divers for subsea inspection and maintenance, and we utilize unmanned aerial, land-based and subsea systems for a wide range of inspection applications.

Most of our revenues are generated by deploying technicians at our customers' locations, where NDT and mechanical services are performed on-site. However, the majority of our aerospace revenues are generated at our various in-house laboratories that have Nadcap and numerous other customer accreditations. We have special machinery and equipment and specialized technicians at these labs to perform various forms of NDT inspection and mechanical services, which can include chemical cleaning, coating application, painting, and pressure testing techniques. Our labs hold a wide variety of certifications that allow them to perform inspections to meet or exceed stringent regulatory requirements, such as: Nadcap, AS9100/ISO-9001, FAA Repair Station and ITAR/EAR. With these certifications comes a comprehensive range of approvals from prime contractors of major projects, the military, and internationally-renowned products and systems manufacturers from aerospace to nuclear energy, transportation to petrochemical industries.
We offer our customers a customized package of services, products and systems, or our enterprise software and other niche high-value products on a stand-alone basis. For example, customers can purchase most of our sensors and accompanying software to integrate with their own systems, or they can purchase a complete turn-key solution, including installation, monitoring and assessment services. Importantly, we do not sell certain advanced and proprietary software and other products as stand-alone offerings; instead, we embed them in our comprehensive service offerings to protect our investment in intellectual property while providing our customers an added value which generates a substantial source of recurring revenues.
As of December 31, 2017, we had approximately 6,000 employees, in approximately 120 offices across 14 countries. We generated revenues of $701.0 million and $404.2 million, respectively, and net loss of $2.2 million and net income of $9.6 million, respectively, for the year ended December 31, 2017 and the transition period ended December 31, 2016. We generated revenues of $719.2 million and $711.3 million and net income of $24.7 million and $16.1 million for fiscal 2016 and 2015, respectively. For the year ended December 31, 2017, the transition period ended December 31, 2016, and fiscal 2016 and 2015, we generated approximately 78%, 73%, 77% and 76% respectively, of our revenues from our Services segment. Our revenues are diversified, with our top ten customers accounting for approximately 38%, 37%, 36% and 33% of our revenues during the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively.

Asset Protection Industry Overview

The asset protection industry consists of NDT inspection, DT, PdM and MI services and inspection data management and analysis. NDT plays a crucial role in assuring the operational and structural integrity and reliability of critical infrastructure without compromising the usefulness of the tested materials or equipment. The evolution of NDT services, in combination with broader industry trends, including increased asset utilization and aging of infrastructure, includes the desire by owners to extend the useful life of their existing infrastructure, new construction projects, enhanced government regulation and the shortage of certified NDT professionals, have made NDT an integral and increasingly outsourced part of many asset-intensive industries. The industry has progressed such that end users are actively seeking firms that can provide asset protection solutions to both in and out of service issues.

Historically, NDT solutions used qualitative testing methods aimed primarily at detecting defects in the tested materials, also referred to as traditional NDT. The traditional NDT market had been highly fragmented, with a significant number of small vendors providing inspection services to divisions of companies or local governments situated in close proximity to the vendor's field inspection engineers and technicians. The trend has progressed over the past several years, however, for customers to engage a select few vendors capable of providing a wider spectrum of asset protection solutions for global infrastructure. This shift in underlying demand, which began in the early 1990s and has accelerated more recently, has contributed to a transition from traditional NDT solutions to more advanced solutions that employ automated digital sensor

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technologies and accompanying enterprise software, allowing for the effective capture, storage, analysis and reporting of inspection and engineering results electronically and in digital formats. These advanced techniques, taken together with advances in wired and wireless communication and information technologies, have further enabled the development of remote monitoring systems, asset-management and predictive maintenance capabilities and other data analytics and management. We believe that as advanced asset protection solutions continue to gain acceptance and the technology becomes more and more reliable, those vendors offering broad, complete and integrated solutions, scalable operations and a global footprint will have a distinct competitive advantage. Moreover, we believe that vendors that are able to effectively deliver both advanced solutions and data analytics, by virtue of their access to customers' data, create a significant barrier to entry for competitors, leading to the opportunity to further create significant recurring revenues.

We believe the following represent key dynamics of the asset protection industry:

- Extending the Useful Life of Aging Infrastructure. The prohibitive cost and challenge of building new infrastructure has resulted in the significant aging of existing infrastructure and caused companies to seek ways to extend the useful life of existing assets. For example, due to the significant cost associated with constructing new refineries, stringent environmental regulations which have increased the costs of managing them and difficulty in finding suitable locations on which to build them, only one new refinery has been constructed in the United States since 1976. Another example is in the area of power transmission and distribution. The Smart Grid initiative in the United States is causing increased loading on aging transformers that are more than 40 years old in many cases. The need to test and monitor these units to ensure their reliability until replacement is instrumental in support of a reliable Smart Grid network. Because aging infrastructure requires relatively higher levels of maintenance and repair in comparison to new infrastructure, as well as more frequent, extensive and ongoing testing, companies and public authorities continue to spend on asset protection solutions to ensure the operational and structural integrity of existing infrastructure.

- Outsourcing of Non-Core Activities and Technical Resource Constraints. The increasing sophistication and automation of NDT programs, together with a decreasing supply of skilled professionals and stricter and increasing governmental regulations, has caused many companies and public authorities to outsource NDT and other services rather than recruit and train such capabilities internally. Owners and operators of infrastructure are increasingly contracting with third party providers that have the necessary technical product portfolio, engineering expertise, technical workforce and proven track record of results-oriented performance to effectively meet their increasing requirements.

- Increasing Asset and Capacity Utilization. Due to the high repair and replacement costs and the limited construction of new infrastructure, existing infrastructure in some of our target markets has experienced high usage, causing increased stress and fatigue that accelerates deterioration. These dynamic costs also motivate our customers to complete repairs, maintenance, replacements and upgrades more quickly. For example, increasing demand for refined petroleum products, combined with high plant utilization rates, is driving refineries to upgrade facilities to make them more efficient and expand capacity. In order to sustain high capacity utilization rates, customers are increasingly using asset protection solutions to efficiently ensure the integrity and safety of their assets. Implementation of asset protection solutions can also lead to increased productivity as a result of reduced maintenance-related downtime.

- Increasing Corrosion from Low-Quality Inputs. The increased availability and low cost of crude oil from areas such as shale plays and oil sands resources have led to the use of lower grade raw materials and feedstock used in refinery and power generation processes. These lower grade raw materials and feedstock, especially in the case of the refining process involving petroleum with higher sulfur content, can rapidly corrode the infrastructure with which they come into contact, which in turn increases the need for asset protection solutions to identify such corrosion and enable infrastructure owners to proactively combat the problems caused by such corrosion.

- Increasing Use of Advanced Materials. Customers in our target markets are increasingly utilizing advanced materials, such as composites, and other unique technologies in the manufacturing and construction of new infrastructure and aerospace applications. As a result, they require advanced testing, assessment and maintenance technologies to inspect and to protect these assets, since many of these advanced materials cannot be tested using traditional NDT techniques. We believe that demand for NDT solutions will increase as companies and public authorities continue to use these advanced materials, not only during the operating phase of the lifecycle of their assets, but also during the design, manufacturing and quality control phases and are more frequently integrating and embedding sensors directly into the end product in support of total life cycle asset management.

- Meeting Safety Regulations. Owners and operators of infrastructure assets increasingly face strict government regulations and safety requirements. Failure to meet these standards can result in significant financial liabilities, increased scrutiny by Occupational Safety and Health Administration (OSHA), U.S. DOT Pipeline and Hazardous

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Materials Safety Administration (PHMSA) and other regulators, higher insurance premiums and tarnished corporate brand value. There have been several industrial accidents, including explosions and fires, in recent years. These accidents created significant damage to the reputation of refineries and Pipeline Operators, and coupled with concern by owners, led OSHA/PHMSA to strengthen process safety enforcement standards with the continued implementation of the National Emphasis Program (NEP) that also extends to chemical plants for compliance with applicable regulations. As a result, these owners and operators are seeking highly reliable asset protection suppliers with a proven track record of providing asset protection services, products and systems to assist them in meeting these increasingly stringent regulations.

- Expanding Addressable End-Markets. Advances in NDT sensor technology and asset protection software based systems, and the continued emergence of new technologies, are creating increased demand for asset protection solutions in applications where existing techniques were previously ineffective.

- Expanding Addressable Geographies. We believe that incremental demand will continue to come from international markets, including Western and Eastern Canada, Europe, Asia and parts of Latin America. Specifically, as companies and governments in these markets build and maintain infrastructure and applications that require the use of asset protection solutions, we believe demand for our solutions will increase.

- Expanding Aerospace Industry. We believe that increased demand will continue to come from the aerospace industry due to the approximately decade-long backlog for next generation commercial aircraft to be built, driving the need for enhanced levels of inspections.

- Offering Complementary Mechanical Services. We believe that owners of capital assets will increasingly look for a single vendor who can provide mechanical services that are complementary to inspection services, such as removing insulation in order to inspect piping, then reinstalling insulation.

We believe that the market available to us will continue to grow as these macro-market trends continue to develop.

Our Target Markets

Overview

Mistras operates in a highly competitive, but fragmented market. Domestically, the market is serviced by several national competitors, and many regional and/or local companies. Internationally, our primary competitors are divisions of large companies, with additional competition from small independent local companies which may be limited to a specific product, service or technology and focused on a niche market or geographic region. We focus our strategic sales, marketing and product development efforts on a range of infrastructure-intensive based industries and governmental authorities. We view energy-related infrastructure and commercial aerospace as the Company's largest market opportunities. We perform inspection and mechanical services for customers in both industries.

In the energy market there are various economic indicators that drive our business, especially in the U.S. domestic markets. These factors are excerpted below from various Energy Information Administration (EIA) outlook reports;

Natural gas prices are expected to remain less expensive than electric prices for commercial, industrial and residential customers. The use of natural gas as an energy source is projected to grow the most on an absolute basis. Natural gas production will grow at a faster rate through 2020, and thereafter grow at a slower pace. Natural gas used for power generation will generally increase over the time period due to the scheduled expiration of renewable tax credits. The industrial sector accounts for the most growth in natural gas consumption, with expanding use in the chemical industries; for industrial heat and power; and for liquefied natural gas production. Natural gas consumption also increases significantly in the power sector as a result of the scheduled expiration of renewables tax credits in the mid-2020s. In its monthly short-term energy outlook dated December 12, 2017, the agency forecast that U.S. crude oil output will rise by 780,000 barrels per day (bpd) to 10.02 million bpd in 2018, which would be the highest level for any year on record in the United States.

There are a number of economic factors which drive the aerospace market, including:

- The approximately decade-long backlog for next generation commercial aircraft to be built, including several large and mid-sized aircraft built by Boeing, Airbus, Bombardier and Embraer, among other manufacturers;

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- The backlog of next generation aircraft engines which operate with greater fuel efficiency, including the LEAP engine and the geared-turbo fan engine;
- The continuing regulatory scrutiny to ensure public safety associated with these new technologically advanced aircraft, which serves to ensure continued need for inspection and mechanical services to be performed, as well as to limit the number of participants who can meet the demanding requirements associated with performing these services.

Revenue by Target Market

The following chart represents the percentage of consolidated revenues we generated from our various markets for the year ended December 31, 2017:

Mistras Revenues by Target Market
(Year ended December 31, 2017)

Oil and Gas

Recently crude oil prices have begun to rebound which should lead to increase spending on maintenance shutdowns in 2018 and 2019. This increased demand will be balanced against the continued focus on process efficiencies and cost savings initiatives. On-line monitoring and permanently mounted sensors, as well as the use of drones and other alternative delivery devices, are all being considered as the Oil and Gas owners look to “smart” technologies that reduce human intervention while delivering highly accurate data to aid in their operational decisions. This helps to drive demand for our integrated approach to asset protection. While we expect off-stream inspection of vessels and piping during a plant shut-down or turnaround to remain a routine practice by companies in these industries, we anticipate this practice will decrease as owners utilize non-invasive, or on-stream inspections, of critical assets. Non-invasive inspections enables companies to minimize the costs associated with shutdowns during testing while enabling the economic and safety advantages of advanced planning and/or predictive maintenance.

Aerospace and Defense

The aerospace industry is enjoying unprecedented growth with many original equipment manufacturers (OEMs) reporting record backlogs of up to ten years. We serve this rapidly growing target market by providing our state of the art fully integrated inspection systems to OEMs. For the OEM that prefers to outsource this inspection, we provide a full range of in-house services through our various regional facilities. These facilities have obtained and maintain numerous accreditations and certifications required to meet the stringent inspection criteria that the aerospace industry demands.

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The operational safety, reliability, structural integrity and maintenance of aircraft and associated products is critical to the aerospace and defense industries. Many of the OEM's are positioning themselves to use sensor technology to deliver data that may aid in driving decisions regarding structural and operational integrity of the aircraft as opposed to performing maintenance on time based intervals. Industry participants use asset protection solutions for the inspection of advanced composites found in new classes of aircraft, x-ray of critical engine components, ultrasonic fatigue testing of complete aircraft structures, corrosion detection and on-board monitoring of landing gear and other critical components. We expect increased demand for our solutions to result from wider use of advanced composites and distributed on-line sensor networks and other embedded analytical applications built into the structure of assets that enable real-time performance monitoring and condition-based maintenance.

Power Generation and Transmission

The growing availability of cheap natural gas, along with environmental concerns with coal has stimulated the construction of new natural gas fired power plants across North America. Our Asset Integrity Management approach offers many tools that aid in the establishment of integrity programs during plant construction using software model. In addition, actual construction drives traditional and Advanced NDT services. We anticipate sharp growth in the plants as natural gas pricing remains low, and the environmental impacts of coal remain unattractive to the public. Asset protection in the power industry has traditionally been associated with the inspection of high-energy, critical steam piping, boilers, rotating equipment, and various other plant components (balance of plant), utility aerial man-lift devices, large transformer testing and various other applications for nuclear and fossil-fuel based power plants. We believe that in recent years the acceptance of asset protection solutions has grown in this industry due to the aging of critical power generation and transmission infrastructure.

Process Industries

The process industries, or industries in which raw materials are treated or prepared in a series of stages, include chemicals, pharmaceuticals, food processing, paper and pulp and metals and mining, have a need for our products and services. As with oil and gas processing facilities, chemical processing facilities require significant spending on maintenance and monitoring. Given their aging infrastructure and high utilization requirements, growing capacity constraints and increasing capital costs, we believe asset protection solutions will continue to grow in importance in maintenance planning, quality and cost control and prevention of catastrophic failure in the chemicals industry.

Public Infrastructure, Research and Engineering

We believe that high profile infrastructure catastrophes, such as the collapse of the I-35W Mississippi River Bridge in Minneapolis and others since, have caused public authorities to more actively seek ways to prevent similar events from occurring. Public authorities tasked with new construction and maintenance of existing, public infrastructure increasingly use asset protection solutions to inspect these assets, including the use of embedded sensors to enable on-line monitoring throughout the life of the asset. This is a target market for our application technology and experience. Over the last twenty years, we have provided testing and health monitoring on many bridges and structures worldwide, among which include some of the largest and well-known bridges in the United States and United Kingdom. In fiscal 2015, for example, we installed several wire break systems complete with multiple sensors types (known as sensor fusion). These bridges are being monitored continuously and automatically, alerting the bridge owner when a crack is detected. Other services are offered, including internet and cloud data transfer, secure web sites and monitoring contracts that provide for "around the clock monitoring" and regular reports, which provide information on the status of the bridge and early detection of suspect areas that can be identified and repaired before an alarm is generated. We continue to provide these monitoring services worldwide.

Industrial

The quality control requirements driven by the need for zero to low defect component tolerance within automated robotic intensive industries such as automotive, consumer electronics and medical industries, serve as key drivers for the recent growth of NDT technologies, such as ultrasonics and radiography. We expect that increasingly stringent quality control requirements and competitive forces will drive the demand for more costly finishing and polishing which, in turn, may promote greater use of NDT throughout the production lifecycle.

Our Competitive Strengths

We believe the following competitive strengths contribute to our being a leading provider of asset protection solutions and will allow us to further capitalize on growth opportunities in our industry:

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- One Source Provider for Asset Protection Solutions® Worldwide. We believe we have the most comprehensive portfolio of proprietary and integrated asset protection solutions, including inspection, mechanical and engineering services, products and systems worldwide, which positions us to be the leading single source provider for a customer's asset protection requirements. Through our network of approximately 120 offices, supplemented by independent representatives in 14 countries around the world, we offer an extensive portfolio of solutions that enables our customers to consolidate their inspection and maintenance requirements and the associated data storage and analytics on a single system that spans the customers' entire enterprise.

- Long-Standing Trusted Provider to a Diversified and Growing Customer Base. By providing critical and reliable NDT services, products and systems for more than 30 years and expanding our asset protection solutions, we have become a trusted partner to a large and growing customer base across numerous infrastructure-intensive industries globally. Our customers include some of the largest and most well-recognized firms in the oil and gas, chemicals, fossil and nuclear power, and aerospace and defense industries as well as some of the largest public authorities.

- Repository of Customer-Specific Inspection Data. Our enterprise data management and analysis software, PCMS, enables us to capture, warehouse, manage and analyze our customers' testing and inspection data in a centralized relational database. As a result, we have accumulated large amounts of proprietary process data and information that allows us to provide our customers with value-added services, such as benchmarking, risk-based inspection and reliability centered maintenance solutions including predictive maintenance, inspection scheduling, data analytics and regulatory compliance.

- Proprietary Products, Software and Technology Packages. We have developed systems that have become the cornerstone of several high value-added unique NDT applications, such as those used for the testing of above-ground storage tanks (the TANKPAC® technology package). These proprietary products allow us to efficiently and effectively provide highly valued solutions to our customers' complex applications, resulting in a significant competitive advantage. In addition to the proprietary products and systems that we sell to customers on a stand-alone basis, we also develop a range of proprietary sensors, instruments, systems and software used exclusively by our Services segment.

- Deep Domain Knowledge and Extensive Industry Experience. In the field of asset protection, we have long and extensive experience and have accumulated vasts amount of data and knowledge. We have gained this through our industry leadership in developing advanced asset protection solutions, including acoustic emission testing for non-intrusive on-line monitoring of storage tanks and pressure vessels, bridges and transformers, portable corrosion mapping, ultrasonic testing (UT) systems, on-line plant asset integrity management with sensor fusion, enterprise software solutions for plant-wide and fleet-wide inspection data archiving and management, advanced and thick composites inspection and ultrasonic phased array inspection of thick wall boilers.

- Collaborating with Our Customers. Our asset protection solutions have historically been designed in response to our customers' unique performance specifications and are supported by our proprietary technologies. Important technology packages, such as TANKPAC for tank floor corrosion detection and Acoustic Turbine Monitoring System (ACTMS), were developed in close cooperation and partnership with key Mistras customers. Our sales and engineering teams work closely with our customers' research and design staff during the design phase in order to incorporate our products into specified infrastructure projects, as well as with facilities maintenance personnel to ensure that we are able to provide the asset protection solutions necessary to meet these customers' changing demands.

- Experienced Management Team. Our management team has a track record of leadership in NDT, DT, PdM and engineering services, averaging over 20 years of experience in the industry. These individuals also have extensive experience in growing businesses organically and in acquiring and integrating companies, which we believe is important to facilitate future growth in the fragmented asset protection industry. In addition, our senior managers are supported by highly experienced managers who are responsible for delivering our solutions to customers.

Our Growth Strategy

Our growth strategy emphasizes the following key elements:

- Continue to Develop Technology-Enabled Asset Protection Services, Products, Software and Systems. We intend to maintain and enhance our technological leadership by continuing to invest in the internal development of new services, products, software and systems. Our highly trained team of Ph.D.'s, engineers, application software

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developers and certified technicians has been instrumental in developing numerous significant asset protection standards. We believe their knowledge base will continue to enable us to innovate a wide range of new asset protection solutions.

- Expand our Service Offerings to Existing Customers. By branching into adjacent mechanical services, we believe we are providing customers with greater value, which increases our value proposition and our ability to capture additional business. Many of our customers are multinational corporations with asset protection requirements from multiple divisions at multiple locations across the globe. Currently, we believe we capture a relatively small portion of their overall expenditures. We believe our expanded services offerings, coupled with our products and systems, and combined with the trend of outsourcing asset protection solutions to a small number of trusted service providers, positions us to significantly expand both the number of divisions and locations that we serve as well as the types of solutions we provide. We strive to be the preferred global partner for our customers and aim to become the single source provider for their asset protection solution requirements.

- Expand our Focus in the Aerospace Industry. We believe that the recent introduction of next generation airframes and aircraft engines has created an inherent demand for inspection and mechanical services required for the production of parts that support their build for years to come. Mistras Group has been an active participant in this market for several years. The Company consummated two acquisitions of aerospace inspection companies in 2017 and won a key European contract in 2016. These recent actions are driven by our increased focus in this growing area.

- Continue to Expand Our Customer Base into New End Markets. We believe we have significant opportunities to expand our customer base in relatively new end markets, including nuclear, wind turbine and other alternative energy and natural gas transportation industries. The expansion of our addressable markets is being driven by the increased recognition and adoption of asset protection services, products and systems, and new NDT technologies enabling further applications in industries such as compressed and liquefied natural gas transportation, and the aging of infrastructure, such as construction and loading cranes and ports, to the point where visual inspection has proven inadequate and new asset protection solutions are required. We expect to continue to expand our global sales organization, grow our inspection data management and data mining services and find new high-value applications. As companies in these emerging end markets realize the benefits of our asset protection solutions, we expect to expand our leadership position by addressing customer needs and winning new business.

- Continue to Capitalize on Acquisitions. We intend to continue employing a disciplined acquisition strategy to broaden, complement and enhance our service offerings, add new customers, expand our sales channels, supplement our internal development efforts and accelerate our expected growth. We believe the market for asset protection solutions is highly fragmented with a large number of potential acquisition opportunities. We have a proven ability to integrate complementary businesses, as demonstrated by the success of our past acquisitions, which have often contributed new or supplemented existing services that have added to our revenues and profitability.

Our Segments

The Company has three operating segments:

- Services. This segment provides asset protection solutions predominantly in North America, with the largest concentration in the United States, consisting primarily of non-destructive testing, inspection, mechanical and engineering services that are used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure.

- International. This segment offers services, products and systems similar to those of our Services and Products and Systems segments to select markets within Europe, the Middle East, Africa, Asia and South America, but not to customers in China and South Korea, which are served by our Products and Systems segment.

- Products and Systems. This segment designs, manufactures, sells, installs and services our asset protection products and systems, including equipment and instrumentation, predominantly in the United States.

For discussion of segment revenues, operating results and other financial information, including geographic areas in which we generated revenues, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7, as well as Note 19 - Segment Disclosure in the notes to consolidated financial statements in Item 8 of this Annual Report.

Our Solutions

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We offer our customers “one source for asset protection solutions”® and are a leading global provider of technology-enabled asset protection solutions used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure. We combine industry-leading products and technologies, expertise in MI, NDT, DT, mechanical and PdM services, process and fixed asset engineering and consulting services, and our world class enterprise inspection database management and analysis software PCMS, to deliver a comprehensive portfolio of customized solutions, ranging from routine inspections to complex, plant-wide asset integrity management and assessments. We deliver our solutions through a combination of services and products and systems.

Our Services

Our Services segment provides a range of testing, inspection and mechanical services to a diversified customer base across energy-related, aerospace, industrial and public infrastructure industries. We either deploy our services directly at the customer’s location or through our own extensive network of field testing facilities. Our footprint allows us to provide asset protection solutions through local offices in close proximity to our customers, permitting us to keep response time, and travel, living and per diem costs to a minimum, while maximizing our ability to develop meaningful, collaborative customer relationships. Examples of our comprehensive portfolio of services include: testing components of new construction as they are built or assembled; providing corrosion monitoring data to help customers determine whether to repair or retire infrastructure; providing material analysis to ensure the integrity of infrastructure components; and supplying non-invasive on-stream techniques that enable our customers to pinpoint potential problem areas prior to failure. In addition, we also provide services to assist in the planning and scheduling of resources for repairs and maintenance activities. Our experienced inspection professionals perform these services, supported by our advanced proprietary software and hardware products. We are also looking to expand our capabilities to offer mechanical services that are complementary to our inspection services. Examples of our services are discussed below.

Traditional NDT Services

Our certified personnel provide a range of traditional inspection services. For example, our visual inspections provide comprehensive assessments of the condition of our customers’ plant equipment during capital construction projects and maintenance shutdowns. Of the broad set of traditional NDT techniques that we provide, several lend themselves to integration with our other offerings and often serve as the initial entry point to more advanced customer engagements. For example, we provide a comprehensive program for the inspection of above-ground storage tanks designed to meet stringent industry standards for the inspection, repair, alteration and reconstruction of oil and petrochemical storage tanks. This program includes magnetic flux exclusion for the rapid detection of floor plate corrosion, advanced ultrasonic systems and leak detection of floor defects, remote ultrasonic crawlers for shell and roof inspections and trained, certified inspectors for visual inspection and documentation.

Advanced NDT Services

In addition to traditional NDT services, we provide a broad range of proprietary advanced NDT services that we offer on a stand-alone basis or in combination with software solutions such as our proprietary enterprise inspection data management and plant condition monitoring software and systems (PCMS). We also provide on-line monitoring capabilities and other solutions that enable the delivery of accurate and real-time information to our customers. Our advanced NDT services require more complex equipment and more highly skilled inspection professionals to operate this equipment and interpret test results. Some of the technologies and techniques we use include automated ultrasonic testing, guided ultrasonic long wave testing, phased array ultrasonic testing, risk-based inspection (RBI) and computed and digital radiography.

Mechanical Integrity Services

We provide a broad range of MI services that enable our customers to meet stringent regulatory requirements. These services increase plant safety, minimize unscheduled downtime and allow our customers to plan for, repair and replace critical components and systems before failure occurs. Our services are designed to complement a comprehensive predictive and preventative inspection and maintenance program that we can provide for our customers in addition to the MI services. Customers of our MI services, in many instances, also have licensed our PCMS software, which allows for the storage and analysis of data captured by our testing and inspection products and services, and implemented this solution to complement our inspection services.

As a result of the information captured by PCMS and its risk-based inspection software module, we are able to provide a professional service known as "Mechanical Integrity Gap Analysis" for process facilities. Our Mechanical Integrity Gap

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Analysis service offers insight into the level of plant readiness, how best to manage and monitor the integrity of process facility assets, and how to extend the useful lives of such assets. Our Mechanical Integrity Gap Analysis service also assists customers in benchmarking and managing their infrastructure through key performance indicators and other metrics.

Destructive Testing Services

We provide a wide range of destructive testing (DT) services in select locations. Hardness, stiffness and strength are a few key indicators drawn from destructive tests per customer specifications. DT is performed for an array of destructive testing applications utilized throughout the materials selection and approval process in the aerospace, automotive, chemical, oil and gas and power generation industries. Example testing includes:

- Mechanical tests — Materials, specimens and even composites are subjected to increasing levels of tension, compression, shear and peeling until failure. There are a number of variations of mechanical testing in which adding temperature, strain, unidirectional load or shear can provide useful results.
- Physical/Chemical — Used to examine specific material and thermal characteristics as well as chemical compositions, including differential scanning calorimetry (DSC), high performance liquid chromatography, fiber volume content and fourier transformation infrared spectroscopy (FTIR).
- Materialography — Gives an insight into the geometries of structural composites, which presents an inside track with regards to determining failure mechanisms and asset lifespan expectations.

Our Products and Systems

We provide a range of acoustic emission (AE) products and are a leader in the design and manufacture of AE sensors, instruments and turn-key systems used for monitoring and testing materials, pressure components, processes and structures. Though we principally sell our products as a system, which includes a combination of sensors, an amplifier, signal processing electronics, knowledge-based software and decision and feedback electronics, we can also sell these as individual components to certain customers that have the in-house expertise to perform their own services. Our sensors “listen” to structures and materials to detect real-time AE activity and to determine the presence of active corrosion, crack propagation and other structural flaws in the inspected materials. Such structures include pressure vessels, storage tanks, heat exchangers, piping, turbine blades and reactors.

In addition, we provide leak monitoring and detection systems used in diverse applications, including the detection and location of both gaseous and liquid leaks in valves, vessels, pipelines, boilers and tanks. AE leak monitoring and detection, when applied in a systematic preventive maintenance program, has proven to substantially reduce costs by eliminating the need for visual valve inspection and unscheduled down-time.

We design, manufacture and market a complete line of ultrasonic equipment. While AE technology detects flaws and pinpoints their location, our UT technology has the ability to size defects in three-dimensional geometric representations. Our line of UT systems include various Automated UT scanners, our unique portable UT handheld and tablet systems with motion control to run our many inspection scanners, and our immersion systems ranging from small bench top units to large UT systems over 55 feet long and large production unit gantry systems.

We provide a wide array of digital radiographic systems to solve specific industrial problems, including Computed Radiography (CR), Real-Time Radiography (RTR), Direct Radiography (DR), and Computed Tomography (CT). Digital Radiography is one of the newer forms of radiographic imaging. Thickness profiles of piping systems, both insulated and un-insulated, are performed using computed radiography, while large production runs of smaller parts are inspected using direct radiography. Real time radiography is utilized for large “real time” inspections of insulated piping systems to identify areas of pipe degradation.

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Technology Solutions

In order to address some of the more common problems faced by our customers, we have developed a number of robust technology solutions. These packages generally allow more rapid and effective testing of infrastructure because they minimize the need for service professionals to customize and integrate asset protection solutions with the infrastructure and interpret test results. These packaged solutions use proprietary and specialized testing procedures and hardware, advanced pattern recognition, neural network software and databases to compare test results against our prior testing data or national and international structural integrity standards. One such package is our ACTMS (Acoustic Combustion Turbine Monitoring System), an on-line system to detect stator blade cracks in gas turbines. Others include TANKPAC for tank inspections, POWERPAC for monitoring discharges in critical power grid transformers, and the AMS boiler tube leak detection and location monitoring system.

Software Solutions

Our software solutions are designed to meet the demands of our customers inspection data management, risk management, data analysis and asset integrity management requirements. We address these requirements using best in class database management systems and applying enterprise based inspection and data management applications. We apply our comprehensive portfolio of customized Acoustic Emission and Ultrasonic application-specific software products to cover a broad range of materials testing and analysis methods, for neural networks, pattern recognition, wavelet analysis and moment tensor analysis. Some of the key software solutions we offer include:

- PCMS enterprise software: A leading inspection data management system for supporting asset protection and reliability.
- ISOTRAC: A multiphase methodology to illustrate in 3-D each element of a plant to help develop an overall asset integrity management program that meets or exceeds compliance with current MI standards and regulations.

Our PCMS application is an enterprise software system that allows for the collection, storage and analysis of data as captured by our testing and inspection products and services and convert it to valuable information for our plant personnel and plant management. PCMS allows our customers to design and develop asset integrity management monitoring plans that include:

- optimal systematic testing schedules for their infrastructure based on real-time data captured by our sensors;
- alerts that notify customers when to perform special testing services on suspect areas, enabling them to identify and resolve flaws on a timely basis by using our PCMS risk-based inspection (RBI) software module; and
- schedules for the maintenance and retirement of assets.

PCMS also offers advantages by allowing the information it develops and stores to be organized, linked and synchronized with enterprise software systems such as SAP and IBM’s Maximo. We believe PCMS is one of the more widely used plant condition management software systems in the world and we estimate it is currently used by more than 40% of U.S. refineries, by capacity. This provides us not only with recurring maintenance and support fees, but also marketing opportunities for additional software, asset integrity management and other asset protection solutions. PCMS has also been chosen and installed by leading midstream pipeline energy companies and major energy companies in Canada and Europe.

We also offer other software solutions, such as our Advanced Data Analysis Pattern Recognition and Neural Networks Software (NOESIS), which enables our AE experts to develop automated remote monitoring systems for our customers, and our Loose Parts Monitoring Software (LPMS), which is a software program for monitoring, detecting and evaluating metallic loose parts in nuclear reactor coolant systems in accordance with strict industry standards.

Engineering and Consulting Services

In addition to software and advanced technologies, Mistras also provides professional engineering and consulting services that is organized under our Asset Integrity Management Services (AIMS) group. Asset integrity management refers to the management system that enables plant owners to maintain the integrity of their assets in a fit for service condition for the desired life of the assets, as well as optimize the assets that are part of a process unit. Our engineering and consulting support capabilities include plant operations support, turn-around planning, project planning, management and execution, facilities planning studies, engineering design, safety reviews, plant operations improvement and optimization evaluations, and technical training.

On-line Monitoring

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Our on-line monitoring offerings combine all of our asset protection services, products and systems. We provide temporary, periodic and continuous monitoring of static infrastructures such as bridges, pipes, and transformers, as well as dynamic or rotating assets such as pumps, motors, gearboxes, steam and gas turbines. Temporary monitoring is typically used when there is a known defect or problem and the condition needs to be monitored until repaired or new equipment can be placed in service. Periodic monitoring, or "walk around" monitoring, is used as a preventative maintenance tool to take machine and device readings, on a periodic basis, to observe any change in the assets' condition, such as increased vibration or unusual heat buildup and dissipation. Continuous monitoring is applied "24/7" on critical assets to observe the earliest onset of a defect and to track its progression to avoid catastrophic failure.

Centers of Excellence

Another differentiator in our business model are our Centers of Excellence (COEs), which focus on specific aspects of inspection technology. The COEs are focused around target applications in our key market segments. They are supported by subject matter experts that will engage in strategic sales opportunities offering customers value-added solutions using advanced technologies and methods providing oversight, management and consultation. The COEs have a blueprint for their areas that can be replicated throughout the world by delivering procedures, equipment, reports, certifications, etc. ensuring a standardized approach to implementation yielding higher margin business.

Customers

We provide our asset protection solutions to a global customer base of diverse companies primarily in our target markets. One customer, BP plc., accounted for approximately 11%, 12% and 10% of our total revenues for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016, respectively. No customer accounted for more than 10% of our revenues in fiscal 2015.

Geographic Areas

We conduct our business in 14 different countries. Our revenues are primarily derived from our U.S., Canadian and European operations. See Note 19 — Segment Disclosure to the consolidated financial statements in this Annual Report for further disclosure of our revenues, long-lived assets and other financial information regarding our international operations.

Seasonality

Our business is seasonal. This seasonality relates primarily to our Services segment. U.S. refineries' non-peak periods are generally in the fall, when they are retooling to produce more heating oil for winter, and in the spring, when they are retooling to produce more gasoline for summer. The peak periods for these customers are the summer and winter months, when they run at peak capacity and are not retooling or performing turnarounds or shut downs. As a result, our revenues in the summer and winter months are typically lower than our revenues in the fall and spring because demand for our asset protection solutions from the oil and gas as well as the fossil and nuclear power industries increases during their non-peak production periods. Because we are increasing our work in the fall and spring, our cash flows are lower in those quarters than in the summer and winter, as collections of receivables lag behind revenues. We expect that this seasonality will continue.

Competition

We operate in a highly competitive, but fragmented, market. Our primary competitors are divisions of large companies, and many of our other competitors are small companies, limited to a specific product or technology and focused on a niche market or geographic region. We believe that none of our competitors currently provides the full range of asset protection and NDT products, enterprise software (PCMS) and the traditional and advanced services solutions that we offer. Our competition with respect to NDT services include the Acuren division of Rockwood Service Corporation, SGS Group, the Team Qualspec division of Team, Inc. and APPLUS RTD. Our competition with respect to our PCMS software includes UltraPIPE, Lloyd’s Register Capstone, Inc. and Meridium Systems. In the traditional NDT market, we believe the principal competitive factors include project management, availability of qualified personnel, execution, price, reputation and quality. In the advanced NDT market, reputation, quality and size are more significant competitive factors than price. We believe that the NDT market has significant barriers to entry which would make it difficult for new competitors to enter the market. These barriers include: (1) having to acquire or develop advanced NDT services, products and systems technologies, which in our case occurred over many years of customer engagements and at significant internal research and development expense, (2) complex regulations and safety codes that require significant industry experience, (3) license requirements and evolved quality and safety programs,

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(4) costly and time-consuming certification processes, (5) capital requirements and (6) emphasis by large customers on size and critical mass, length of relationship and past service record.

Sales and Marketing

We sell our asset protection solutions through our experienced and highly trained direct sales and marketing teams within all of our offices worldwide. In addition, our project and laboratory managers as well as our management are trained on our solutions and often are the source of sales leads and customer contacts. Our direct sales and marketing teams work closely with our customers' research and design personnel, reliability engineers and facilities maintenance engineers to demonstrate the benefits and capabilities of our asset protection solutions, refine our asset protection solutions based on changing market and customer needs and identify potential sales opportunities. We divide our sales and marketing efforts into services sales, products and systems sales and marketing and utilize CRM systems to collect, manage and collaborate customer information with our teams globally. Our CRM's also provide critical data to provide accurate forecasting and reporting.

Manufacturing

Most of our hardware products are manufactured in our Princeton Junction, New Jersey facility. Our Princeton Junction facility includes the capabilities and personnel to fully produce all of our AE products, NDT Automation Ultrasonic equipment and Vibra-Metrics vibration sensing products and systems. Certain other hardware is manufactured by a third party and then loaded by us with our proprietary software. We also design and manufacture automated ultrasonic systems and scanners in France.

Intellectual Property

Our success depends, in part, on our ability to maintain and protect our proprietary technology and to conduct our business without infringing on the proprietary rights of others. We utilize a combination of intellectual property safeguards, including patents, copyrights, trademarks and trade secrets, as well as employee and third-party confidentiality agreements, to protect our intellectual property.

As of December 31, 2017, we held 4 patents (by direct ownership or exclusive licensing), all in the United States, which will expire at various times between 2021 and 2026, and license certain other patents. However, we do not principally rely on these patents or licenses to provide our proprietary asset protection solutions. Our trademarks and service marks provide us and our products and services with a certain amount of brand recognition in our markets. We do not consider any single patent, trademark or service mark material to our financial condition or results of operations.

As of December 31, 2017, the primary trademarks and service marks that we held in the United States included Mistras® and our stylized globe design. Other trademarks or service marks that we utilize in localized markets or product advertising include PCMS®, Physical Acoustics Corporation and the PAC logo, Ropeworks®, NOESIS, Pocket AE®, Pocket UT®, AEwin®, AEwinPost, UTwin®, UTIA, LST, Vibra-Metrics®, Field CAL®, MONPAC, PERFPAC, TANKPAC® , Valve-Squeak®,VPAC, POWERPAC, Sensor Highway, QSL, NDT Automation, and One Source for Asset Projection Solutions®.

Many elements of our asset protection solutions involve proprietary know-how, technology or data that are not covered by patents or patent applications because they are not patentable, or patents covering them would be difficult to enforce, including technical processes, equipment designs, algorithms and procedures. We believe that this proprietary know-how, technology and data is the most important component of our intellectual property assets used in our asset protection solutions, and is a primary differentiator of our asset protection solutions from those of our competitors. We rely on various trade secret protection techniques and agreements with our customers, service providers and vendors to protect these assets. All of our employees are subject to confidentiality requirements through our employee handbook. In addition, employees in our Products and Systems segment and our other employees involved in the development of our intellectual property have entered into confidentiality and proprietary information agreements with us. Our employee handbook and these agreements require our employees not to use or disclose our confidential information, to assign to us all of the inventions, designs and technologies they develop during the course of employment with us, and otherwise address intellectual property protection issues. We also seek confidentiality agreements from our customers and business partners before we disclose any sensitive aspects of our asset protection solutions technology or business strategies. We are not currently involved in any material intellectual property claims.

Research and Development

Our research and development is principally conducted by engineers and scientists at our Princeton Junction, New Jersey headquarters, and supplemented by other employees in the United States and throughout the world, including France, Greece, and the United Kingdom, who have other primary responsibilities. Our total professional staff includes employees who hold

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Ph.D.'s and engineers and employees who hold Level III certification, the highest level of certification from the American Society of Non-Destructive Testing.

We work with customers to develop new products or applications for our technology. Research and development expenses are reflected on our consolidated statements of income as research and engineering expenses. Our company-sponsored research and engineering expenses were approximately $2.3 million $1.6 million, $2.5 million and $2.5 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively. While we have historically funded most of our research and development expenditures, from time to time we also receive customer-sponsored research and development funding. We also have paid research contracts in Greece, Brazil, France, the United Kingdom, and the Netherlands, for various industries and applications, including testing of new composites, detecting crack propagation and wireless and communications technologies, as well as the development of permanently embedded inspection systems using acoustic emission and acousto-ultrasonics to provide continuous on-line in-service full coverage monitoring of critical structural components. Most of the projects are in our target markets; however, a few of the projects could lead to other future market opportunities.

Employees

Providing our asset protection solutions requires a highly-skilled and technically proficient employee base. As of December 31, 2017, we had approximately 6,000 employees worldwide, of which approximately 63% were based in the United States. Less than 10% of our employees in the United States are unionized. We believe that we have good relations with our employees.

Environmental Matters

We are subject to numerous environmental, legal and regulatory requirements related to our operations worldwide. In the United States, these laws and regulations include, among others: the Comprehensive Environmental Response, Compensation, and Liability Act, the Resources Conservation and Recovery Act, the Clean Air Act, the Federal Water Pollution Control Act, the Toxic Substances Control Act, the Atomic Energy Act, the Energy Reorganization Act of 1974, and applicable regulations. In addition to the federal laws and regulations, states and other countries where we do business often have numerous environmental, legal and regulatory requirements by which we must abide. We evaluate and address the environmental impact of our operations by assessing properties in order to avoid future liabilities and comply with environmental, legal and regulatory requirements.

We received a notice in May 2015 that the U.S. Environmental Protection Agency ("EPA") performed a preliminary assessment of a leased facility we operate in Cudahy, California. Based upon the preliminary assessment, the EPA conducted an investigation of the site. The purpose of the investigation is to determine whether any hazardous materials were released from the facility. We have been informed that certain hazardous materials and pollutants have been found in the ground water in the general vicinity of the site and the EPA is attempting to ascertain the origination or source of these materials and pollutants. Given the historic industrial use of the site, the EPA determined that the site of our Cudahy facility should be examined along with numerous other sites in the vicinity. At this time, we are not able to determine whether we have any liability in connection with this matter and if so, the amount or range of any such liability.

Our Website and Available Information

Our website address is www.mistrasgroup.com. We file reports with the SEC, including Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K, Current Reports on Form 8-K and Proxy Statements. All of the materials we file with or furnish to the SEC are available free of charge on our website at http://investors.mistrasgroup.com/sec.cfm, as soon as reasonably practicable after having been electronically submitted to the SEC. Information contained on or connected to our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered part of this report or any other filing with the SEC. All of our SEC filings are also available at the SEC’s website at www.sec.gov. In addition, materials we file with the SEC may be read and copied at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

Executive Officers

The following are our executive officers and other key employees as of December 31, 2017 and their background and experience:

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Name	Age	Position
Dr. Sotirios J. Vahaviolos	71	Executive Chairman and Director
Dennis Bertolotti	58	President, Chief Executive Officer and Director
Michael C. Keefe	60	Executive Vice President, General Counsel and Secretary
Michael J. Lange	57	Vice Chairman, Senior Executive Vice President of Global Business Development, Marketing & Strategic Planning, and Director
Jonathan H. Wolk	56	Senior Executive Vice President, Chief Financial Officer and Chief Operating Officer

Dr. Sotirios J. Vahaviolos was named Executive Chairman on August 10, 2017. Prior to being named Executive Chairman, Dr. Vahaviolos had been our Chairman and Chief Executive Officer since he founded Mistras in 1978 under the name Physical Acoustics Corporation and was also our President until June 1, 2016. Prior to joining Mistras, Dr. Vahaviolos worked at AT&T Bell Laboratories. Dr. Vahaviolos received a B.S. in Electrical Engineering and graduated first in his engineering class from Fairleigh Dickinson University and received Masters Degrees in Electrical Engineering and Philosophy and a Ph.D. (EE) from the Columbia University School of Engineering. During Dr. Vahaviolos' career in non-destructive testing, he has been elected Fellow of The Institute of Electrical and Electronics Engineers, a member of The American Society for Nondestructive Testing (ASNT) where he served as its President from 1992-1993 and its Chairman from 1993-1994, a member of Acoustic Emission Working Group (AEWG) and an honorary life member of the International Committee for Nondestructive Testing. Additionally, he was the recipient of ASNT's Gold Medal in 2001 and AEWG's Gold Medal in 2005. He was also one of the six founders of NDT Academia International in 2008 headquartered in Brescia, Italy.

Dennis Bertolotti joined Mistras when Conam Inspection Services was acquired in 2003, where Mr. Bertolotti was a Vice President at the time of the acquisition. Since then, Mr. Bertolotti has had increasing levels of responsibility with Mistras, and became our President and Chief Executive Officer and Director, effective August 10, 2017. From June 1, 2016 to August 9, 2017, Mr. Bertolotti was our President and Chief Operating Officer. Mr. Bertolotti has been in the NDT business for over 30 years, and previously held ASNT Level III certifications and various American Petroleum Institute, or API, certifications, and received his Associate of Science degree in NDT from Moraine Valley Community College in 1983. Mr. Bertolotti has also received a Bachelor of Science and MBA from Otterbein College.

Michael C. Keefe joined Mistras in December 2009. Prior to joining Mistras, Mr. Keefe worked at International Fight League, a publicly-traded sports promotion company, from 2007 until 2009, in various executive positions. From 1990 until 2006, Mr. Keefe served in various legal roles with Lucent Technologies and AT&T, the last four years as Vice President, Corporate and Securities Law and Assistant Secretary. Mr. Keefe received a BS in Business Administration (Accounting) from Seton Hall University and a J.D. from Seton Hall University School of Law.

Michael J. Lange joined Mistras when we acquired Quality Services Laboratories in November 2000, and was elected a Director in 2003. Mr. Lange has held various executive level positions with Mistras, becoming Vice Chairman in July 2015 and Senior Executive Vice President, effective June 1, 2016. Mr. Lange is a well-recognized authority in Radiography and has held an ASNT Level III Certificate for almost 20 years. Mr. Lange received an Associate of Science degree in NDT from the Spartan School of Aeronautics.

Jonathan H. Wolk joined Mistras in November 2013 as Executive Vice President, Chief Financial Officer and Treasurer until August 10, 2017, when Mr. Wolk became Senior Executive Vice President and Chief Operating Officer. Mr. Wolk was also acting Chief Financial Officer from August 10, 2017 until the appointment of Mr. Prajzner on January 5, 2018. Prior to joining Mistras, Mr. Wolk served as Senior Vice President, Chief Financial Officer and Secretary of American Woodmark Corporation from 2004 until August 2013. Prior to American Woodmark, he served as the Chief Financial Officer and Treasurer of Tradecard, Inc., from 2000 to 2004, and was the global controller of GE Capital Real Estate from 1998 to 2000. Mr. Wolk started his career in public accounting at KPMG, received his B.S. in accounting from State University of New York-Albany and is a certified public accountant.

On January 5, 2018, Edward J. Prajzner, joined Mistras as Senior Vice President, Chief Financial Officer and Treasurer. Prior to joining Mistras, Mr. Prajzner worked at CECO Environmental Corp., a global service provider to environmental, energy and filtration industries, and served as Chief Financial Officer and Secretary from 2014 to 2017, Vice President of Finance and Chief Accounting Officer from 2013 until his appointment as CFO in 2014, and Corporate Controller and Chief Accounting Officer from 2012 to 2013. Mr. Prajzner also served in senior finance roles at CDI Corporation (now AE Industrial Partners), and American Infrastructure (now Allan Myers). Mr. Prajzner began his career in public accounting at Ernst & Young, received

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his B.S. in accountancy from Villanova University, his MBA in finance from Temple University and is a certified public accountant.

Our executive officers are elected by, and serve at the discretion of, our board of directors. There are no family relationships among any of our directors or executive officers.

ITEM 1A. RISK FACTORS

This section describes the major risks to us, our business and our common stock. You should carefully read and consider the risks described below, together with the other information contained in this Annual Report, including our financial statements and the notes thereto and “Management’s Discussion and Analysis of Financial Condition and Results of Operations”(MD&A) before making an investment decision. The statements contained in this section constitute cautionary statements under the Private Securities Litigation Reform Act of 1995. If any of these risks occur, our business, financial condition, results of operations and future growth prospects may be adversely affected. As a result, the trading price of our common stock would likely decline, and you may lose all or part of your investment. You should understand that it is not possible to predict or identify all risk factors that could impact us. Accordingly, you should not consider the following to be a complete discussion of all risks and uncertainties pertaining to us and our common stock.

Risks Related to Our Business

Our growth strategy includes acquisitions. We may not be able to identify suitable acquisition candidates or integrate acquired businesses successfully, which may adversely impact our results. Furthermore, acquisitions that we do complete could expose us to a number of unanticipated operational and financial risks.

A significant factor in our growth has been and will continue to be based upon our ability to make acquisitions and successfully integrate these acquired businesses. We intend to continue to seek additional acquisition opportunities, both to expand into new markets and to enhance our position in existing markets. This strategy has provided us with many benefits and has helped fuel our growth, but also carries with it many risks. Some of the risks associated with our acquisition strategy include:

- whether we successfully identify suitable acquisition candidates, negotiate appropriate acquisition terms, and complete proposed acquisitions;
- whether we can successfully integrate acquired businesses into our current operations, including our accounting, internal control and information technology systems, marketing and other key infrastructure;
- whether we can adequately capture opportunities that an acquired business may offer, including the expansion into new markets in which we do not have significant experience or presence;
- whether we value an acquired business properly when determining the purchase price, terms and whether we are able to achieve the returns on the investment we expect;
- whether an acquired business can achieve levels of revenues, profitability, productivity or cost savings we expect;
- whether an acquired business is compatible with our culture and philosophy of doing business;
- the unexpected loss of key personnel and customers of an acquired business;

- the assumption of liabilities and risks (including environmental-related costs) of an acquired business, some of which may not be anticipated;

- the potential disruption of our ongoing business and distraction of management and other personnel of us and the acquired business resulting from the efforts to acquire, then integrate, an acquired business; and

- the use of significant funds, including those borrowed under our bank credit agreement, and the opportunity cost associated with the funds spent on the acquisition and integration of other businesses (some of which acquisition funding may be substantial), as well as the impact of the acquisition and borrowing on our continued compliance with our bank covenants.

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Our ability to undertake acquisitions is limited by our financial resources, including available cash and borrowing capacity. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of substantial additional indebtedness and other expenses, any of which could adversely impact our financial condition and results of operations. Although management intends to: (i) evaluate the risks inherent in any particular transaction, (ii) assume only risks management believes to be acceptable, and (iii) develop plans to mitigate such risks, there are no assurances that we will properly ascertain or accurately assess the extent of all such risks. Difficulties encountered with acquisitions may adversely impact our business, financial condition and results of operations.

In addition, we have a significant amount of goodwill and other intangible assets on our balance sheet from our acquisitions. This will increase as we complete more acquisitions. If our acquisitions do not perform as planned and we do not realize the benefits and profitability we expect, we could incur significant write-downs and impairment charges to our earnings due to the impairment of the goodwill and other intangible assets we have acquired or acquire in the future.

Our international operations are subject to risks relating to non-U.S. operations.

For the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, we generated approximately 33%, 36%, 28% and 31% of our revenues outside the United States, respectively. In addition, our international operations as a percentage of our business may increase over time. Our primary operations outside the United States are in Canada, Germany, France, the United Kingdom and Brazil. We also have operations in the Netherlands, Belgium and India. There are numerous risks inherent in doing business in international markets, including:

- fluctuations in currency exchange rates and interest rates;
- varying regional and geopolitical business and economic conditions and demands;
- compliance with applicable foreign regulations and licensing requirements, and U.S. laws and regulation with respect to our business in other countries, including export controls and anti-bribery laws;
- the cost and uncertainty of obtaining data and creating solutions that are relevant to particular geographic markets;
- the need to provide sufficient levels of technical support in different locations;
- the complexity of maintaining effective policies and procedures in locations around the world;
- political instability and civil unrest;
- restrictions or limitations on outsourcing contracts or services abroad;
- the impact of the United Kingdom exiting the European Union;
- restrictions or limitations on the repatriation of funds, or tax consequences on the non-repatriation of overseas operationally generated funds; and
- other potentially adverse tax consequences.

Due to our dependency on customers in the oil and gas industry, we are susceptible to prolonged negative trends relating to this industry that could adversely affect our operating results.

Our customers in the oil and gas industry (including the petrochemical market) have accounted for a substantial portion of our historical revenues. Specifically, they accounted for approximately 58%, 55%, 56% and 52% of our revenues for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively. Although we have expanded our customer base into industries other than the oil and gas industry, we still receive approximately half of our revenues from this industry. Our services are vital to the operators of plants and refineries and we have expanded our services offerings, such as expanding our mechnical services capabilities. However, economic slowdowns or low oil prices have, and could continue to, result in cutbacks in contracts for our services. In addition, low oil prices could depress the level of new exploration and construction, which would adversely affect our market opportunities. If the oil and gas industry were to continue to operate in a market with low oil prices, our revenues, profits and cash flows may be reduced. While we continue to expand our market presence in the power generation and transmission, and the chemical processing industries, among others, these markets are also cyclical in nature and as such, are subject to economic downturns.

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We expect to continue expanding and our success depends on how effectively we manage our growth.

We expect to continue experiencing growth, including through acquisitions, in the number of employees and the scope of our operations over the long-term. To effectively manage our anticipated future growth, we must continue to implement and improve our managerial, operational, compliance, financial and reporting systems and capabilities, expand our facilities and continue to recruit and train additional qualified personnel. We expect that all these measures will require significant expenditures and will demand the attention of management. Failure to manage our growth effectively could lead us to over or under-invest in technology and operations, result in weaknesses in our infrastructure, systems, compliance programs or controls, give rise to operational mistakes, the loss of business opportunities, the loss of employees and reduced productivity among remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of new solutions. If our management is unable to effectively manage our expected growth, our expenses may increase more than expected, our profit margins may suffer, our revenues could decline or may grow more slowly than expected and we may be unable to implement our business strategy as anticipated.

Our operating results could be adversely affected by a reduction in business with our significant customers.

We derive a significant amount of revenues from a few customers. For instance, various divisions or business units of our largest customer were responsible for approximately 11% of our revenues for 2017. Taken as a group, our top ten customers were responsible for approximately 38%, 37%, 36% and 33% of our revenues for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively. This concentration pertains almost exclusively to our Services segment, which accounted for more than 70% of our revenues for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015. These customers are primarily in the oil and gas sector. Generally, our customers do not have an obligation to make purchases from us and may stop ordering our products and services or may terminate existing orders or contracts at any time with little or no financial penalty. The loss of any of our significant customers, any substantial decline in sales to these customers or any significant change in the timing or volume of purchases by our customers could result in lower revenues and could harm our business, financial condition or results of operations. During 2017, we have noted a challenged region within our Services segment ("the Challenged Region") which includes a large customer contract. During the first quarter of 2018, the large contract in the Challenged Region was awarded to another contractor. Accordingly, our 2018 results will be impacted by the loss of this contract.

An accident or incident involving our asset protection solutions could expose us to claims, harm our reputation and adversely affect our ability to compete for business and, as a result, harm our operating performance.

We could be exposed to liabilities arising out of the solutions we provide. For instance, we furnish the results of our testing and inspections for use by our customers in their assessment of their assets, facilities, plants and other structures. If such results were to be incorrect or incomplete, as a result of, for instance, poorly designed inspections, malfunctioning testing equipment or our employees' failure to adequately test or properly record data, we could be subject to claims. Further, if an accident or incident involving a structure we tested occurs and causes personal injuries or property damage, such as the collapse of a bridge or an explosion in a facility, and particularly if these injuries or damages could have been prevented by our customers had we provided them with correct or complete results, we may face significant claims relating to personal injury, property damage or other losses. Even if our results are correct and complete, we may face claims for such injuries or damage simply because we tested the structure or facility in question. While we do have insurance, our insurance coverage may not be adequate to cover the damages from any such claims, forcing us to bear these uninsured damages directly, which could harm our operating results and may result in additional expenses and possible loss of revenues. An accident or incident for which we are found partially or fully responsible, even if fully insured, or even an incident at a customer for which we provide services although we were found not to be responsible, may also result in negative publicity, which would harm our reputation among our customers and the public, cause us to lose existing and future contracts or make it more difficult for us to compete effectively, thereby significantly harming our operating performance. In addition, the occurrence of an accident or incident might also make it more expensive or extremely difficult for us to insure against similar events in the future.

Many of the sites at which we work are inherently dangerous workplaces. If we fail to maintain a safe work environment, we may incur losses and lose business.

Many of our customers, particularly in the oil and gas and chemical industries, require their inspectors and other contractors working at their facilities to have good safety records because of the inherent danger at these sites. If our employees are injured at the work place, we will incur costs for the injuries and lost productivity. In addition, safety records are impacted by the number and amount of workplace incidents involving a contractor’s employees. If our safety record is not within the levels required by our customers, or compares unfavorably to our competitors, we could lose business, be prevented from working at

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certain facilities or suffer other adverse consequences, all of which could negatively impact our business, revenues, reputation and profitability.

Most of our computer and communications hardware is located at a single facility, the failure of which would harm our business and results of operations.

Most of our computer and communications hardware is located at a single facility. We have a back-up data-center and storage in a different geographic area. Should a natural disaster or some other event occur that damages our primary data center or significantly disrupts its operation, such as human error, fire, flood, power loss, telecommunications failure, break-ins, terrorist attacks, acts of war and similar events, we could suffer temporary interruption of key functions and capabilities before the back-up facility is fully operational.

If we are unable to attract and retain a sufficient number of trained certified technicians, engineers and scientists at competitive wages, our operational performance may be harmed and our costs may increase.

We believe that our success depends, in part, upon our ability to attract, develop and retain a sufficient number of trained certified technicians, engineers and scientists at competitive wages. The demand for such employees fluctuates as the demand for NDT and inspection services fluctuate. There is currently a reduced demand for technicians because of a slowdown of spending in the oil and gas industry. However, if the demand for qualified technicians increases, we will likely experience increased labor costs. The markets for our products and services require us to use personnel trained and certified in accordance with standards set by domestic or international standard-setting bodies, such as the American Society of Non-Destructive Testing or the American Petroleum Institute. Because of the limited supply of these certified technicians, we expend substantial resources maintaining in-house training and certification programs. If we fail to attract sufficient new personnel or fail to motivate and retain our current personnel, our ability to perform under existing contracts and orders or to pursue new business may be harmed, preventing us from growing our business or causing us to lose customers and revenues, and the costs of performing such contracts and orders may increase, which would likely reduce our margins.

We operate in competitive markets and if we are unable to compete successfully, we could lose market share and revenues and our margins could decline.

We face strong competition from NDT and a variety of niche asset protection providers, both larger and smaller than we are. Some of our competitors have greater financial resources than we do and could focus their substantial financial resources to develop a competing business model or develop products or services that are more attractive to potential customers than what we offer. Some of our competitors are business units of companies substantially larger than us and could attempt to combine asset protection solutions into an integrated offering to customers who already purchase other types of products or services from them. Our competitors may offer asset protection solutions at lower prices than ours in order to attempt to gain market share. Smaller niche competitors with small customer bases could be aggressive in their pricing in order to retain customers. These competitive factors could reduce our market share, revenues and profits.

Certain of our operations are unionized, and as a result, we or our subsidiaries are required to contribute to multi-employer pension plans. A significant reduction in our union work force could result in withdrawal liability to these mutli-employer pension plans, which could be significant.

Some of our workforce is unionized and the terms of employment for these workers are governed by collective bargaining agreements, or CBAs. Under these CBAs, we are required to contribute to the national pension funds for the unions representing these employees, which are multi-employer pension plans. If we experience a significant reduction in the employees covered by the CBAs, including as a result of lost business in the Challenged Region, a complete or partial withdrawal liability to these multi-employer pension plans could result under ERISA. Depending on the circumstances, this liability could be significant and adversely impact our earnings and cash flow.

Events such as natural disasters, industrial accidents, epidemics, war and acts of terrorism, and adverse weather conditions could disrupt our business or the business of our customers, which could significantly harm our operations, financial results and cash flow.

Our operations and those of our customers are susceptible to the occurrence of catastrophic events outside our control, ranging from severe weather conditions to acts of war and terrorism. Any such events could cause a serious business disruption that reduces our customers' need or interest in purchasing our asset protection solutions. In the past, such events have resulted in order cancellations and delays because customer equipment, facilities or operations have been damaged, or are not then operational or available. A large portion of our customer base has operations in the Gulf of Mexico, which is subject to hurricanes. Hurricane-related disruptions to our customers' operations have adversely affected our revenues in the past. Such events in the future may result in substantial delays in the provision of solutions to our customers and the loss of valuable equipment. In addition, our results can be adversely impacted by severe winter weather conditions, which can result in lost work days and temporary closures of customer facilities or outdoor projects. Any cancellations, delays or losses due to such events may significantly reduce our revenues and harm our operating performance.

If we lose key members of our senior management team upon whom we are dependent, we may be less effective in managing our operations and may have more difficulty achieving our strategic objectives.

Our future success depends to a considerable degree upon the availability, contributions, vision, skills, experience and effort of our senior management team. We have in place various compensation programs, such as an annual cash incentive program, equity incentive program and a severance policy, each designed to incentivize and retain our key senior managers. We have also made changes to our senior management structure so that executive officers other than our founder, Dr. Sotirios Vahaviolos, provide executive leadership for operational, business development and strategy matters. At this time, we do not have any reason to believe that we may lose the services of any of these key persons in the foreseeable future and we believe our compensation programs will help us retain these individuals. We believe we have sufficient depth in our executive management to continue our success if we were to lose the services of an executive. However, an unplanned loss or interruption of the service of numerous key members of our senior management team could harm our business, financial condition and results of operations and could significantly reduce our ability to manage our operations and implement our strategy.

Deteriorations in economic conditions in certain markets or other factors may cause us to recognize impairment charges for our goodwill.

As of December 31, 2017, the carrying amount of our goodwill was approximately $203 million, of which approximately $38 million relates to our International segment. A significant portion of our international operations are concentrated in Europe and Brazil. Significant deterioration in industry or economic conditions in which we operate, disruptions to our business, not effectively integrating acquired businesses, or other factors, may cause impairment charges to goodwill in future periods. During 2017, the Products and Systems segment had contract bids which management assessed as having a reasonable chance of success and were not awarded to the Company. As a result of this missed opportunity, the annual forecasting process was accelerated, resulting in a goodwill impairment test for the Products and Systems reporting unit and a $13.2 million impairment charge during the third quarter of 2017.

The success of our businesses depends, in part, on our ability to develop new asset protection solutions, increase the functionality of our current offerings and meet the needs and demands of our customers.

The market for asset protection solutions is impacted by technological change, uncertain product lifecycles, shifts in customer demands and evolving industry standards and regulations. We may not be able to successfully develop and market new asset protection solutions that comply with present or emerging industry regulations and technology standards. Also, new regulations or technology standards could increase our cost of doing business.

From time to time, our customers have requested greater value and functionality in our solutions. As part of our strategy to enhance our asset protection solutions and grow our business, we continue to make investments in the research and development of new technologies, inspection tools and methodologies. We believe our future success will depend, in part, on our ability to continue to design new, competitive and broader asset protection solutions, enhance our current solutions and provide new, value-added services. Many traditional NDT and inspection services are subject to price competition by our customers. Accordingly, the need to demonstrate our value-added services is becoming more important. Developing new solutions will require continued investment, and we may experience unforeseen technological or operational challenges. In addition, our asset protection software is complex and can be expensive to develop, and new software and software enhancements can require long development and testing periods. If we are unable to develop new asset protection solutions or enhancements that meet market demands on a timely basis, we may experience a loss of customers or otherwise be likely to lose opportunities to earn revenues and to gain customers or access to markets, and our business and results of operations will be adversely affected.

Even if we develop new solutions, if our customers, or potential customers, do not see the value our solutions have over competing products and services, our operating results could be adversely impacted. In addition, because the asset protection solutions industry is rapidly evolving, we could lose insight into trends that may be emerging, which would further harm our competitive position by making it difficult to predict and respond to customer needs. If the market for our asset protection solutions does not continue to develop, our ability to grow our business would be limited and we might not be able to maintain profitability. If we cannot convince our customers of the advantages and value of our advanced NDT services, we could lose large contracts or suffer lower profit margin.

If our software or system produces inaccurate information or are incompatible with the systems used by our customers and make us unable to successfully provide our solutions, it could lead to a loss of revenues and customers.

Our software and systems are complex and, accordingly, may contain undetected errors or failures. Software or system defects or inaccurate data may cause incorrect recording, reporting or display of information related to our asset protection solutions. Any such failures, defects and inaccurate data may prevent us from successfully providing our asset protection solutions, which could result in lost revenues. Software or system defects or inaccurate data may lead to customer dissatisfaction and could cause our customers to seek to hold us liable for any damages incurred. As a result, we could lose customers, our reputation may be harmed and our financial condition and results of operations could be materially adversely affected.

We currently serve a commercial, industrial and governmental customer base that uses a wide variety of constantly changing hardware, software solutions and operating systems. Our asset protection solutions need to interface with these non-standard systems in order to gather and assess data. Our business depends on the following factors, among others:

- our ability to integrate our technology with new and existing hardware and software systems;
- our ability to anticipate and support new standards, especially internet-based standards; and
- our ability to integrate additional software modules under development with our existing technology and operational processes.

If we are unable to adequately address any of these factors, our results of operations and prospects for growth and profitability would be adversely impacted.

The seasonal nature of our business reduces our revenues and profitability in the winter and summer.

Our business, primarily in our Services segment, is seasonal. The fall and spring revenues for our Services segment are typically higher than our revenues in the winter and summer because demand for our asset protection solutions from the oil and gas as well as the fossil and nuclear power industries increases during their non-peak production periods. For instance, U.S. refineries' non-peak periods are generally in the fall, when they are retooling to produce more heating oil for winter, and in the spring, when they are retooling to produce more gasoline for summer. As a result of these trends, we generally have reduced cash flows in the fall and spring, as collections of receivables lag behind revenues, possibly requiring us to borrow under our credit agreement. In addition, most of our operating expenses, such as employee compensation and property rental expense, are relatively fixed over the short term. Moreover, our spending levels are based in part on our expectations regarding future revenues. As a result, if revenues for a particular quarter are below expectations, we may not be able to proportionately reduce operating expenses for that quarter. We expect that the impact of seasonality will continue.

Our business, and the industries we currently serve, are currently subject to governmental regulation, and may become subject to modified or new government regulation that may negatively impact our ability to market our asset protection solutions.

We incur substantial costs in complying with various government regulations and licensing requirements. For example, the transportation and overnight storage of radioactive materials used in providing certain of our asset protection solutions such as radiography are subject to regulation under federal and state laws and licensing requirements. Our Services segment is currently licensed to handle radioactive materials by the U.S. Nuclear Regulatory Commission (NRC), over 20 state regulatory agencies and the Canadian Nuclear Safety Commission. If we allegedly fail to comply with these regulations, we may be investigated and incur significant legal expenses associated with such investigations, and if we are found to have violated these regulations, we may be fined or lose one or more of our licenses or permits, which would prevent or restrict our ability to provide radiography services. In addition, while we are investigated, we may be required to suspend work on the projects associated with our alleged noncompliance, resulting in loss of profits or customers, and damage to our reputation. Many of our customers have strict requirements concerning safety or loss time occurrences and if we are unable to meet these requirements it could result in lost revenues. In the future, governmental agencies may seek to change current regulations or impose additional regulations on our business. Any modified or new government regulation applicable to our current or future asset protection solutions may negatively impact the marketing and provision of those solutions and increase our costs of providing these solutions and have a corresponding adverse effect on our margins.

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Additionally, greenhouse gases that result from human activities, including burning of fossil fuels, have been the focus of increased scientific and political scrutiny and are being subjected to various legal requirements. International agreements, national laws, state laws and various regulatory schemes limit or otherwise regulate emissions of greenhouse gases, and additional restrictions are under consideration by different governmental entities. We derive a significant amount of revenues and profits from such industries, including oil and gas, power generation and transmission, and chemicals processing. Such regulations could negatively impact our customers, which could negatively impact the market for the services and products we provide. This could materially adversely affect our business, financial condition, results of operations and cash flows.

We rely on certification of our NDT solutions by industry standards-setting bodies. We and/or our subsidiaries currently have International Organization for Standardization (ISO) 9001:2008 certification, ISO 14001:2004 certification and OHSAS 18001:2007 certification. In addition, we currently have NADCAP (formerly National Aerospace and Defense Contractors Accreditation Program) and similar certifications for certain of our locations. We continually review our NDT solutions for compliance with the requirements of industry specification standards and the NADCAP special processes quality requirements. However, if we fail to maintain our ISO, Nadcap or other certifications, our business may be harmed because our customers generally require that we have these certifications before they purchase our NDT solutions.

Intellectual property may impact our business and results of operations.

Our ability to compete effectively depends in part upon the maintenance and protection of the intellectual property related to our asset protection solutions. Patent protection is unavailable for certain aspects of the technology and operational processes important to our business and any patent or patent applications, trademarks or copyrights held by us or to be issued to us, may not adequately protect us. Some of our trademarks that are not in use may become available to others. To date, we have relied principally on copyright, trademark and trade secrecy laws, as well as confidentiality agreements and licensing arrangements, to establish and protect our intellectual property. However, we have not obtained confidentiality agreements from all of our customers and vendors. Although we obligate our employees to confidentiality, we cannot be certain that these obligations will be honored or enforceable.

We may require additional capital to support business growth, which might not be available.

We intend to continue making investments to support our business growth and may require additional funds to respond to business challenges or opportunities, including the need to develop new, or enhance our current, asset protection solutions, enhance our operating infrastructure or acquire businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through further issuances of equity or convertible debt securities, our current stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. While our current bank financing is meeting our current need, any debt financing secured by us in the future could involve restrictive covenants relating to our capital-raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, no assurance can be given that adequate or acceptable financing will be available to us, in which case we may not be able to grow our business, including through acquisitions, or respond to business challenges.

Our credit agreement contains financial and operating restrictions that may limit our access to credit. If we fail to comply with financial or other covenants in our credit agreement, we may be required to repay indebtedness to our existing lenders, which may harm our liquidity.

Our credit agreement contains financial covenants that require us to maintain compliance with specified financial ratios. If we fail to comply with these covenants, the lenders could prevent us from borrowing under our credit agreement, require us to pay all amounts outstanding, require that we cash collateralize letters of credit issued under the credit agreement and restrict us from making acquisitions. If the maturity of our indebtedness is accelerated, we then may not have sufficient funds available for repayment or the ability to borrow or obtain sufficient funds to replace the accelerated indebtedness on terms acceptable to us, or at all.

Our current credit agreement also imposes restrictions on our ability to engage in certain activities, such as creating liens, making certain investments, incurring more debt, disposing of certain property, paying dividends and making distributions and entering into a new line of business. While these restrictions have not impeded our business operations to date, if our plans change, these restrictions could be burdensome or require that we pay fees to have the restrictions waived.

Any real or perceived internal or external electronic security breaches in connection with the use of our asset protection solutions could harm our reputation, inhibit market acceptance of our solutions and cause us to lose customers.

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We and our customers use our asset protection solutions to compile and analyze sensitive or confidential customer-related information. In addition, some of our asset protection solutions allow us to remotely control and store data from equipment at commercial, institutional and industrial locations. Our asset protection solutions rely on the secure electronic transmission of proprietary data over the internet or other networks. The occurrence or perception of security breaches in connection with our asset protection solutions or our customers' concerns about internet security or the security of our solutions, whether warranted or not, would likely harm our reputation or business, inhibit market acceptance of our asset protection solutions and cause us to lose customers, any of which would harm our financial condition and results of operations.

We may come into contact with sensitive information or data when we perform installation, maintenance or testing functions for our customers. Even the perception that we have improperly handled sensitive, confidential information would have a negative effect on our business. If, in handling this information, we fail to comply with privacy or security laws, we could incur civil liability to government agencies, customers and individuals whose privacy is compromised. In addition, third parties may attempt to breach our security or inappropriately harm our asset protection solutions through computer viruses, electronic break-ins and other disruptions. If a breach is successful, confidential information may be improperly obtained, for which we may be subject to lawsuits and other liabilities.

Risks Related to Our Common Stock

Our stock price could fluctuate for numerous reasons, including variations in our results.

Our quarterly operating results have fluctuated in the past and may do so in the future. Accordingly, we believe that period-to-period comparisons of our results of operations may be the best indicators of our business. You should not rely upon the results of one quarter as an indication of future performance. Our revenues and operating results may fall below the expectations of securities analysts or investors in any future period. Our failure to meet these expectations may cause the market price of our common stock to decline, perhaps substantially. Our quarterly revenues and operating results may vary depending on a number of factors, including those listed previously under "Risks Related to Our Business." In addition, the price of our common stock is subject to general economic, market, industry, and competitive conditions, the risk factors discussed below and numerous other conditions outside of our control.

A significant stockholder controls the direction of our business. The concentrated ownership of our common stock may prevent other stockholders from influencing significant corporate decisions.

Dr. Sotirios J. Vahaviolos, our Executive Chairman, owns approximately 37% of our outstanding common stock. As a result, Dr. Vahaviolos exhibits significant control over our Company and has the ability to exert substantial influence over all matters requiring approval by our shareholders, including the election and removal of directors, amendments to our certificate of incorporation, and any proposed merger, consolidation or sale of all or substantially all of our assets and other corporate transactions. This concentration of ownership could be disadvantageous to other shareholders with differing interests from Dr. Vahaviolos.

We currently have no plans to pay dividends on our common stock.

We have not declared or paid any cash dividends on our common stock to date, and we do not anticipate declaring or paying any dividends on our common stock in the foreseeable future. To the extent we do not pay dividends on our common stock, investors must look solely to stock appreciation for a return on their investment.

Shares eligible for future sale may cause the market price for our common stock to decline even if our business is doing well.

Future sales by us or by our existing shareholders of substantial amounts of our common stock in the public market, or the perception that these sales may occur, could cause the market price of our common stock to decline. This could also impair our ability to raise additional capital in the future through the sale of our equity securities. Under our certificate of incorporation, we are authorized to issue up to 200,000,000 shares of common stock, of which approximately 28,302,000 shares of common stock were outstanding as of March 5, 2018. In addition, we have approximately 3,093,000 shares of common stock reserved for issuance related to stock options and restricted stock units that were outstanding as of March 5, 2018. We cannot predict the size of future issuances of our common stock or the effect, if any, that future sales and issuances of shares of our common stock, or the perception of such sales or issuances, would have on the market price of our common stock.

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Provisions of our charter, bylaws and of Delaware law could discourage, delay or prevent a change of control of our company, which may adversely affect the market price of our common stock.

Certain provisions of our certificate of incorporation and bylaws could discourage, delay or prevent a merger, acquisition, or other change of control that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- require that vacancies on the board of directors, including newly created directorships, be filled only by a majority vote of directors then in office;
- authorize our board of directors to issue, without stockholder approval, preferred stock that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting by prohibiting stockholder action by written consent;
- prohibit cumulative voting in the election of directors, which may otherwise allow holders of less than a majority of stock to elect some directors; and
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings and limit the right to call special meetings of stockholders to the Chairman of the Board, the Chief Executive Officer, the board of directors acting pursuant to a resolution adopted by a majority of directors or the Secretary upon the written request of stockholders entitled to cast not less than 35% of all the votes entitled to be cast at such meeting.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a prescribed period of time.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of December 31, 2017, we operated approximately 120 offices in 14 countries, with our corporate headquarters located in Princeton Junction, New Jersey. Our headquarters in Princeton Junction is our primary location, where most of our manufacturing and research and development is conducted. While we lease most of our facilities, as of December 31, 2017, we owned properties located in Monroe, North Carolina; Trainer, Pennsylvania; LaPorte, Texas; Burlington, Washington; Gillette, Wyoming, Ellabell, Georgia; and Jonquiere, Quebec. Our Services segment utilizes approximately 80 offices throughout North America (including Canada). Our Products and Systems segment’s primary location is in our Princeton Junction, NJ facility. Our International segment has approximately 40 offices including locations in Belgium, Brazil, France, Germany, Greece, India, the Netherlands, and the United Kingdom. We believe that all of our facilities are well maintained and are suitable and adequate for our current needs.

ITEM 3. LEGAL PROCEEDINGS

We are subject to periodic legal proceedings, investigations and claims that arise in the ordinary course of business. See "Litigation" in Note 18 — Commitments and Contingencies to our audited consolidated financial statements contained in Item 8 of this Annual Report for a description of legal proceedings involving us and our business, which is incorporated herein by reference.

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ITEM 4. MINE SAFETY DISCLOSURES

None.

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

Market for Common Stock

Our common stock currently trades on the New York Stock Exchange (NYSE) under the ticker symbol "MG." The following table sets forth for the periods indicated the range of high and low sales prices, based on closing stock price, of our common stock.

	Year ended December 31, 2017	
	High	Low
Quarter ended March 31, 2017	$26.33	$20.00
Quarter ended June 30, 2017	$22.78	$20.54
Quarter ended September 30, 2017	$22.51	$17.12
Quarter ended December 31, 2017	$23.47	$20.38

	Transition period ended December 31, 2016	
Transition period:	High	Low
Quarter ended June 30, 2016 (1)	$25.32	$23.01
Quarter ended September 30, 2016	$25.86	$22.81
Quarter ended December 31, 2016	$26.07	$20.04

(1) The first quarter of the transition period ended December 31, 2016 (7-months) included only one month (June 1 - June 30, 2016) as a result of the change in our fiscal year-end.

	Year ended May 31, 2016		Year ended May 31, 2015	
	High	Low	High	Low
Quarter ended August 31,	$ 20.14	$ 13.88	$ 25.04	$ 20.70
Quarter ended November 30,	$ 21.53	$ 12.79	$ 21.55	$ 15.98
Quarter ended February 28,	$ 22.59	$ 18.42	$ 21.50	$ 15.87
Quarter ended May 31,	$ 26.00	$ 22.02	$ 19.34	$ 17.50

Holders of Record

As of March 5, 2018, there were 8 holders of record of our Common Stock. The number of record holders was determined from the records of our transfer agent and does not include beneficial owners of common stock whose shares are held in the names of various security brokers, dealers, and registered clearing agencies. The transfer agent of our common stock is American Stock Transfer & Trust Company, 6201 15th Avenue, Brooklyn, New York 11219.

Dividends

No cash dividends have been paid on our Common Stock to date. We currently intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends in the foreseeable future.

Purchases of Equity Securities

The following sets forth the shares of our common stock we acquired during the fourth quarter of 2017 pursuant to the surrender of shares by employees to satisfy minimum tax withholding obligations in connection with the vesting of restricted stock units.

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Month Ending	Total Number of Shares (or Units) Purchased	Average Price Paid per Share (or Unit)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2)
October 31, 2017	1,233	$ 20.69	—	$25,081,657
November 30, 2017	2,741	$ 21.33	—	$25,081,657
December 31, 2017	2,918	$ 23.47	—	$25,081,657

(1) On August 17, 2016, the Company entered into an agreement with its founder, Chairman and then Chief Executive Officer, Dr. Sotirios Vahaviolos, which provided for the Company to repurchase up to 1 million shares of its common stock from Dr.
Vahaviolos. The plan with Dr. Vahaviolos is included in the $50.0 million of purchases authorized by our Board of Directors
described in footnote 2 below. The repurchasing of Dr. Vahaviolos shares were completed during the third quarter of 2017. (See Note 20 in the notes to consolidated financial statements in Item 8 of this Annual Report for further details).

(2) - On October 7, 2015, the Company announced that its Board of Directors approved a share repurchase plan, which
authorizes the expenditure of up to $50.0 million for the purchase of the Company's common stock.

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ITEM 6. SELECTED FINANCIAL DATA

The following table presents selected financial data for the year ended December 31, 2017, the transition period ended December 31, 2016 as well as each of the last four fiscal years. This selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 and the audited consolidated financial statements and the notes thereto in Item 8 in this Annual Report.

	For the year ended	For the Transition period ended	For the year ended May 31,			
	December 31, 2017 (1)	December 31, 2016 (2)	2016 (3)	2015 (3)	2014 (3)	2013 (4)
	($ in thousands, except per share data)					
Statement of Income Data:						
Revenues	$700,970	$404,161	$719,181	$711,252	$623,447	$529,282
Gross profit	187,712	117,004	203,008	184,733	172,943	148,371
Income from operations	4,160	17,533	43,177	30,353	38,295	27,554
Net (loss) income attributable to Mistras Group, Inc.	$(2,175)	$9,568	$24,654	$16,081	$22,518	$11,646
Per Share Information:						
Weighted average common shares outstanding:						
Basic	28,422	28,989	28,856	28,613	28,365	28,141
Diluted	28,422	30,125	29,891	29,590	29,324	29,106
(Loss) earnings per common share:						
Basic	$(0.08)	$0.33	$0.85	$0.56	$0.79	$0.41
Diluted	$(0.08)	$0.32	$0.82	$0.54	$0.77	$0.40
Balance Sheet Data:						
Cash and cash equivalents	$27,541	$19,154	$21,188	$10,555	$10,020	$7,802
Total assets	554,441	469,427	482,675	471,727	443,972	377,997
Total long-term debt and obligations under capital leases, including current portion	181,491	103,466	104,776	132,822	97,563	77,956
Total Mistras Group, Inc. stockholders' equity	$270,619	$270,582	$276,163	$244,819	$242,104	$210,053
Cash Flow Data:						
Net cash provided by operating activities	$55,239	$30,259	$68,124	$49,840	$36,873	$43,503
Net cash used in investing activities	(102,797)	(17,374)	(16,752)	(49,651)	(38,005)	(45,479)
Net cash (used in) provided by financing activities	53,605	(12,869)	(40,378)	2,066	3,262	1,144

1- Includes pre-tax charges of $21.0 million relating to special items. See the Income from Operations table in Item 7 for a description of these items. The impact of these items, net of taxes, on net income and diluted earnings per share was $14.9 million and $0.51, respectively, including a $2.0 million tax charge related to the Tax Act.

2- Includes pre-tax charges of $2.2 million relating to special items. The impact of these items, net of taxes, on net income and diluted earnings per share was ($1.6) million and ($0.05), respectively.

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3 - Includes pre-tax charges (benefits) of $6.0 million in fiscal 2016, $0.1 million in fiscal 2015 and $(2.4) million in fiscal 2014 relating to special items. Net income was (decreased) increased by these items, net of taxes, by ($3.2) million in fiscal 2016, $1.0 million in fiscal 2015 and $2.4 million in fiscal 2014, respectively. The (decrease) increase of these items on diluted earnings per share were ($0.11) in fiscal 2016, $0.03 in fiscal 2015 and $0.08 in fiscal 2014, respectively.

4 - Includes pre-tax charges of $7.8 million relating to: goodwill impairment charge of $9.9 million and acquisition related benefit of ($2.1 million). The impact of these items, net of taxes, on net income and diluted earnings per share was ($8.3) million and ($0.29), respectively.

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ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

The following Management’s Discussion and Analysis (“MD&A”) provides a narrative of our results of operations for the year ended December 31, 2017 and the comparable period ended December 31, 2016, the transition period ended December 31, 2016 and the comparable period ended December 31, 2015 (which is referred to as "transition period 2015") and the fiscal years ended May 31, 2016 and 2015, respectively, and our financial position as of December 31, 2017 and December 31, 2016, respectively. The MD&A should be read together with our consolidated financial statements and related notes included in Item 8 in this Annual Report on Form 10-K. Unless otherwise specified or the context otherwise requires, “Mistras,” “the Company,” “we,” “us” and “our” refer to Mistras Group, Inc. and its consolidated subsidiaries. The MD&A includes the following sections:

- Forward-Looking Statements
- Overview
- Consolidated Results of Operations
- Liquidity and Capital Resources
- Critical Accounting Estimates
- Recent Accounting Pronouncements

Forward-Looking Statements

This annual report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 (Securities Act), and Section 21E of the Securities Exchange Act of 1934 (Exchange Act). Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. See “Forward-Looking Statements” at the beginning of Item 1 of this Annual Report.

Overview

We offer our customers “one source for asset protection solutions”® and are a leading global provider of technology-enabled asset protection solutions used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure. We combine industry-leading products and technologies, expertise in mechanical integrity (MI), Non-Destructive Testing (NDT), Destructive Testing (DT), mechanical and predictive maintenance (PdM) services, process and fixed asset engineering and consulting services, proprietary data analysis and our world class enterprise inspection database management and analysis software, PCMS, to deliver a comprehensive portfolio of customized solutions, ranging from routine inspections to complex, plant-wide asset integrity management and assessments. These mission critical solutions enhance our customers’ ability to comply with governmental safety and environmental regulations, extend the useful life of their assets, increase productivity, minimize repair costs, manage risk and avoid catastrophic disasters. Our operations consist of three reportable segments: Services, International and Products and Systems.

- Services provides asset protection solutions predominantly in North America, with the largest concentration in the United States, followed by Canada, consisting primarily of NDT, inspection, mechanical and engineering services that are used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure.

- International offers services, products and systems similar to those of the other segments to select markets within Europe, the Middle East, Africa, Asia and South America, but not to customers in China and South Korea, which are served by the Products and Systems segment.

- Products and Systems designs, manufactures, sells, installs and services the Company’s asset protection products and systems, including equipment and instrumentation, predominantly in the United States.

Given the role our solutions play in ensuring the safe and efficient operation of infrastructure, we have historically provided a majority of our services to our customers on a regular, recurring basis. We serve a global customer base of companies with asset-intensive infrastructure, including companies in the oil and gas (downstream, midstream, upstream and petrochemical), commercial aerospace and defense, power generation (natural gas, fossil, nuclear, alternative, renewable, and transmission and distribution), public infrastructure, chemicals, transportation, primary metals and metalworking, pharmaceutical/biotechnology and food processing industries and research and engineering institutions. As of December 31, 2017, we had approximately

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6,000 employees in approximately 120 offices across 14 countries. We have established long-term relationships as a critical solutions provider to many of the leading companies in our target markets.

For the last several years, we have focused on introducing our advanced asset protection solutions to our customers using proprietary, technology-enabled software and testing instruments, including those developed by our Products and Systems segment. During this period, the demand for outsourced asset protection solutions, in general, has increased, creating demand from which our entire industry has benefited. We believe continued growth can be realized in all of our target markets. Concurrent with this growth, we are working on building our infrastructure to profitably absorb additional growth and have made a number of acquisitions in an effort to leverage our fixed costs, grow our base of experienced, certified personnel, expand our product and technical capabilities and increase our geographical reach.

We have increased our capabilities and the size of our customer base through the development of applied technologies and managed support services, organic growth and the integration of acquired companies. These acquisitions have provided us with additional products, technologies, resources and customers that we believe will enhance our advantages over our competition.

Note about Non-GAAP Measures

In this MD&A under the heading "Income from Operations", the non-GAAP financial performance measure "Income before special items" is used for each of our three segments, the Corporate segment and the Total Company, with tables reconciling the measure to a financial measure under GAAP. This non-GAAP measure excludes from the GAAP measure "Income from Operations" (a) transaction expenses related to acquisitions, such as professional fees and due diligence costs, (b) the net changes in the fair value of acquisition-related contingent consideration liabilities, (c) impairment charges and (d) other special items. These special items have been excluded from the GAAP measure because these expenses and credits are not related to the Company’s or Segment’s core business operations. The acquisition related costs and special items can be a net expense or credit in any given period.

We believe investors and other users of our financial statements benefit from the presentation of "Income before special items” for each of our three segments, the Corporate segment and the Total Company in evaluating our performance. Income before special items excludes the identified special items, which provides additional tools to compare our core business operating performance on a consistent basis and measure underlying trends and results in our business. Income before special items is not used to determine incentive compensation for executives or employees, nor is it a replacement for GAAP and/or comparable to other companies non-GAAP financial measures.

Consolidated Results of Operations

On January 3, 2017, the Company's Board of Directors approved a change in the Company's fiscal year end from May 31 to December 31, effective December 31, 2016. In connection with this change, we previously filed a Transition Report on Form 10-K to report the results of the seven-month transition period from June 1, 2016 to December 31, 2016. In this report, the periods presented are the year ended December 31, 2017, the seven-month transition period from June 1, 2016 to December 31, 2016 and the years ended May 31, 2016 and 2015. For comparison purposes, we have also included unaudited data for the year ended December 31, 2016 and for the seven months ended December 31, 2015.

Year ended December 31, 2017 vs. Year ended December 31, 2016

The following table summarizes our consolidated statements of operations for the years ended December 31, 2017 and 2016:

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	For the year ended December 31,	
	2017	2016 (unaudited)
	($ in thousands)	
Revenues	$700,970	$684,762
Gross profit	187,712	194,134
Gross profit as a % of Revenue	27 %	28 %
Total operating expenses	183,552	168,588
Operating expenses as a % of Revenue	26 %	25 %
Income from operations	4,160	25,546
Income from operations as a % of Revenue	1 %	4 %
Interest expense	4,386	3,075
(Loss) income before provision for income taxes	(226)	22,471
Provision for income taxes	1,942	8,008
Net (loss) income	(2,168)	14,463
Less: net income attributable to noncontrolling interests, net of taxes	7	54
Net (loss) income attributable to Mistras Group, Inc.	$(2,175)	$14,409

Revenues

Revenues by segment for the years ended December 31, 2017 and 2016 were as follows:

	For the year ended December 31,	
	2017	2016 (unaudited)
	($ in thousands)	
Revenues		
Services	$543,565	$519,378
International	144,265	148,761
Products and Systems	23,297	26,049
Corporate and eliminations	(10,157)	(9,426)
	$700,970	$684,762

Revenue was $701.0 million for the year ended December 31, 2017, an increase of $16.2 million, or 2%, compared with the year ended December 31, 2016. The increase was driven by the Services segment, which increased by $24.2 million, or 5%, partially offset by a decrease of $4.5 million, or 3% from the International segment and the Products and Systems segment, which decreased $2.8 million, or 11%. The Services segment increase was driven by mid-single digit acquisition growth. The International segment decrease was driven by a mid-single digit organic decline, offset by low single digit favorable impact of foreign exchange rates. The Products and Systems segment decrease was driven by lower sales volume.

Revenues from oil and gas customers comprised 58% for the year ended December 31, 2017, compared to 57% for the year ended December 31, 2016. Revenues from aerospace customers comprised 13% for the years ended December 31, 2017 and 2016.

Gross Profit

Gross profit by segment for the years ended December 31, 2017 and December 31, 2016 was as follows:

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	For the year ended December 31,	
	2017	2016 (unaudited)
	($ in thousands)	
Gross profit		
Services	$139,160	$133,532
% of segment revenue	25.6 %	25.7 %
International	38,974	48,372
% of segment revenue	27.0 %	32.5 %
Products and Systems	9,798	11,956
% of segment revenue	42.1 %	45.9 %
Corporate and eliminations	(220)	274
	$187,712	$194,134
% of total revenue	26.8 %	28.4 %

Gross profit decreased $6.4 million, or 3%, for the year ended December 31, 2017 compared to the year ended December 31, 2016, despite a sales increase of 2%. Gross profit margin was 26.8% and 28.4% for the years ended December 31, 2017 and 2016, respectively. International segment gross margins had a year-on-year decline of 550 basis points to 27.0% for the year ended December 31, 2017. This decline was primarily driven by lower revenues in the Company's German subsidiary, as well as poor margins on a large contract and lower utilization of technical labor in the United Kingdom. Products and Systems segment gross margins declined by 380 basis points for the year ended December 31, 2017 to 42.1%, driven by lower sales volumes and a less favorable sales mix. Services segment gross profit margins were consistent with the prior year.

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Income from Operations. The following table shows a reconciliation of segment income (loss) from operations to income (loss) before special items for the years ended December 31, 2017 and 2016:

	For the year ended December 31,	
	2017	2016 (unaudited)
	($ in thousands)	
Services:		
Income from operations (GAAP)	$46,677	$ 37,788
Litigation charges	—	6,320
Bad debt provision for a customer bankruptcy	1,200	—
Severance costs	561	77
Asset write-offs and lease terminations	123	—
Acquisition-related (benefit) expense, net	392	(232)
Income before special items (non-GAAP)	48,953	43,953
International:		
Income from operations (GAAP)	3,537	12,908
Severance costs	1,055	1,184
Asset write-offs and lease terminations	—	1,042
Acquisition-related (benefit) expense, net	(501)	(42)
Income before special items (non-GAAP)	4,091	15,092
Products and Systems:		
Loss from operations (GAAP)	(16,991)	(180)
Impairment charges	15,810	—
Severance costs	18	31
Loss before special items (non-GAAP)	(1,163)	(149)
Corporate and Eliminations:		
Loss from operations (GAAP)	(29,063)	(24,970)
Litigation charges	1,600	—
Severance costs	184	133
Acquisition-related expense (benefit), net	591	269
Loss before special items (non-GAAP)	(26,688)	(24,568)
Total Company:		
Income from operations (GAAP)	$4,160	$ 25,546
Litigation charges	$1,600	$ 6,320
Impairment charges	$15,810	$ —
Bad debt provision for a customer bankruptcy	$1,200	$ —
Severance costs	$1,818	$ 1,425
Asset write-offs and lease terminations	$123	$ 1,042
Acquisition-related (benefit) expense, net	$482	$ (5)
Income before special items (non-GAAP)	$25,193	$ 34,328

Total Company income from operations (GAAP) decreased by $21.4 million, or 84% compared to the year ended December 31, 2016. Total Company income before special items (non-GAAP) decreased by $9.1 million or 27% compared with the year

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ended December 31, 2016. Income before special items declined by 140 basis points to 3.6% for the year ended December 31, 2017 from 5.0% for the year ended December 31, 2016.

Total operating expenses increased by $15.0 million, or 9% for the year ended December 31, 2017, driven primarily by the $15.8 million impairment charges for the Products and Systems segment (See Notes 8 and 9 in the notes to consolidated financial statements in Item 8 of this Annual Report).

Interest Expense

Interest expense was $4.4 million and $3.1 million for the years ended December 31, 2017 and December 31, 2016. The increase was primarily related to increased borrowings on the Company's revolving line of credit.

Income Taxes

Our effective income tax rate was approximately (858)% for the year ended December 31, 2017, compared to 36% for the year ended December 31, 2016. The change in effective tax rate was driven by tax reform in the United States.

On December 22, 2017, the United States enacted fundamental changes to federal tax law following the passage of the Tax Cuts and Jobs Act (the “Tax Act”). The Tax Act is complex and significantly changes the U.S. corporate tax system. Our financial statements for the year ended December 31, 2017 reflect certain effects of the Tax Act which includes a reduction in the corporate tax rate from 35% to 21%, imposition of a tax on unrepatriated foreign earnings (“the transition tax”), and a reduction to deferred tax assets attributable to changes made to executive compensation rules. As a result of the changes to tax laws and tax rates under the Tax Act, we incurred an increase in income tax expense of $1.9 million during the year ended December 31, 2017, which consisted primarily of a $2.3 million decrease in our net deferred tax liabilities due to the reduction in the federal corporate tax rate from 35% to 21%, an increase of $3.9 million in tax expense attributable to the transition tax, and a decrease in the realizability of deferred tax assets of $0.3 million due to changes made to executive compensation rules pursuant to the Tax Act.

Income tax expense varies as a function of pre-tax income and the level of non-deductible expenses, such as certain amounts of meals and entertainment expense, valuation allowances, and other permanent differences. It is also affected by discrete items that may occur in any given year, but are not consistent from year to year. Our effective income tax rate may fluctuate over the next few years due to many variables including the amount and future geographic distribution of our pre-tax income, changes resulting from our acquisition strategy, increases or decreases in our permanent differences, and the effects of the Tax Act.

Transition period ended December 31, 2016 vs. Transition period ended December 31, 2015

The following table summarizes our consolidated statements of operations for the transition periods ended December 31, 2016 and 2015:

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	For the Transition period ended December 31,	
	2016	2015 (unaudited)
	($ in thousands)	
Revenues	$404,161	$427,913
Gross profit	117,004	123,190
Gross profit as a % of Revenue	29 %	29 %
Total operating expenses	99,471	88,092
Operating expenses as a % of Revenue	25 %	21 %
Income from operations	17,533	35,098
Income from operations as a % of Revenue	4 %	8 %
Interest expense	2,052	3,672
Income before provision for income taxes	15,481	31,426
Provision for income taxes	5,870	11,627
Net income	9,611	19,799
Less: net income (loss) attributable to noncontrolling interests, net of taxes	43	(15)
Net income attributable to Mistras Group, Inc.	$9,568	$19,814

Revenues by segment for the transition periods ended December 31, 2016 and 2015 were as follows:

	For the Transition period ended December 31,	
	2016	2015 (unaudited)
	($ in thousands)	
Revenues		
Services	$293,218	$327,118
International	104,013	87,411
Products and Systems	14,541	18,786
Corporate and eliminations	(7,611)	(5,402)
	$404,161	$427,913

Revenue was $404.2 million for the transition period ended December 31, 2016, a decrease of $23.8 million, or 6% compared with the transition period ended December 31, 2015. The decrease was driven by the Services segment, which decreased by $33.9 million, or 10% and the Products and Systems segment, which decreased by $4.2 million, or 23%, partially offset by an increase of $16.6 million, or 19% from the International segment. The Services segment decrease was driven by low double digit organic decline, offset by a small amount of acquisition growth. The Products and Systems segment decrease was driven by lower sales volume. The International segment increase was driven by organic growth, offset partially by an unfavorable impact of foreign exchange rates.

Revenues from oil and gas customers comprised 55% for the transition period ended December 31, 2016.

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Gross profit by segment for the transition periods ended December 31, 2016 and December 31, 2015 was as follows:

	For the Transition period ended December 31,			
	2016		2015 (unaudited)	
	($ in thousands)			
Gross profit				
Services	$75,784		$ 87,514	
% of segment revenue	25.8	%	26.8	%
International	34,210		26,762	
% of segment revenue	32.9	%	30.6	%
Products and Systems	6,920		8,986	
% of segment revenue	47.6	%	47.8	%
Corporate and eliminations	90		(72	)
	$117,004		123,190	
% of total revenue	28.9	%	28.8	%

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Gross profit decreased $6.2 million, or 5% for the transition period ended December 31, 2016 compared to the transition period ended December 31, 2015. As a percentage of revenues, gross profit improved by 10 basis points compared with the prior year to 28.9%.

The decrease in gross profit was primarily attributable to revenue declines in the Services segment of $11.7 million or 13% and in the Products and Systems segment of $2.1 million or 23%, offset in part by the International segment's improvement of $7.4 million or 28%. International gross profit margins improved to 32.9% of revenues in the transition period ended December 31, 2016 compared with 30.6% of revenues in the transition period ended December 31, 2015. The 230 basis point increase was due to improvement across the Company's largest country locations, driven by organic growth, improvements in technical labor utilization, sales mix and overhead utilization. Services segment gross profit margins decreased to 25.8% of revenues in the transition period ended December 31, 2016 compared with 26.8% of revenues in the transition period ended December 31, 2015. The 100 basis point decrease was primarily driven by lower sales volume and a less favorable sales mix. Products and Systems segment gross margins decreased by 20 basis points to 47.6% of revenues.

Income from Operations. The following table shows a reconciliation of the segment income from operations to income before for the transition periods ended December 31, 2016 and 2015:

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	For the transition period ended December 31, 2016	2015 (unaudited)
	($ in thousands)	
Services:		
Income from operations (GAAP)	$22,411	$ 37,175
Severance costs	77	188
Acquisition-related expense (benefit), net	236	(593)
Income before special items (non-GAAP)	22,724	36,770
International:		
Income from operations (GAAP)	10,597	6,888
Severance costs	474	175
Asset write-offs and lease terminations	1,042	—
Acquisition-related expense (benefit), net	29	(457)
Income before special items (non-GAAP)	12,142	6,606
Products and Systems:		
(Loss) income from operations (GAAP)	(254)	2,613
Severance costs	14	17
(Loss) income before special items (non-GAAP)	(240)	2,630
Corporate and Eliminations:		
Loss from operations (GAAP)	(15,221)	(11,578)
Severance costs	133	—
Acquisition-related expense (benefit), net	231	91
Loss before special items (non-GAAP)	(14,857)	(11,487)
Total Company:		
Income from operations (GAAP)	$17,533	$ 35,098
Severance costs	$698	$ 380
Asset write-offs and lease terminations	$1,042	$ —
Acquisition-related expense (benefit), net	$496	$ (959)
Income before special items (non-GAAP)	$19,769	$ 34,519

Total Company income from operations (GAAP) decreased by $17.6 million, or 50% compared to the transition period ended December 31, 2015. Total Company income before special items (non-GAAP) decreased by $14.8 million or 43% compared with the transition period ended December 31, 2015. Income before special items declined by 320 basis points to 4.9% of revenues for the transition period ended December 31, 2016.

Total operating expenses increased by $11.4 million, or 13% in the transition period ended December 31, 2016 compared to the transition period ended December 31, 2015. The increase included approximately $5 million of expenses that were primarily associated with the acceleration of certain costs to align with our new fiscal year, and other charges which included severance and the write-off of an intangible asset.

Interest Expense

Interest expense was $2.1 million and $3.7 million for the transition periods ended December 31, 2016 and December 31, 2015, respectively. The decrease was primarily related to the repayment of seller notes related to acquisitions.

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Income Taxes

Our effective income tax rate was 38% for the transition period ended December 31, 2016 compared to 37% for the transition period ended December 31, 2015. The higher effective tax rate was driven by the impact of permanent items.

Fiscal 2016 vs. 2015

The following table summarizes our consolidated statements of operations for fiscal 2016 and 2015:

	For the year ended May 31,	
	2016	2015
	($ in thousands)	
Revenues	$ 719,181	$ 711,252
Gross profit	203,008	184,733
Gross profit as a % of Revenue	28 %	26 %
Total operating expenses	159,831	154,380
Operating expenses as a % of Revenue	22 %	22 %
Income from operations	43,177	30,353
Income from operations as a % of Revenue	6 %	4 %
Interest expense	4,762	4,622
Income before provision for income taxes	38,415	25,731
Provision for income taxes	13,765	9,740
Net income	24,650	15,991
Less: net (loss) income attributable to noncontrolling interests, net of taxes	(4)	(90)
Net income attributable to Mistras Group, Inc.	$ 24,654	$ 16,081

Revenues by segment for fiscal 2016 and 2015 were as follows:

	For the year ended May 31,	
	2016	2015
	($ in thousands)	
Revenues		
Services	$ 553,279	$ 540,224
International	143,025	146,953
Products and Systems	30,293	31,255
Corporate and eliminations	(7,416)	(7,180)
	$ 719,181	$ 711,252

Revenue was $719.2 million in fiscal 2016, an increase of $7.9 million or 1% compared with fiscal 2015, driven by Services segment growth of $13.1 million or 2%, offset by declines in International revenues of $3.9 million or 3%, and the Products & Systems segment of $1.0 million or 3%. The Services segment increase was driven by low single digit organic growth, plus a lesser amount of acquisition-driven growth, offset in part by low single digit unfavorable impact of foreign exchange rates. The decline in International Segment revenues was driven by a combination of high single digit organic growth, which had positive contributions from each of the segment's four largest subsidiaries, that was more than offset by the low double digit unfavorable impact of foreign exchange rates. Products and Systems segment revenues declined due to lower sales volume.

Management believes that revenues generally declined in the inspection industry during fiscal 2016, as evidenced by several of the Company's competitors who reported revenue declines that have been driven by customers spending less on inspection due to pressures stemming from low commodities prices. Despite these difficult market conditions, the Company had modest growth in fiscal 2016, as noted above, driven by market share gains in both the Services and International segments. Revenues

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from oil and gas customers comprised 56% and 52% of revenues in fiscal 2016 and 2015, respectively. The International segment's largest revenue concentration in fiscal 2016 was aerospace and defense, which comprised 39% of segment revenues. One customer accounted for 10% of fiscal 2016 revenues.

Gross profit by segment for fiscal 2016 and 2015 was as follows:

	For the year ended May 31,			
	2016		2015	
	($ in thousands)			
Gross profit				
Services	$ 145,262		$ 135,201	
% of segment revenue	26.3	%	25.0	%
International	43,613		34,572	
% of segment revenue	30.5	%	23.5	%
Products and Systems	14,022		14,314	
% of segment revenue	46.3	%	45.8	%
Corporate and eliminations	111		646	
	$ 203,008		$ 184,733	
% of total revenue	28.2	%	26.0	%

Gross profit increased $18.3 million, or 10% in fiscal 2016 compared to fiscal 2015. As a percentage of revenues, gross profit margin improved by 220 basis points compared with the prior year to 28.2% in fiscal 2016.

The 2016 improvement in gross profit margin was primarily attributable to the International and Services segments. International segment gross margins improved to 30.5% of revenues in fiscal 2016 compared with 23.5% of revenues in the prior year. The 700 basis point increase was driven by improvement in the Company's four largest countries, driven by organic revenue growth, prior year management changes and staffing actions that improved technical labor utilization and improved sales mix. Services segment gross profit margin was 26.3% and 25.0% in fiscal 2016 and fiscal 2015, respectively. The 130 basis point improvement was driven by improvements in contract profitability and technician labor utilization. Products and Systems segment gross profit margin improved to 46.3% compared to 45.8% in the prior year driven by a more favorable sales mix which included fewer customized solutions.

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Income from Operations. The following table shows a reconciliation of the segment income from operations to income before special items for fiscal 2016 and 2015:

	For the year ended May 31,	
	2016	2015
	($ in thousands)	
Services:		
Income from operations (GAAP)	$ 52,552	$ 49,142
Legal settlement	6,320	—
Severance costs	188	—
Acquisition-related expense (benefit), net	(1,061)	(639)
Income before special items (non-GAAP)	57,999	48,503
International:		
Income (loss) from operations (GAAP)	$ 9,293	$ (575)
Severance costs	885	1,082
Asset write-offs and lease terminations	—	872
Acquisition-related expense (benefit), net	(520)	(2,926)
Income (loss) before special items (non-GAAP)	9,658	(1,547)
Products and Systems:		
Income from operations (GAAP)	$ 2,688	$ 2,461
Severance costs	34	99
Asset write-offs and lease terminations	—	157
Acquisition-related expense (benefit), net	—	—
Income before special items (non-GAAP)	2,722	2,717
Corporate and Eliminations:		
Loss from operations (GAAP)	$ (21,356)	$ (20,675)
Severance costs	—	542
Charges related to sale of foreign operations	—	2,516
Acquisition-related expense (benefit), net	128	(1,602)
Loss before special items (non-GAAP)	(21,228)	(19,219)
Total Company:		
Income from operations (GAAP)	$ 43,177	$ 30,353
Legal settlement	$ 6,320	$ —
Severance costs	$ 1,107	$ 1,723
Asset write-offs and lease terminations	$ —	$ 1,029
Charges related to sale of foreign operations	$ —	$ 2,516
Acquisition-related expense (benefit), net	$ (1,453)	$ (5,167)
Income before special items (non-GAAP)	$ 49,151	$ 30,454

Total Company income from operations (GAAP) improved by $12.8 million, or 42% compared to fiscal 2015. Total Company income before special items (non-GAAP) improved by $18.7 million or 61% compared with fiscal 2015. Income before special items improved by 250 basis points to 6.8% of revenues in fiscal 2016. This improvement was driven by the Services and International segments. Services segment income from operations (GAAP) improved in fiscal 2016 by $3.4 million, or 7%, while income before special items (non-GAAP) improved by $9.5 million, or 20%. Services operating profit margin before

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special items improved by 150 basis points to 10.5% in fiscal 2016, driven by the 130 basis point improvement in gross profit margin for the segment. International segment income before special charges improved by approximately 800 basis points to 7% in fiscal 2016, driven by the 700 basis point improvement in segment gross profit margin. Products and Systems fiscal 2016 operating margins before special charges of 9.0% improved by 30 basis points over 2015.

Total operating expenses increased by $5 million, or 4% in fiscal 2016 compared to fiscal 2015, driven by a $6.3 million legal settlement accrual, offset by a $1.3 million, or 1% decline in recurring expenses.

Interest Expense

Interest expense was $4.8 million and $4.6 million in fiscal 2016 and fiscal 2015, respectively.

Income Taxes

Our effective income tax rate was 36% for fiscal 2016 compared to 38% for fiscal 2015. The lower effective tax rate was driven by discrete items, including favorability from reserves pertaining to uncertain tax positions and the absence of increases in the valuation allowance for deferred tax assets in 2016.

Liquidity and Capital Resources

Overview

The Company has funded its operations from cash provided from operations, bank borrowings and capital lease financings. Management believes that the Company's existing cash and cash equivalents, anticipated cash flows from operating activities, and available borrowings under our credit agreement will be more than sufficient to meet anticipated cash needs over the next 12 months. The Company generated operating cash flow of $55.2 million for the year ended December 31, 2017, $63.2 million for the year ended December 31, 2016 and $30.3 million for the transition period ended December 31, 2016. The Company generated operating cash flow of $68.1 million in fiscal 2016 and $49.8 million in fiscal 2015. Capital expenditures for the purchase of property, plant and equipment and of intangible assets was $20.6 million $15.9 million, $9.8 million, $16.2 million and $16.0 million for the years ended December 31, 2017 and 2016, the transition period ended December 31, 2016 and for fiscal 2016 and 2015, respectively.

Cash Flows Table

The following table summarizes our cash flows for the years ended December 31, 2017 and 2016, the transition period ended December 31, 2016 and fiscal 2016 and 2015:

	For the year ended December 31,		For the Transition period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2016	2015
($ in thousands)		(unaudited)			

Net cash provided by (used in):					
Operating activities	$55,239	$ 63,211	$ 30,259	$68,124	$49,840
Investing activities	(102,797)	(22,408)	(17,374)	(16,752)	(49,651)
Financing activities	53,605	(30,031)	(12,869)	(40,378)	2,066
Effect of exchange rate changes on cash	2,340	(1,217)	(2,050)	(361)	(1,720)
Net change in cash and cash equivalents	$8,387	$ 9,555	$ (2,034)	$10,633	$535

Cash Flows from Operating Activities

Cash provided by operating activities for the year ended December 31, 2017 was $55.2 million, a decline of $8 million from the prior year. The decrease was primarily attributable to a lower level of net income, exclusive of the $15.8 million impairment charge during 2017.

Cash provided by operating activities for the transition period ended December 31, 2016 was $30.3 million.

Cash provided by operating activities in fiscal 2016 improved by $18 million or 37% over the prior fiscal year. This improvement was primarily driven by the Company's $16 million improvement in net income, as adjusted for working capital items and certain non-cash items, most notably the $6 million legal settlement, as well as from reducing Days Sales Outstanding by 2 days.

Cash provided by operating activities in fiscal 2015 improved by $13 million or 35% over the prior fiscal year. The improvement was primarily attributable to the timing of working capital inflows and outflows, namely a $28 million improvement in the timing of collections of accounts receivable, offset in part by incremental net outflows of $15 million related to the timing of payments relating to accounts payable, and accrued expenses and other liabilities.

Cash Flows from Investing Activities

Net cash used in investing activities for the year ended December 31, 2017 was $102.8 million, principally due to $83.4 million of acquisitions and $20.6 million purchases of property, plant and equipment and intangible assets. Net cash used in investing activities for the year ended December 31, 2016 was $22.4 million, principally due to $15.9 million purchases of property, plant and equipment and intangible assets as well as $8.3 million of acquisitions.

Net cash used in investing activities for the transition period ended December 31, 2016 was $17.4 million, principally due to $9.8 million purchases of property, plant and equipment and intangible assets and $8.3 million of acquisitions.

Net cash used in investing activities was $16.8 million in fiscal 2016, principally due to $16.2 million purchases of property, plant and equipment and intangible assets.

Net cash used in investing activities was $49.7 million in fiscal 2015, principally due to acquisitions totaling $34.7 million, and purchases of property, plant and equipment of $16.0 million.

Cash Flows from Financing Activities

Net cash provided by financing activities for the year ended December 31, 2017 was $53.6 million, derived from our net borrowings for the year of $71.5 million, which were primarily used to fund acquisitions, offset principally by $15.9 million of treasury stock purchases. Net cash used in financing activities for the year ended December 31, 2016 was $30.0 million, driven primarily by $17.3 million of net repayments of debt and $9.0 million of treasury stock purchases.

Net cash used in financing activities for the transition period ended December 31, 2016 was $12.9 million, driven primarily by $9 million of treasury stock purchases and $2 million of net repayments of debt.

Net cash used in financing activities in fiscal 2016 of $40 million consisted primarily of net repayments of debt totaling $36 million.

Net cash provided by financing activities in fiscal 2015 was $2 million.

Cash Balance and Credit Facility Borrowings

As of December 31, 2017, the Company had cash and cash equivalents totaling $27.5 million, of which $27.3 million is outside of the United States, and available borrowing capacity of up to $88.2 million under its credit agreement (as defined below). Borrowings of $156.9 million and letters of credit of $4.9 million were outstanding under the credit agreement at December 31, 2017. We finance our operations primarily through our existing cash balances, cash collected from operations, bank borrowings and capital lease financing. We believe these sources are sufficient to fund our operations for the foreseeable future.

On December 8, 2017, the Company entered into a Fourth Amended and Restated Credit Agreement (“Credit Agreement”). The Credit Agreement increased the Company’s revolving line of credit from $175.0 million to $250.0 million and provides that under certain circumstances the line of credit can be increased to $300.0 million. The Company may continue to borrow up to $30.0 million in non-U.S. Dollar currencies and use up to $10.0 million of the credit limit for the issuance of letters of credit. The maturity date of the Credit Agreement is December 7, 2022.

Loans under the Credit Agreement bear interest at LIBOR plus an applicable LIBOR margin ranging from 1% to 2%, or a base rate less a margin of 1.25% to 0.375%, at our option, based upon our Funded Debt Leverage Ratio. Funded Debt Leverage Ratio is generally the ratio of (1) all outstanding indebtedness for borrowed money and other interest-bearing indebtedness as of the date of determination to (2) EBITDA (which is (a) net income, less (b) income (or plus loss) from discontinued operations and extraordinary items, plus (c) income tax expenses, plus (d) interest expense, plus (e) depreciation, depletion, and amortization (including non-cash loss on retirement of assets), plus (f) stock compensation expense, less (g) cash expense related to stock compensation, plus (h) certain amounts of EBITDA of acquired business for the prior twelve months, plus (i) certain expenses related to the closing of the Credit Agreement, plus (j) non-cash expenses which do not (in the current or any future period) represent a cash item (excluding non-cash gains which increase net income), plus (k) non-recurring charges (not to exceed $5 million in the four consecutive quarters immediately preceding the date of determination) for items such as severance, lease termination charges, asset write-offs and litigation settlements paid during the period, all determined for the period of four consecutive fiscal quarters immediately preceding the date of determination. The Company has the benefit of the lowest margin if its Funded Debt Leverage Ratio is equal to or less than 0.5 to 1, and the margin increases as the ratio increases, to the maximum margin if the ratio is greater than 2.75 to 1. The Company will also bear additional costs for market disruption, regulatory changes effecting the lenders' funding costs, and default pricing of an additional 2% interest rate margin on any amounts not paid when due. Amounts borrowed under the Credit Agreement are secured by liens on substantially all of the assets of the Company and is guaranteed by some of our subsidiaries.

The Credit Agreement contains financial covenants requiring that we maintain a Funded Debt Leverage Ratio of no greater than 3.50 to 1 and an Interest Coverage Ratio of at least 3.0 to 1. Interest Coverage Ratio means the ratio, as of any date of determination, of (a) EBITDA for the 12 month period immediately preceding the date of determination, to (b) all interest, premium payments, debt discount, fees, charges and related expenses of us and our subsidiaries in connection with borrowed money (including capitalized interest) or in connection with the deferred purchase price of assets, in each case to the extent treated as interest in accordance with GAAP, paid during the 12 month period immediately preceding the date of determination.
The Company can elect to increase the Funded Debt Leverage Ratio to 3.75 to 1 temporarily for four fiscal quarters immediately following the fiscal quarter in which the Company acquires another business. The Company can make this election twice during the term of the Credit Agreement.

The Credit Agreement also limits the Company's ability to, among other things, create liens, make investments, incur more indebtedness, merge or consolidate, make dispositions of property, pay dividends and make distributions to stockholders or repurchase our stock, enter into a new line of business, enter into transactions with affiliates and enter into burdensome agreements. The Credit Agreement does not limit the Company's ability to acquire other businesses or companies except that the acquired business or company must be in the Company's line of business, the Company must be in compliance with the financial covenants on a pro forma basis after taking into account the acquisition, and, if the acquired business is a separate subsidiary, in certain circumstances the lenders will receive the benefit of a guaranty of the subsidiary and liens on its assets and a pledge of its stock.

As of December 31, 2017, the Company was in compliance with the terms of the Credit Agreement, and has undertaken to continuously monitor compliance with these covenants.

Liquidity and Capital Resources Outlook

Future Sources of Cash

We expect our future sources of cash to include cash flow generated from our operating activities and borrowings under our Credit Agreement. Our revolving credit facility is available for cash advances required for working capital and for letters of credit to support our operations. Acquisitions are funded through available cash, borrowings under the revolving credit facility and seller notes.

Future Uses of Cash

We expect our future uses of cash will primarily be for acquisitions, international expansion, stock repurchases, purchases or manufacture of field testing equipment to support growth, additional investments in technology and software products and the replacement of existing assets and equipment used in our operations. We often make purchases to support new sources of revenues, particularly in our Services segment. In addition, we will need to fund a certain amount of replacement equipment, including our fleet vehicles. We historically spend approximately 2% to 4% of our total revenues on capital expenditures, excluding acquisitions, and expect to fund these expenditures through a combination of cash and lease financing. Our cash capital expenditures, excluding acquisitions, for the year ended December 31, 2017, the transition period ended December 31, 2016 and for fiscal 2016 and 2015 were approximately 3%, 2%, 2% and 2% of revenues, respectively.

Our future acquisitions may also require capital. We acquired three companies during the year ended December 31, 2017 and, three companies during the transition period ended December 31, 2016, with an aggregate cash outlay of $92.3 million. In some cases, additional equipment will be needed to upgrade the capabilities of these acquired companies. In addition, our future acquisition and capital spending may increase as we pursue growth opportunities. Other investments in infrastructure, training and software may also be required to match our growth, but we plan to continue using a disciplined approach to building our business. In addition, we will use cash to fund our operating leases, capital leases, long-term debt repayments and various other obligations as they arise.

We also expect to use cash to support our working capital requirements for our operations, particularly in the event of further growth and due to the impacts of seasonality on our business. Our future working capital requirements will depend on many factors, including the rate of our revenue growth, our introduction of new solutions and enhancements to existing solutions and our expansion of sales and marketing and product development activities. To the extent that our cash and cash equivalents and future cash flows from operating activities are insufficient to fund our future activities, we may need to raise additional funds through bank credit arrangements, public or private equity financings, or debt financings. We also may need to raise additional funds in the event we determine in the future to effect one or more acquisitions of businesses, technologies or products that will complement our existing operations. In the event additional funding is required, we may not be able to obtain bank credit arrangements or effect an equity or debt financing on acceptable terms.

Contractual Obligations

We generally do not enter into long-term minimum purchase commitments. Our principal commitments, in addition to those related to our long-term debt discussed below, consist of obligations under facility leases for office space and equipment leases and contingent consideration obligations in connection with our acquisitions.

The following table summarizes our outstanding contractual obligations as of December 31, 2017:

($ in thousands)	Total	December 31, 2018	December 31, 2019	December 31, 2020	December 31, 2021	December 31, 2022	Thereafter
Long-term debt (1)	$166,878	$ 2,358	$ 1,664	$ 1,243	$ 892	$ 157,728	$ 2,993
Capital lease obligations (2)	15,344	5,899	3,788	2,485	1,778	634	760
Operating lease obligations	49,432	11,542	8,888	6,902	4,881	4,304	12,915
Contingent consideration obligations (3)	5,508	3,430	1,279	799	—	—	—
Total	$237,162	$ 23,229	$ 15,619	$ 11,429	$ 7,551	$ 162,666	$ 16,668

(1) Consists primarily of the principal portion of borrowings from our senior credit facility and seller notes payable in connection with our acquisitions and includes the current portion outstanding.

(2) Includes estimated cash interest to be paid over the remaining terms of the leases.

(3) Consists of payments deemed reasonably likely to occur in connection with our acquisitions.

Off-Balance Sheet Arrangements

During the year ended December 31, 2017, the transition period ended December 31, 2016 as well as fiscal 2016 and 2015, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with generally accepted accounting principles requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and expenses during the reporting period. The accounting policies that we believe require more significant estimates and assumptions include: revenue recognition, long-lived assets and goodwill. We base our estimates and assumptions on historical experience, known or expected trends and various other assumptions that we believe to be reasonable. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates, which may cause our future results to be significantly affected.

We believe that the following critical accounting policies comprise the more significant estimates and assumptions used in the preparation of our consolidated financial statements.

Revenue Recognition

Revenue is generally recognized when persuasive evidence of an arrangement exists, services have been rendered or products have been delivered, the fee is fixed or determinable, and collectability is reasonably assured, as summarized below.

Services

Most of our projects are short-term in nature and revenue is primarily derived from providing services on a time and material basis. Service arrangements generally consist of inspection professionals working under contract for a fixed period of time or on a specific customer project. Revenue is generally recognized when the service is performed in accordance with terms of each customer arrangement, upon completion of the earnings process and when collection is reasonably assured. At the end of any reporting period, earned revenue is accrued for services that have been provided which have not yet been billed. Reimbursable costs, including those related to travel and out-of-pocket expenses, are included in revenue, and equivalent amounts of reimbursable costs are included in cost of services.

Products and Systems

Sales of products and systems are recorded when the sales price is fixed and determinable and the risks and rewards of ownership are transferred (generally upon shipment) and when collectability is reasonably assured.

These arrangements occasionally contain multiple elements or deliverables, such as hardware, software (that is essential to the functionality of the hardware) and related services. We recognize revenue for delivered elements as separate units of accounting, when the delivered elements have standalone value, uncertainties regarding customer acceptance are resolved and there are no refund or return rights for the delivered elements. We establish the selling prices for each deliverable based on our vendor-specific objective evidence (“VSOE”), if available, third-party evidence, if VSOE is not available, or estimated selling price (“ESP”) if neither VSOE nor third-party evidence is available. We establish VSOE of selling price using the price charged for a deliverable when sold separately and, in rare instances, using the price established by management having the relevant authority. Third-party evidence of selling price is established by evaluating largely similar and interchangeable competitor products or services in standalone sales to similarly situated customers. We determine ESP by considering internal factors such as margin objectives, pricing practices and controls, customer segment pricing strategies and the product life cycle. Consideration is also given to market conditions such as competitor pricing strategies and industry technology life cycles. When determining ESP, we apply management judgment to establish margin objectives and pricing strategies and to evaluate market conditions and product life cycles. Changes in the aforementioned factors may result in a different allocation of revenue to the deliverables in multiple element arrangements and therefore may change the pattern and timing of revenue recognition for these elements, but will not change the total revenue recognized for the arrangement.

A portion of our revenue is generated from engineering and manufacturing of custom products under long-term contracts that may last from several months to several years, depending on the contract. Revenues from long-term contracts are recognized on the percentage-of-completion method of accounting. Under the percentage-of-completion method of accounting revenues are recognized as work is performed. The percentage of completion at any point in time is generally based on total costs or total labor dollars incurred to date in relation to the total estimated costs or total labor dollars estimated at completion. The percentage of completion is then applied to the total contract revenue to determine the amount of revenue to be recognized in the period. Application of the percentage-of-completion method of accounting requires the use of estimates of costs to be incurred for the performance of the contract. Contract costs include all direct materials, direct labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs, and all costs associated with operation of equipment. The cost estimation process is based upon the professional knowledge and experience of our engineers, project managers and financial professionals. Factors that are considered in estimating the work to be completed include the availability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in our project performance and the recoverability of any claims. Whenever revisions of estimated contract costs and contract values indicate that the contract costs will exceed estimated revenues, thus creating a loss, a provision for the total estimated loss is recorded in that period.

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Long-Lived Assets

We perform a review of long-lived assets (or asset groups) for impairment when events or changes in circumstances indicate the carrying value of such assets may not be recoverable. If an indication of impairment is present, we compare the estimated undiscounted future cash flows to be generated by the asset (or asset group) to its carrying amount. If the undiscounted future cash flows are less than the carrying amount of the asset (or asset group), we record an impairment loss equal to the excess of the asset's carrying amount over its fair value. We estimate fair value based on valuation techniques such as a discounted cash flow analysis or a comparison to fair values of similar assets. As of December 31, 2017 and December 31, 2016, we had $87.1 million and $73.1 million in net property, plant and equipment, respectively, and $63.7 million and $40.0 million in intangible assets, net, respectively. During the third quarter of 2017, there was a triggering event in the Products and Systems segment that resulted in a $2.6 million impairment charge of long-lived assets. (See Note 9 in the notes to consolidated financial statements in Item 8 of this Annual Report for further details) During the transition period ended December 31, 2016, $0.8 million of specifically identified assets were written off.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over the fair values attributed to underlying net tangible assets and identifiable intangible assets. We test goodwill for impairment at a "reporting unit" level (which for the Company is represented by (i) our Services segment, (ii) our Products and Systems segment, and (iii) the European component and (iv) Brazilian component of our International segment). Our annual impairment test is conducted on the first day of our fourth quarter. In connection with the change in our fiscal year to December 31, our annual test date is October 1. For the transition period ended December 31, 2016, a December 1 date was used and historically, prior to the fiscal year end change, the Company tested for impairment annually as of March 1. Goodwill is also tested for impairment whenever an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. During the third quarter of 2017, there was a triggering event in the Products and Systems segment that resulted in a $13.2 million goodwill impairment charge. See Note 8 in the notes to consolidated financial statements in Item 8 of this Annual Report for further details.

If the fair value of a reporting unit is less than its carrying value, this is an indicator that the goodwill assigned to that reporting unit may be impaired. As a result of the Company adopting ASU 2017-04, impairment will be recorded in the amount that fair value is less than carrying value, as the ASU eliminated step two of goodwill impairment process. The Company considers the income and market approaches to estimating the fair value of our reporting units, which requires significant judgment in evaluation of economic and industry trends, estimated future cash flows, discount rates and other factors.

Recent Accounting Pronouncements

For information about recent accounting pronouncements, see Note 2 to the consolidated financial statements.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Sensitivity

The company's investment portfolio primarily includes cash equivalents for which the market values are not significantly affected by changes in interest rates. Our interest rate risk results primarily from our variable rate indebtedness under our credit facility, which is influenced by movements in short-term rates. Borrowings under our $250.0 million revolving credit facility are based on an LIBOR, plus an additional margin based on our Funded Debt

Leverage Ratio. Based on the amount of variable rate debt, $156.9 million at December 31, 2017, an increase in interest rates by one hundred basis points from our current rate would increase annual interest expense by approximately $1.6 million.

Foreign Currency Risk

We have foreign currency exposure related to our operations in foreign locations. This foreign currency exposure, particularly the Euro, British Pound Sterling, Brazilian Real, Canadian Dollar and the Indian Rupee, arises primarily from the translation of our foreign subsidiaries' financial statements into U.S. Dollars. For example, a portion of our annual sales and operating costs are denominated in British Pound Sterling and we have exposure related to sales and operating costs increasing or decreasing based on changes in currency exchange rates. If the U.S. Dollar increases in value against these foreign currencies, the value in U.S. Dollars of the assets and liabilities originally recorded in these foreign currencies will decrease. Conversely, if the U.S.

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Dollar decreases in value against these foreign currencies, the value in U.S. Dollars of the assets and liabilities originally recorded in these foreign currencies will increase. Thus, increases and decreases in the value of the U.S. Dollar relative to these foreign currencies have a direct impact on the value in U.S. Dollars of our foreign currency denominated assets and liabilities, even if the value of these items has not changed in their original currency. Translation adjustments for these movements are recorded as a separate component of Accumulated Other Comprehensive Income in Shareholder Equity. We do not currently enter into forward exchange contracts to hedge exposures denominated in foreign currencies. An unfavorable 10% change (strengthening) in the average U.S. Dollar exchange rates for the year ended December 31, 2017 would cause a decrease in consolidated operating income of approximately $0.8 million and a favorable 10% change (weakening) would cause an increase of approximately $0.9 million. We may consider entering into hedging or forward exchange contracts in the future, as sales in international currencies increase due to growth in our International segment.

Fair Value of Financial Instruments

We do not have material exposure to market risk with respect to investments, as our investments consist primarily of highly liquid investments purchased with a remaining maturity of three months or less. We do not use derivative financial instruments for speculative or trading purposes; however, this does not preclude our adoption of specific hedging strategies in the future.

Effects of Inflation and Changing Prices

Our results of operations and financial condition have not been significantly affected by inflation and changing prices.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm
The Board of Directors and Stockholders
Mistras Group, Inc.:
Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting
We have audited the accompanying consolidated balance sheets of Mistras Group, Inc. and subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of (loss) income, comprehensive income (loss), equity, and cash flows for the year ended December 31, 2017, the seven month transition period ended December 31, 2016, and each of the years in the two-year period ended May 31, 2016, and the related notes (collectively, the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the year ended December 31, 2017, the seven month transition period ended December 31, 2016, and each of the years in the two-year period ended May 31, 2016, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
The Company acquired three entities during 2017, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2017, these entities' internal control over financial reporting associated with total assets of 4.0% and total revenues of 2.6% included in the consolidated financial statements of the Company as of and for the year ended December 31, 2017. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of these entities.
Basis for Opinions
The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.
Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in

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accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

We have served as the Company’s auditor since 2013.
Short Hills, New Jersey

March 14, 2018

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Mistras Group, Inc. and Subsidiaries
Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31, 2017	2016
ASSETS		
Current Assets		
Cash and cash equivalents	$27,541	$19,154
Accounts receivable, net	138,080	130,852
Inventories	10,503	10,017
Deferred income taxes	—	6,230
Prepaid expenses and other current assets	18,884	16,399
Total current assets	195,008	182,652
Property, plant and equipment, net	87,143	73,149
Intangible assets, net	63,739	40,007
Goodwill	203,438	169,940
Deferred income taxes	1,606	1,086
Other assets	3,507	2,593
Total Assets	$554,441	$469,427
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	$10,362	$6,805
Accrued expenses and other current liabilities	65,561	58,697
Current portion of long-term debt	2,358	1,379
Current portion of capital lease obligations	5,875	6,488
Income taxes payable	6,069	4,342
Total current liabilities	90,225	77,711
Long-term debt, net of current portion	164,520	85,917
Obligations under capital leases, net of current portion	8,738	9,682
Deferred income taxes	8,803	17,584
Other long-term liabilities	11,363	7,789
Total Liabilities	283,649	198,683
Commitments and contingencies		
Equity		
Preferred stock, 10,000,000 shares authorized	—	—
Common stock, $0.01 par value, 200,000,000 shares authorized, 28,294,968 and 29,216,745 shares issued	282	292
Additional paid-in capital	222,425	217,211
Treasury stock at cost, 0 and 420,258 shares	—	(9,000)
Retained earnings	64,717	91,803
Accumulated other comprehensive loss	(16,805)	(29,724)
Total Mistras Group, Inc. stockholders’ equity	270,619	270,582
Non-controlling interests	173	162
Total Equity	270,792	270,744
Total Liabilities and Equity	$554,441	$469,427

The accompanying notes are an integral part of these consolidated financial statements.

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Mistras Group, Inc. and Subsidiaries
Consolidated Statements of (Loss) Income
(in thousands, except per share data)

	For the year ended December 31,	For the transition period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Revenue	$700,970	$404,161	$719,181	$711,252
Cost of revenue	492,238	274,298	494,911	506,281
Depreciation	21,020	12,859	21,262	20,238
Gross profit	187,712	117,004	203,008	184,733
Selling, general and administrative expenses	153,025	91,058	141,229	143,978
Impairment charges	15,810	—	—	—
Research and engineering	2,272	1,577	2,523	2,521
Depreciation and amortization	10,363	6,340	11,212	13,048
Acquisition-related expense (benefit), net	482	496	(1,453)	(5,167)
Litigation charges	1,600	—	6,320	—
Income from operations	4,160	17,533	43,177	30,353
Interest expense	4,386	2,052	4,762	4,622
(Loss) income before provision for income taxes	(226)	15,481	38,415	25,731
Provision for income taxes	1,942	5,870	13,765	9,740
Net (loss) income	(2,168)	9,611	24,650	15,991
Less: net income (loss) attributable to noncontrolling interests, net of taxes	7	43	(4)	(90)
Net (loss) income attributable to Mistras Group, Inc.	$(2,175)	$9,568	$24,654	$16,081
(Loss) earnings per common share				
Basic	$(0.08)	$0.33	$0.85	$0.56
Diluted	$(0.08)	$0.32	$0.82	$0.54
Weighted average common shares outstanding:				
Basic	28,422	28,989	28,856	28,613
Diluted	28,422	30,125	29,891	29,590

The accompanying notes are an integral part of these consolidated financial statements.

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Mistras Group, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(in thousands)

	For the year ended December 31,	For the transition period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Net (loss) income	$ (2,168)	$ 9,611	$ 24,650	$ 15,991
Other comprehensive income (loss):				
Foreign currency translation adjustments	12,919	(9,625)	1,014	(19,602)
Comprehensive income (loss)	10,751	(14)	25,664	(3,611)
Less: net income (loss) attributable to noncontrolling interests	7	43	(4)	(90)
Foreign currency translation adjustments attributable to noncontrolling interests	4	6	1	5
Comprehensive income (loss) attributable to Mistras Group, Inc.	$ 10,748	$ (51)	$ 25,669	$ (3,516)

The accompanying notes are an integral part of these consolidated financial statements.

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Mistras Group, Inc. and Subsidiaries
Consolidated Statements of Equity
(in thousands)

	Common Stock		Treasury Stock							
	Shares	Amount	Shares	Amount	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Total Mistras Group, Inc. Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at May 31, 2014	28,456	$284	—	$—	$201,831	$41,500	$(1,511)	$242,104	$288	$242,392
Net income	—	—	—	—	—	16,081	—	16,081	(90)	15,991
Other comprehensive loss, net of tax	—	—	—	—	—	—	(19,602)	(19,602)	(5)	(19,607)
Share-based payments	21	—	—	—	6,579	—	—	6,579	—	6,579
Net settlement on vesting of restricted stock units	161	2	—	—	(1,483)	—	—	(1,481)	—	(1,481)
Excess tax benefit from share-based payment compensation	—	—	—	—	388	—	—	388	—	388
Exercise of stock options	65	1	—	—	749	—	—	750	—	750
Balance at May 31, 2015	28,703	$287	—	$—	$208,064	$57,581	$(21,113)	$244,819	$193	$245,012
Net income	—	—	—	—	—	24,654	—	24,654	(4)	24,650
Other comprehensive income, net of tax	—	—	—	—	—	—	1,014	1,014	(64)	950
Share-based payments	—	—	—	—	6,394	—	—	6,394	—	6,394
Net settlement on vesting of restricted stock units	182	2	—	—	(1,093)	—	—	(1,091)	—	(1,091)
Excess tax benefit from share-based payment compensation	—	—	—	—	(170)	—	—	(170)	—	(170)
	55	1	—	—	542	—	—	543	—	543

Exercise of stock options										
Balance at May 31, 2016	28,940	$ 290	—	$—	$ 213,737	$ 82,235	$ (20,099)	$ 276,163	$ 125	$ 276,288
Net income	—	—	—	—	—	9,568	—	9,568	43	9,611
Other comprehensive loss, net of tax	—	—	—	—	—	—	(9,625)	(9,625)	(6)	(9,631)
Share-based payments	—	—	—	—	4,627	—	—	4,627	—	4,627
Net settlement on vesting of restricted stock units	212	2	—	—	(2,325)	—	—	(2,323)	—	(2,323)
Excess tax benefit from share-based payment compensation	—	—	—	—	568	—	—	568	—	568
Purchase of treasury stock		—	(420)	(9,000)	—	—	—	(9,000)	—	(9,000)
Exercise of stock options	65	—	—	—	604	—	—	604	—	604
Balance at December 31, 2016	29,217	$ 292	(420)	$ (9,000)	$ 217,211	$ 91,803	$ (29,724)	$ 270,582	$ 162	$ 270,744
Net loss	—	—	—	—	—	(2,175)	—	(2,175)	7	(2,168)
Other comprehensive income, net of tax	—	—	—	—	—	—	12,919	12,919	4	12,923
Share-based payments	—	—	—	—	6,588	—	—	6,588	—	6,588
Net settlement on vesting of restricted stock units	187	2	—	—	(1,649)	—	—	(1,647)	—	(1,647)
Retirement of treasury stock	(1,146)	(12)	1,146	24,923	—	(24,911)	—	—	—	—
Purchase of treasury stock	—	—	(726)	(15,923)	—	—	—	(15,923)	—	(15,923)
Exercise of stock options	37	—	—	—	275	—	—	275	—	275
Balance at December 31, 2017	28,295	$ 282	—	$—	$ 222,425	$ 64,717	$ (16,805)	$ 270,619	$ 173	$ 270,792

The accompanying notes are an integral part of these consolidated financial statements.

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Mistras Group, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(in thousands)

	For the year ended December 31, 2017	For the transition period ended December 31, 2016	For the year ended May 31, 2016	2015
Cash flows from operating activities				
Net (loss) income	$ (2,168)	$ 9,611	$ 24,650	$ 15,991
Adjustments to reconcile net income to net cash provided by operating activities				
Depreciation and amortization	31,383	19,199	32,474	33,286
Deferred income taxes	(4,854)	(174)	240	(1,745)
Share-based compensation expense	6,574	4,559	6,514	6,579
Impairment charges	15,810	—	—	—
Bad debt provision for unexpected customer bankruptcy	1,200	—	—	—
Charges associated with the exit of foreign operations	—	—	—	2,516
Fair value adjustments to contingent consideration	(463)	262	(2,066)	(5,382)
Other	79	559	(1,052)	1,647
Changes in operating assets and liabilities, net of effect of acquisitions				
Accounts receivable	2,490	4,123	(4,999)	3,982
Inventories	(117)	628	1,595	388
Prepaid expenses and other current assets	(2,464)	(4,453)	(1,812)	(1,109)
Accounts payable	2,574	(3,667)	254	(6,571)
Accrued expenses and other liabilities	4,188	(2,301)	10,187	2,006
Income taxes payable	1,007	1,913	2,139	(1,748)
Net cash provided by operating activities	55,239	30,259	68,124	49,840
Cash flows from investing activities				
Purchase of property, plant and equipment	(19,314)	(9,093)	(14,864)	(15,104)
Purchase of intangible assets	(1,255)	(697)	(1,315)	(866)
Acquisition of businesses, net of cash acquired	(83,424)	(8,262)	(1,743)	(34,677)
Proceeds from sale of equipment	1,196	678	1,170	996
Net cash used in investing activities	(102,797)	(17,374)	(16,752)	(49,651)
Cash flows from financing activities				
Repayment of capital lease obligations	(6,492)	(4,490)	(7,870)	(8,653)
Proceeds from borrowings of long-term debt	6,653	386	2,737	2,232
Repayment of long-term debt	(2,101)	(11,919)	(17,580)	(11,457)
Proceeds from revolver	124,000	48,400	55,800	110,300
Repayments of revolver	(50,600)	(34,300)	(69,600)	(86,800)
Payment of contingent consideration for business acquisitions	(560)	(795)	(3,147)	(3,213)
Purchases of treasury stock	(15,923)	(9,000)	—	—
Taxes paid related to net share settlement of share-based awards	(1,647)	(2,323)	(1,091)	(1,481)
Excess tax benefit from share-based compensation	—	568	(170)	388
Proceeds from the exercise of stock options	275	604	543	750
Net cash provided by (used in) financing activities	53,605	(12,869)	(40,378)	2,066
Effect of exchange rate changes on cash and cash equivalents	2,340	(2,050)	(361)	(1,720)

Net change in cash and cash equivalents	8,387	(2,034)	10,633	535
Cash and cash equivalents:				
Beginning of period	19,154	21,188	10,555	10,020
End of period	$ 27,541	$ 19,154	$21,188	$10,555
Supplemental disclosure of cash paid				
Interest	$ 4,264	$ 2,079	$4,151	$4,504
Income taxes	$ 3,063	$ 8,119	$10,686	$13,243
Noncash investing and financing				
Equipment acquired through capital lease obligations	$ 3,185	$ 1,829	$8,248	$8,031
Issuance of notes payable and other debt obligations primarily related to acquisitions	$ —	$ 325	$—	$20,480

The accompanying notes are an integral part of these consolidated financial statements.

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Mistras Group, Inc. and Subsidiaries
Notes to Consolidated Financial Statements
(tabular dollars in thousands, except per share data)

1. Description of Business and Basis of Presentation

Description of Business

Mistras Group, Inc. and subsidiaries (the Company) is a leading “one source” global provider of technology-enabled asset protection solutions used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure. The Company combines industry-leading products and technologies, expertise in mechanical integrity (MI), non-destructive testing (NDT) and mechanical services and proprietary data analysis software to deliver a comprehensive portfolio of customized solutions, ranging from routine inspections to complex, plant-wide asset integrity assessments and management. These mission critical solutions enhance customers’ ability to extend the useful life of their assets, increase productivity, minimize repair costs, comply with governmental safety and environmental regulations, manage risk and avoid catastrophic disasters. The Company serves a global customer base of companies with asset-intensive infrastructure, including companies in the oil and gas, commercial aerospace and defense, fossil and nuclear power, alternative and renewable energy, public infrastructure, chemicals, transportation, primary metals and metalworking, pharmaceutical/biotechnology and food processing industries and research and engineering institutions.

Principles of Consolidation

The accompanying audited consolidated financial statements include the accounts of Mistras Group, Inc. and its wholly and majority-owned subsidiaries. For subsidiaries in which the Company’s ownership interest is less than 100%, the non-controlling interests are reported in stockholders’ equity in the accompanying consolidated balance sheets. The non-controlling interests in net income, net of tax, is classified separately in the accompanying consolidated statements of income.

On January 3, 2017, the Company's Board of Directors approved a change in the Company's fiscal year from May 31 to December 31, effective December 31, 2016. In connection with this change, we previously filed a Transition Report on Form 10-K to report the results of the seven-month transition period from June 1, 2016 to December 31, 2016. In this Annual Report, the periods presented are the year ended December 31, 2017, the seven-month transition period from June 1, 2016 to December 31, 2016 and the years ended May 31, 2016 and 2015. The Company has also included unaudited data for the year ended December 31, 2016 and for the seven months ended December 31, 2015 (See Note 21).

All significant intercompany accounts and transactions have been eliminated in consolidation. For fiscal 2016 and 2015, Mistras Group, Inc.’s and its subsidiaries’ fiscal years ended on May 31 except for the subsidiaries in the International segment, which ended on April 30. Accordingly, the Company’s International segment subsidiaries were consolidated on a one-month lag. Therefore, in the quarter and year of acquisition, results of acquired subsidiaries in the International segment were generally included in consolidated results for one less month than the actual number of months from the acquisition date to the end of the reporting period. As discussed in Note 7 - Acquisitions and Dispositions, during the lag period in fiscal 2015, the Company sold an international subsidiary, and decided to sell two additional international subsidiaries. Effective December 31, 2016, the Company's International segment is no longer consolidated on a one month lag, and such change for the seven month transition period ended December 31, 2016 was not material.

Reclassifications

Certain amounts in prior periods have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the Company's financial condition or results of operations as previously reported.

2. Summary of Significant Accounting Policies

Revenue Recognition

Revenue is generally recognized when persuasive evidence of an arrangement exists, services have been rendered or products have been delivered, the fee is fixed or determinable, and collectability is reasonably assured. Shipping and handling costs are included in cost of revenues. Taxes collected from customers and remitted to governmental authorities are presented in the consolidated statements of income on a net basis. One customer accounted for 11% and 12% of our revenues for the year ended December 31, 2017 and the transition period ended December 31, 2016, which primarily were generated from the Services

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segment. One customer accounted for 10% of our revenues in fiscal 2016, which primarily were generated from the Services segment. No customer accounted for 10% or more of our revenues in fiscal 2015. The following revenue recognition policies define the manner in which we account for specific transaction types:

Services

Most of our projects are short-term in nature and revenue is primarily derived from providing services on a time and material basis. Service arrangements generally consist of inspection professionals working under contract for a fixed period of time or on a specific customer project. Revenue is generally recognized when the service is performed in accordance with terms of each customer arrangement, upon completion of the earnings process and when collection is reasonably assured. At the end of any reporting period, earned revenue is accrued for services that have been provided which have not yet been billed. Reimbursable costs, including those related to travel and out-of-pocket expenses, are included in revenue, and equivalent amounts of reimbursable costs are included in cost of services.

Products and Systems

Sales of products and systems are recorded when the sales price is fixed and determinable and the risks and rewards of ownership are transferred (generally upon shipment) and when collectability is reasonably assured.

These arrangements occasionally contain multiple elements or deliverables, such as hardware, software (that is essential to the functionality of the hardware) and related services. The Company recognizes revenue for delivered elements as separate units of accounting, when the delivered elements have standalone value, uncertainties regarding customer acceptance are resolved and there are no refund or return rights for the delivered elements. The Company establishes the selling prices for each deliverable based on vendor-specific objective evidence (“VSOE”), if available, third-party evidence, if VSOE is not available, or estimated selling price (“ESP”) if neither VSOE nor third-party evidence is available. The Company establishes VSOE of selling price using the price charged for a deliverable when sold separately and, in rare instances, using the price established by management having the relevant authority. Third-party evidence of selling price is established by evaluating largely similar and interchangeable competitor products or services in standalone sales to similarly situated customers. The Company determines ESP, by considering internal factors such as margin objectives, pricing practices and controls, customer segment pricing strategies and the product life cycle. Consideration is also given to market conditions such as competitor pricing strategies and industry technology life cycles. When determining ESP, the Company applies management judgment to establish margin objectives and pricing strategies and to evaluate market conditions and product life cycles. Changes in the aforementioned factors may result in a different allocation of revenue to the deliverables in multiple element arrangements and therefore may change the pattern and timing of revenue recognition for these elements, but will not change the total revenue recognized for the arrangement.

A portion of the Company’s revenue is generated from engineering and manufacturing of custom products under long-term contracts that may last from several months to several years, depending on the contract. Revenues from long-term contracts are recognized on the percentage-of-completion method of accounting. Under the percentage-of-completion method of accounting revenues are recognized as work is performed. The percentage of completion at any point in time is generally based on total costs or total labor dollars incurred to date in relation to the total estimated costs or total labor dollars estimated at completion. The percentage of completion is then applied to the total contract revenue to determine the amount of revenue to be recognized in the period. Application of the percentage-of-completion method of accounting requires the use of estimates of costs to be incurred for the performance of the contract. Contract costs include all direct materials, direct labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs, and all costs associated with operation of equipment. The cost estimation process is based upon the professional knowledge and experience of our engineers, project managers and financial professionals. Factors that are considered in estimating the work to be completed include the availability and productivity of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in our project performance and the recoverability of any claims. Whenever revisions of estimated contract costs and contract values indicate that the contract costs will exceed estimated revenues, thus creating a loss, a provision for the total estimated loss is recorded in that period.

Use of Estimates

The preparation of financial statements in accordance with generally accepted accounting principles requires that the Company make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and disclosure of contingent assets and liabilities at the date of financial statements. The Company bases its estimates and assumptions on historical experience, known or expected trends and various other assumptions that it believes to be reasonable. As future

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events and their effects cannot be determined with precision, actual results could differ significantly from these estimates, which may cause the Company's future results to be significantly affected.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Accounts Receivable

Accounts receivable are stated net of an allowance for doubtful accounts and sales allowances. Outstanding accounts receivable balances are reviewed periodically, and allowances are provided at such time that management believes it is probable that such balances will not be collected within a reasonable period of time. The Company extends credit to its customers based upon credit evaluations in the normal course of business, primarily with 30-day terms. Bad debts are provided for based on historical experience and management's evaluation of outstanding accounts receivable. Accounts are written off when they are deemed uncollectible. One customer accounted for 7% and 11% of our accounts receivable as of December 31, 2017 and December 31, 2016, respectively.

Inventories

Inventories are stated at the lower of cost, as determined by using the first-in, first-out method, or market. Work in process and finished goods inventory include material, direct labor, variable costs and overhead.

Purchased and Internal-Use Software

The Company capitalizes certain costs that are incurred to purchase or to create and implement internal-use software, which includes software coding, installation and testing. Capitalized costs are amortized on a straight-line basis over three years, the estimated useful life of the software.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation of property, plant and equipment is computed utilizing the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is computed utilizing the straight-line method over the shorter of the remaining lease term or estimated useful life. Repairs and maintenance costs are expensed as incurred.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over the fair values attributed to underlying net tangible assets and identifiable intangible assets. We test goodwill for impairment at a "reporting unit" level (which for the Company is represented by (i) our Services segment, (ii) our Products and Systems segment, and (iii) the European component and (iv) Brazilian component of our International segment). Our annual impairment test is conducted on the first day of our fourth quarter. In connection with the change in our fiscal year to December 31, our annual test date is October 1. For the transition period ended December 31, 2016, a December 1 date was used and historically, prior to the fiscal year end change, the Company tested for impairment annually as of March 1. Goodwill is also tested for impairment whenever an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. During the third quarter of 2017, there was a triggering event in the Products and Systems segment that resulted in a $13.2 million goodwill impairment charge. See Note 8 for further details.

If the fair value of a reporting unit is less than its carrying value, this is an indicator that the goodwill assigned to that reporting unit may be impaired. As a result of the Company adopting ASU 2017-04, impairment will be recorded in the amount that fair value is less than carrying value, as the ASU eliminated step two of goodwill impairment process. The Company considers the income and market approaches to estimating the fair value of our reporting units, which requires significant judgment in evaluation of economic and industry trends, estimated future cash flows, discount rates and other factors.

Impairment of Long-lived Assets

The Company reviews the recoverability of its long-lived assets (or asset groups) on a periodic basis in order to identify indicators of a possible impairment. The assessment for potential impairment is based primarily on the Company's ability to

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recover the carrying value of its long-lived assets from expected future undiscounted cash flows. If the total expected future undiscounted cash flows are less than the carrying amount of the assets, a loss is recognized for the difference between fair value (computed based upon the expected future discounted cash flows) and the carrying value of the assets. During the third quarter of 2017, there was a triggering event in the Products and Systems segment that resulted in a $2.6 million impairment charge of long-lived assets. See Note 9 for further details.

Research and Engineering

Research and product development costs are expensed as incurred.

Advertising, Promotions and Marketing

The costs for advertising, promotion and marketing programs are expensed as incurred and are included in selling, general and administrative expenses. Advertising expense was approximately $1.9 million, $1.2 million, $1.8 million and $2.2 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively.

Fair Value of Financial Instruments

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and other financial current assets and liabilities approximate fair value based on the short-term nature of the items. The carrying value of long-term debt approximates fair value due to the variable-rate structure of the debt. The fair value of the Company’s notes payable and capital lease obligations approximate their carrying amounts as those obligations bear interest at rates which management believes would currently be available to the Company for similar obligations.

Foreign Currency Translation

The financial position and results of operations of the Company’s foreign subsidiaries are measured using their functional currencies, which are their local currencies. Assets and liabilities of foreign subsidiaries are translated into the U.S. Dollar at the exchange rates in effect at the balance sheet date. Income and expenses are translated at the average exchange rate during the period. Translation gains and losses are reported as a component of other comprehensive (loss) income for the period and included in accumulated other comprehensive (loss) income within stockholders’ equity.

Foreign currency (gains) and losses arising from transactions denominated in currencies other than the functional currency are included in net income, reported in SG&A expenses, and were approximately $0.6 million, $(0.7) million, $(0.1) million and $1.5 million for the year ended December 31, 2017, transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. At times, cash deposits may exceed the limits insured by the Federal Deposit Insurance Corporation. The Company believes it is not exposed to any significant credit risk or risk of nonperformance of financial institutions.

Self-Insurance

The Company is self-insured for certain losses relating to workers’ compensation and health benefits claims. The Company maintains third-party excess insurance coverage for all workers' compensation and health benefit claims in excess of approximately $0.3 million per occurence to reduce its exposure from such claims. Self-insured losses are accrued when it is probable that an uninsured claim has been incurred but not reported and the amount of the loss can be reasonably estimated at the balance sheet date.

Share-based Compensation

The value of services received from employees and directors in exchange for an award of an equity instrument is measured based on the grant-date fair value of the award. Such value is recognized as a non-cash expense on a straight-line basis over the period the individual provides services, which is typically the vesting period of the award with the exception of awards with graded vesting that contain an internal performance measure where each tranche is recognized on a straight-line basis over its vesting period subject to the probability of meeting the performance requirements and adjusted for the number of shares

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expected to be earned. As share-based compensation expense is based on awards ultimately expected to vest, the amount of expense has been reduced for estimated forfeitures. The cost of these awards is recorded in selling, general and administrative expense in the Company's consolidated statements of income.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax credit carry-forwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided if it is more likely than not that some or all of a deferred income tax asset will not be realized. Financial accounting standards prescribe a minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. These standards also provide guidance on de-recognition, measurement, and classification of amounts relating to uncertain tax positions, accounting for and disclosure of interest and penalties, accounting in interim periods and disclosures required. Interest and penalties related to unrecognized tax positions are recognized as incurred within "provision for income taxes" in the consolidated statements of income.

Recent Accounting Pronouncements

In August 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, which defers the effective date of ASU 2014-09 for all entities by one year. This update is effective for public business entities for annual reporting periods beginning after December 15, 2017, including interim periods within those reporting periods. Earlier application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. ASU 2014-09 will become effective for the Company beginning 2018. The ASU permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the cumulative catch-up transition method). The ASU also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract.

The Company adopted ASU 2014-09 along with the related additional ASU's on Topic 606 on January 1, 2018, utilizing the cumulative catch-up method. The result of adoption is immaterial to the Company's consolidated financial statements, largely because most of our projects are short-term in nature and billed on a time and material basis. The Company utilizes a practical expedient that provides for revenue to be recognize in an amount that corresponds directly with the value to the customer of the entity's performance completed to date. The Company will make the additional required disclosures under Topic 606, starting with the Company's condensed consolidated financial statements in the first quarter of 2018.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. This amendment will simplify the presentation of deferred tax assets and liabilities on the balance sheet and require all deferred tax assets and liabilities to be treated as non-current. ASU 2015-17 is effective for fiscal years, and interim periods within those fiscal years beginning after December 15, 2016, with early adoption permitted. The Company adopted this guidance prospectively beginning in the first quarter of 2017, which did not have a material impact on the consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). This amendment supersedes previous accounting guidance (Topic 840) and requires all leases, with the exception of leases with a term of 12 months or less, to be recorded on the balance sheet as lease assets and lease liabilities. ASU 2016-02 is effective for fiscal years, and interim periods within those fiscal years beginning after December 15, 2018, with early adoption permitted. The standard requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The Company is evaluating the effect that ASU 2016-02 will have on its consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU No. 2016-09, Stock Compensation (Topic 718). This amendment simplifies certain aspects of accounting for share-based payment transactions, which include accounting for income taxes and the related impact on the statement of cash flows, an option to account for forfeitures when they occur in addition to the existing guidance to estimate the forfeitures of awards, classification of awards as either equity or liabilities and classification on the statement of cash flows for employee taxes paid to tax authorities on shares withheld for vesting. ASU 2016-09 is effective for fiscal years,

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and interim periods within those fiscal years beginning after December 15, 2016, with early adoption permitted. The Company adopted this guidance prospectively beginning in the first quarter of 2017, and accordingly, is recording excess tax benefits and tax deficiencies as a component of income tax expense.

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230). This amendment will provide guidance on the presentation and classification of specific cash flow items to improve consistency within the statement of cash flows. ASU 2016-15 is effective for fiscal years, and interim periods within those fiscal years beginning after December 15, 2017, with early adoption permitted. The Company does not expect that ASU 2016-15 will have a material impact on its consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230). This amendment will clarify the presentation of restricted cash on the statement of cash flows. Amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning and ending cash balances on the statement of cash flows. ASU 2016-18 is effective for fiscal years, and interim periods within those fiscal years beginning after December 15, 2017, with early adoption permitted. The Company does not expect that ASU 2016-18 will have a material impact on its consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles-Goodwill and Other (Topic 350). This amendment eliminates Step Two of the goodwill impairment test. Under the amendments in this update, entities should perform the annual goodwill impairment test by comparing the carrying value of its reporting units to their fair value. An entity should record an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. Tax deductibility of goodwill should be considered in evaluating any reporting unit's impairment loss to be taken. ASU 2017-04 is effective for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company early adopted ASU 2017-04 in the third quarter of 2017 for its consolidated financial statements and related disclosures. See Notes 8 and 9 for information on the impairment of assets in the Products and Systems reporting unit during the three months ended September 30, 2017.

In May 2017, the FASB issued ASU 2017-09, Compensation-Stock Compensation (Topic 718) Scope of Modification Accounting. This amendment provides guidance concerning which changes to the terms or conditions of a share-based payment require an entity to apply modification accounting. Certain changes to stock awards, notably administrative changes, do not require modification accounting. There are three specific criteria that need to be met in order to prove that modification accounting is not required. ASU 2017-09 is effective for fiscal years, and interim period within those fiscal years, beginning after December 15, 2017, with early adoption permitted. The Company does not expect that ASU 2017-09 will have a material impact on its consolidated financial statements and related disclosures.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”), which provides guidance on accounting for the tax effects of the Tax Cuts and Jobs Act (the "Tax Act"). SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Act for which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Act. The Company considers the accounting for the Tax Act to be provisional as of December 31, 2017. The Company will complete the accounting for the tax effects of all of the provisions of the Tax Act within the required measurement period not to extend beyond one year from the enactment date.

3. Earnings per Share

Basic earnings per share is computed by dividing net income attributable to common shareholders by the weighted average number of shares outstanding during the period. Diluted earnings per share is computed by dividing net income attributable to common shareholders by the sum of (1) the weighted average number of shares of common stock outstanding during the period, and (2) the dilutive effect of assumed conversion of equity awards using the treasury stock method. With respect to the number of weighted average shares outstanding (denominator), diluted shares reflects: (i) only the exercise of options to acquire common stock to the extent that the options’ exercise prices are less than the average market price of common shares during the period and (ii) the pro forma vesting of restricted stock units.

The following table sets forth the computations of basic and diluted earnings per share:

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	For the year ended December 31,	For the transition period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Basic (loss) earnings per share				
Numerator:				
Net (loss) income attributable to Mistras Group, Inc.	$ (2,175)	$ 9,568	$24,654	$16,081
Denominator				
Weighted average common shares outstanding	28,422	28,989	28,856	28,613
Basic (loss) earnings per share	$ (0.08)	$ 0.33	$0.85	$0.56
Diluted earnings per share:				
Numerator:				
Net income attributable to Mistras Group, Inc.	$ (2,175)	$ 9,568	$24,654	$16,081
Denominator				
Weighted average common shares outstanding	28,422	28,989	28,856	28,613
Dilutive effect of stock options outstanding	—	791	712	719
Dilutive effect of restricted stock units outstanding	—	345	323	258
	28,422	30,125	29,891	29,590
Diluted (loss) earnings per share	$ (0.08)	$ 0.32	$0.82	$0.54

The following potential common shares were excluded from the computation of diluted earnings per share, as the effect would have been anti-dilutive:

	For the year ended December 31,		For the transition period ended December 31,	For the year ended May 31,	
	2017		2016	2016	2015
Potential common stock attributable to stock options outstanding	810	(1)	—	5	6
Potential common stock attributable to restricted stock units (RSUs) and performance stock units (PSUs) outstanding	353	(2)	2	24	1
Total	1,163		2	29	7

(1) - 805 shares related to stock options were excluded from the calculation of diluted EPS due to the net loss for the period.

(2) - 351 shares related to RSUs and PSUs were excluded from the calculation of diluted EPS due to the net loss for the period.

4. Accounts Receivable, net

Accounts receivable consist of the following:

	December 31, 2017	December 31, 2016
Trade accounts receivable	$141,952	$133,704
Allowance for doubtful accounts	(3,872)	(2,852)
Accounts receivable, net	$138,080	$130,852

The Company had $14.4 million and $16.8 million of unbilled revenues accrued as of December 31, 2017 and December 31, 2016, respectively. Unbilled revenues as of December 31, 2017 are expected to be billed in the first quarter of 2018.

5. Inventories

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Inventories consist of the following:

	December 31, 2017	December 31, 2016
Raw materials	$ 5,105	$ 5,054
Work in progress	1,192	1,246
Finished goods	2,746	2,335
Services-related consumable supplies	1,460	1,382
Inventory	$ 10,503	$ 10,017

6. Property, Plant and Equipment, net

Property, plant and equipment consist of the following:

	Useful Life (Years)	December 31, 2017	December 31, 2016
Land		$ 2,414	$ 1,714
Building and improvements	30-40	24,003	19,261
Office furniture and equipment	5-8	14,230	9,069
Machinery and equipment	5-7	191,721	169,928
		232,368	199,972
Accumulated depreciation and amortization		(145,225)	(126,823)
Property, plant and equipment, net		$ 87,143	$ 73,149

Depreciation expense was approximately $22.4 million, $14.0 million, $22.9 million and $22.2 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015, respectively.

7. Acquisitions and Dispositions

Acquisitions

During the year ended December 31, 2017, the Company completed three acquisitions, one that performs mechanical services at height, located in Canada, a company located in the U.S. that primarily performs chemical and specialty process services and a company in the U.S. that performs a wide variety of non-destructive testing services. Both U.S. companies primarily provide services to the aerospace industry.

In these acquisitions, the Company acquired 100% of the equity interests of the entity based in Canada and one of the entities based in the U.S. in exchange for aggregate consideration of $79.5 million in cash, contingent consideration up to $2.4 million to be earned based upon the acquired business achieving specific performance metrics over the initial three years of operations from the acquisition date and $0.2 million for working capital adjustments yet to be finalized. The Company acquired the assets of one of the U.S. based entities noted above in exchange for aggregate consideration of $4.5 million in cash and contingent consideration up to $3.5 million to be earned based upon the acquired business achieving specific performance metrics over the initial three years of operations from the acquisition date. The Company accounted for these transactions in accordance with the acquisition method of accounting for business combinations.

During the transition period ended December 31, 2016, the Company completed three acquisitions. The Company purchased three companies, two that provide NDT services, located in Canada and one that provides mechanical services, located in the U.S.

For the Canadian acquisitions, the Company acquired 100% of the common stock of both acquirees in exchange for aggregate consideration of $1.3 million in cash, $0.3 million of notes payable and contingent consideration up to $0.6 million to be earned based upon the acquired businesses achieving specific performance metrics over their initial three years of operations

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from their acquisition dates. For the U.S. acquisition, the Company acquired assets of the acquiree in exchange for aggregate consideration of $7.0 million in cash and contingent consideration up to $2.0 million to be earned based upon the acquired businesses achieving specific performance metrics over the initial three years of operations from its acquisition date. The Company accounted for these three transactions in accordance with the acquisition method of accounting for business combinations.

Assets and liabilities of the acquired businesses were included in the consolidated balance sheets as of December 31, 2017 based on their estimated fair value on the date of acquisition as determined in a purchase price allocation, using available information and making assumptions management believes are reasonable. The Company is still in the process of completing its valuation of the assets, both tangible and intangible, and liabilities acquired for two of the acquisitions completed during the year ended December 31, 2017. Goodwill of $41.7 million primarily relates to expected synergies and assembled workforce, of which $39.7 million is generally deductible for tax purposes. Other intangible assets, primarily related to customer relationships and covenants not to compete, were $31.7 million. The results of operations of each of the acquisitions completed during the year ended December 31, 2017 and the transition period ended December 31, 2016 are included in each respective operating segment’s results of operations from the date of acquisition. The following table summarizes the estimated fair value of the assets acquired and liabilities assumed, the Company's allocation of purchase price and any subsequent adjustments made during the year ended December 31, 2017 and the transition period ended December 31, 2016:

	Year ended December 31, 2017	Transition Period
Number of entities	3	3
Cash paid	$ 83,963	$ 8,295
Working capital adjustments	150	—
Notes payable	—	325
Contingent consideration	3,407	1,630
Consideration paid	$ 87,520	$ 10,250
Current net assets	$ 7,165	$ 1,632
Debt and other long-term liabilities	(2,848)	(214)
Property, plant and equipment	11,115	953
Deferred tax asset (liability)	(1,278)	392
Intangibles	31,671	3,367
Goodwill	41,695	4,120
Net assets acquired	$ 87,520	$ 10,250

The amortization period for intangible assets acquired ranges from two to fourteen years. The Company recorded $41.7 million and $4.1 million of goodwill in connection with its acquisitions for the year ended December 31, 2017 and the transition period ended December 31, 2016, respectively, reflecting the strategic fit and revenue and earnings growth potential of these businesses.

Revenue included in the consolidated statement of income for the year ended December 31, 2017 from the three businesses acquired in 2017 for the period subsequent to the closing of the transactions was approximately $17.9 million. Aggregate income from operations included in the consolidated statement of income for the year ended December 31, 2017 from the acquisitions for the period subsequent to the closing of each transaction was $0.8 million, inclusive of $0.9 million of acquisition-related expense. As these acquisitions were immaterial on an individual basis and in the aggregate, no unaudited pro forma financial information has been included in this report.

Dispositions

On May 22, 2015, the Company completed the sale of one of its Russian subsidiaries and recognized a loss of $0.4 million. On July 31, 2015, the Company completed the sale of its other subsidiary in Russia, as well as its subsidiary in Japan. For the year ended May 31, 2015, the Company recognized impairment charges of $2.1 million related to these sales. Aggregate charges

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associated with the exit of these three foreign operations was approximately $2.5 million and is included within selling, general and administrative expenses on the consolidated income statement for the year ended May 31, 2015. In the aggregate, the assets and liabilities of these subsidiaries represent 0.6% and 0.3% of consolidated assets and liabilities, respectively, and are included in their natural classifications on the consolidated balance sheet as of May 31, 2015.

During the fourth quarter of 2017, the Company began the process of marketing one of its subsidiaries in the Products and Systems segment for sale. The Company determined that the classification of being held for sale has been met as of December 31, 2017. For the year ended December 31, 2017, this subsidiary represented 0.6% of consolidated revenues and loss from operations was $3.5 million, inclusive of a $2.6 million impairment charge for long-lived assets (See Note 9). In the aggregate, the assets and liabilities of this subsidiary represents 0.4% and 0.2% of consolidated assets and liabilities, respectively, and are included in their natural classifications on the consolidated balance sheet as of December 31, 2017.

Acquisition-Related expense

In the course of its acquisition activities, the Company incurs costs in connection with due diligence, professional fees, and other expenses. Additionally, the Company adjusts the fair value of acquisition-related contingent consideration liabilities on a quarterly basis. These amounts are recorded as acquisition-related (benefit) expense, net, on the consolidated statements of income and were as follows for the year ended December 31, 2017, the transition period ended December 31, 2016 and fiscal 2016 and 2015:

	For the year ended December 31,	For the Transition Period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Due diligence, professional fees and other transaction costs	$ 945	$ 231	$629	$215
Adjustments to fair value of contingent consideration liabilities	$ (463)	$ 265	$(2,082)	$(5,382)
Acquisition-related (benefit) expense, net	$ 482	$ 496	$(1,453)	$(5,167)

The Company’s contingent consideration liabilities are recorded on the balance sheet in accrued expenses and other liabilities.

8. Goodwill

The changes in the carrying amount of goodwill by segment is shown below:

	Services	International	Products and Systems	Total
Balance at May 31, 2016	$119,683	$ 36,340	$13,197	$169,220
Goodwill acquired during the year	4,120	—	—	4,120
Adjustments to preliminary purchase price allocations	(19)	—	—	(19)
Foreign currency translation	(392)	(2,989)	—	(3,381)
Balance at December 31, 2016	$123,392	$ 33,351	$13,197	$169,940
Goodwill acquired during the year	41,695	—	—	41,695
Impairment charge	—	—	(13,197)	(13,197)

Adjustments to preliminary purchase price allocations	(211)	—	—	(211)
Foreign currency translation	925	4,286	—	5,211
Balance at December 31, 2017	$165,801	$ 37,637	$—	$203,438

During the second quarter of 2017, there were pending Products and Systems contract bids which management assessed as having a reasonable chance of success. During the third quarter of 2017, these contract bids were not awarded to the Company. As a result of this missed opportunity, the annual forecasting process was accelerated, resulting in lower expected future operating profits and cash flows. As such, during the third quarter of 2017, there were indicators that the carrying amount of the goodwill for the Products and Systems reporting unit may not have been recoverable due to the decline in the projected future cash flows.

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The Company performed an analysis to determine any impairment of goodwill as well as long-lived assets (see Note 9). For the goodwill analysis, we used income and market approaches to estimate the fair value of the reporting unit, which required significant judgment in evaluation of economic and industry trends, estimated future cash flows, discount rates and other factors, and compared that fair value to the carrying value, and determined that the fair value of the reporting unit was less than the carrying value. The Company recorded an impairment charge of $13.2 million, based on the difference between the fair value and the carrying value of the reporting unit, which resulted in an impairment of the entire amount of goodwill for the Products and Systems reporting unit.

The Company performed an impairment test of its remaining reporting units as of October 1, 2017 and concluded that there was no impairment. For the year ended December 31, 2017, the Company reviewed goodwill for impairment on a reporting unit basis. As of December 31, 2017, the Company did not identify any changes in circumstances that would indicate the remaining carrying value of goodwill may not be recoverable.

The Company's cumulative goodwill impairment for the periods ended December 31, 2017 was $23.1 million, of which $13.2 million related to the Products and Systems segment and $9.9 million related to the International segment. The Company's cumulative goodwill impairment as of December 31, 2016 was $9.9 million, all of which is within its International segment.

9. Intangible Assets

The gross carrying amount and accumulated amortization of intangible assets were as follows:

		December 31, 2017				December 31, 2016		
	Useful Life (Years)	Gross Amount	Accumulated Amortization	Impairment	Net Carrying Amount	Gross Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	5-14	$113,299	$ (58,107)	$ (170)	$55,022	$81,559	$ (50,417)	$31,142
Software/Technology	3-15	19,523	(14,133)	(2,411)	2,979	18,128	(12,577)	5,551
Covenants not to compete	2-5	12,510	(10,438)	—	2,072	11,143	(9,647)	1,496
Other	2-5	10,109	(6,411)	(32)	3,666	7,266	(5,448)	1,818
Total		$155,441	$ (89,089)	$ (2,613)	$63,739	$118,096	$ (78,089)	$40,007

Amortization expense for the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015 was approximately $9.0 million, $5.2 million, $9.6 million and $11.1 million, respectively, including amortization of software/technology for these periods of $0.7 million, $0.5 million, $1.0 million and $0.9 million, respectively.

As described in Note 8, the Company performed an analysis to determine whether there was any impairment of long-lived
assets for the Products and Systems reporting unit. We used income and market approaches to estimate the fair value of the
long-lived assets, which requires significant judgment in evaluation of the useful lives of the assets, economic and industry
trends, estimated future cash flows, discount rates, and other factors. The result of the analysis was an impairment of $2.4 million to software/technology, $0.2 million to customer relationships and less than $0.1 million to other intangibles, which are

included in the impairment charges line on the consolidated statements of income for the year ended December 31, 2017.

Amortization expense in each of the five years and thereafter subsequent to December 31, 2017 related to the Company’s intangible assets is expected to be as follows:

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	Expected Amortization Expense
2018	$ 10,117
2019	8,952
2020	7,483
2021	6,411
2022	6,076
Thereafter	24,700
Total	$ 63,739

10. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

	December 31,	
	2017	2016
Accrued salaries, wages and related employee benefits	$27,185	$23,442
Contingent consideration	3,430	1,826
Accrued workers' compensation and health benefits	5,181	6,351
Deferred revenues	6,338	3,743
Legal settlement accrual	1,600	6,320
Other accrued expenses	21,827	17,015
Total accrued expenses and other current liabilities	$65,561	$58,697

11. Long-Term Debt

Long-term debt consists of the following:

	December 31,	
	2017	2016
Senior credit facility	$156,948	$82,776
Notes payable	228	320
Other	9,702	4,200
Total debt	166,878	87,296
Less: Current portion	(2,358)	(1,379)
Long-term debt, net of current portion	$164,520	$85,917

Senior Credit Facility

On December 8, 2017, the Company entered into a Fourth Amended and Restated Credit Agreement (“Credit Agreement”). The Credit Agreement increased the Company’s revolving line of credit from $175.0 million to $250.0 million and provides that under certain circumstances the line of credit can be increased to $300.0 million. The Company may continue to borrow up to $30.0 million in non-U.S. Dollar currencies and use up to $10.0 million of the credit limit for the issuance of letters of credit. The maturity date of the Credit Agreement is December 7, 2022. At December 31, 2017, the Company had borrowings of $156.9 million and letters of credit of $4.9 million were outstanding under the Credit Agreement. The Company has capitalized costs of $0.8 million associated with debt modifications.

Loans under the Credit Agreement bear interest at LIBOR plus an applicable LIBOR margin ranging from 1% to 2%, or a base rate less a margin of 1.25% to 0.375%, at the option of the Company, based upon the Company's Funded Debt Leverage Ratio. Funded Debt Leverage Ratio is generally the ratio of (1) all outstanding indebtedness for borrowed money and other interest-

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bearing indebtedness as of the date of determination to (2) EBITDA (which is (a) net income, less (b) income (or plus loss) from discontinued operations and extraordinary items, plus (c) income tax expenses, plus (d) interest expense, plus (e) depreciation, depletion, and amortization (including non-cash loss on retirement of assets), plus (f) stock compensation expense, less (g) cash expense related to stock compensation, plus (h) certain amounts of EBITDA of acquired business for the prior twelve months, plus (i) certain expenses related to the closing of the Credit Agreement, plus (j) non-cash expenses which do not (in the current or any future period) represent a cash item (excluding non-cash gains which increase net income), plus (k) non-recurring charges (not to exceed $5 million in the four consecutive quarters immediately preceding the date of determination) for items such as severance, lease termination charges, asset write-offs and litigation settlements paid during the period, all determined for the period of four consecutive fiscal quarters immediately preceding the date of determination. The Company has the benefit of the lowest margin if its Funded Debt Leverage Ratio is equal to or less than 0.5 to 1, and the margin increases as the ratio increases, to the maximum margin if the ratio is greater than 2.75 to 1. The Company will also bear additional costs for market disruption, regulatory changes effecting the lenders' funding costs, and default pricing of an additional 2% interest rate margin on any amounts not paid when due. Amounts borrowed under the Credit Agreement are secured by liens on substantially all of the assets of the Company and is guaranteed by some of our subsidiaries.

The Credit Agreement contains financial covenants requiring that the Company maintain a Funded Debt Leverage Ratio of no greater than 3.5 to 1 and an Interest Coverage Ratio of at least 3.0 to 1. Interest Coverage Ratio means the ratio, as of any date of determination, of (a) EBITDA for the 12 month period immediately preceding the date of determination, to (b) all interest, premium payments, debt discount, fees, charges and related expenses of the Company and its subsidiaries in connection with borrowed money (including capitalized interest) or in connection with the deferred purchase price of assets, in each case to the extent treated as interest in accordance with GAAP, paid during the 12 month period immediately preceding the date of determination. The Company can elect to increase the Funded Debt Leverage Ratio to 3.75 to 1 temporarily for four fiscal quarters immediately following the fiscal quarter in which the Company acquires another business. The Company can make this election twice during the term of the Credit Agreement.

The Credit Agreement also limits the Company's ability to, among other things, create liens, make investments, incur more indebtedness, merge or consolidate, make dispositions of property, pay dividends and make distributions to stockholders or repurchase our stock, enter into a new line of business, enter into transactions with affiliates and enter into burdensome agreements. The Credit Agreement does not limit the Company's ability to acquire other businesses or companies except that the acquired business or company must be in the Company's line of business, the Company must be in compliance with the financial covenants on a pro forma basis after taking into account the acquisition, and, if the acquired business is a separate subsidiary, in certain circumstances the lenders will receive the benefit of a guaranty of the subsidiary and liens on its assets and a pledge of its stock.

As of December 31, 2017, the Company was in compliance with the terms of the Credit Agreement, and has undertaken to continuously monitor compliance with these covenants.

Notes Payable and Other Debt

In connection with certain of its acquisitions, the Company issued subordinated notes payable to the sellers. The maturity of the notes that remain outstanding are three years from the date of acquisition and bear interest at the prime rate for the Bank of Canada, currently 3.2% as of December 31, 2017. Interest expense is recorded in the consolidated statements of income.

The Company's other debt includes local bank financing provided at the local subsidiary levels used to support working capital requirements and fund capital expenditures. At December 31, 2017, there was approximately $9.7 million outstanding, payable at various times from 2018 to 2029. Monthly payments range from $1 thousand to $18 thousand. Interest rates range from 0.6% to 6.2%.

The Company has evaluated current market conditions and borrower credit quality and has determined that the carrying value of its long-term debt approximates fair value. The fair value of the Company's notes payable and capital lease obligations approximates their carrying amounts based on anticipated interest rates which management believes would currently be available to the Company for similar issues of debt.

Scheduled principal payments due under all borrowing agreements in each of the five years and thereafter subsequent to December 31, 2017 are as follows:

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2018	$2,358
2019	1,664
2020	1,243
2021	892
2022	157,728
Thereafter	2,993
Total	$166,878

12. Fair Value Measurements

The Company performs fair value measurements in accordance with the guidance provided by ASC 820, Fair Value Measurements and Disclosures. ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It also establishes a three level hierarchy that prioritizes the inputs used to measure fair value. The three levels of the hierarchy are defined as follows:

Level 1 — Inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

Level 2 — Observable inputs other than quoted prices included in Level 1, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability and inputs derived principally from or corroborated by observable market data.

Level 3 — Unobservable inputs reflecting the Company’s own assumptions about inputs that market participants would use in pricing the asset or liability based on the best information available.

Financial instruments measured at fair value on a recurring basis
The fair value of contingent consideration liabilities was estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expected future cash flows related to the acquisitions, appropriately discounted considering the uncertainties associated with the obligation, and as calculated in accordance with the terms of the applicable acquisition agreements.

The following table represents the changes in the fair value of Level 3 contingent consideration:

Balance at May 31, 2016	$2,075
Acquisitions	1,630
Payments	(795)
Accretion of liability	136
Revaluation	126
Foreign currency translation	(78)
Balance at December 31, 2016	$3,094
Acquisitions	3,407
Payments	(560)
Accretion of liability	272

Revaluation	(735)
Foreign currency translation	30
Balance at December 31, 2017	$5,508

Financial instruments not measured at fair value on a recurring basis
The Company has evaluated current market conditions and borrower credit quality and has determined that the carrying value
of its long-term debt approximates fair value. The fair value of the Company's notes payable and capital lease obligations
approximates their carrying amounts based on anticipated interest rates which management believes would currently be
available to the Company for similar issuances of debt.

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13. Share-Based Compensation

The Company has share-based incentive awards outstanding to its eligible employees and Directors under three employee stock ownership plans: (i) the 2007 Stock Option Plan (the 2007 Plan), (ii) the 2009 Long-Term Incentive Plan (the 2009 Plan) and (iii) the 2016 Long-Term Incentive Plan. No further awards may be granted under either the 2007 Plan or the 2009 Plan, although awards granted under the 2007 Plan and 2009 Plan remain outstanding in accordance with their terms. Awards granted under the 2016 Plan may be in the form of stock options, restricted stock units and other forms of share-based incentives, including performance restricted stock units, stock appreciation rights and deferred stock rights. The 2016 Plan allows for the grant of awards of up to approximately 1,700,000 shares of common stock, of which 1,438,000 shares were available for future grants as of December 31, 2017. As of December 31, 2017, there was an aggregate of approximately 2,130,000 stock options outstanding and approximately 724,000 unvested restricted stock units outstanding under the 2009 Plan and the 2007 Plan.

Stock Options

For the year ended December 31, 2017 and the transition period ended December 31, 2016, the Company did not have any share-based compensation expense related to stock option awards. For each of the fiscal years ended May 31, 2016 and 2015, the Company recognized share-based compensation expense related to stock option awards of less than $0.1 million. No stock options were granted during the year ended December 31, 2017, the transition period ended December 31, 2016 or the years ended May 31, 2016 and 2015. As of December 31, 2017, no unrecognized compensation costs remained related to stock option awards. Cash proceeds from, and the intrinsic value of stock options exercised during the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015 were as follows:

	For the year ended December 31,	For the Transition Period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Cash proceeds from options exercised	$ 275	$ 604	$543	$750
Aggregate intrinsic value of options exercised	580	993	658	563

A summary of the stock option activity, weighted average exercise prices, and options outstanding and exercisable as of December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015 is as follows (in thousands, except per share amounts):

	For the year ended December 31,		For the Transition Period ended December 31,		For the year ended May 31,			
	2017		2016		2016		2015	
	Common Stock Options	Weighted Average Exercise Price	Common Stock Options	Weighted Average Exercise Price	Common Stock Options	Weighted Average Exercise Price	Common Stock Options	Weighted Average Exercise Price
Outstanding at beginning of year:	2,167	$ 13.33	2,232	$ 13.21	2,287	$ 13.13	2,352	$ 13.09

Granted	—	$ —	—	$ —	—	$ —	—	$ —
Exercised	(37)	$ 7.39	(65)	$ 9.27	(55)	$ 9.87	(65)	$ 11.54
Expired or forfeited	—	$ —	—	$ —	—	$ —	—	$ —
Outstanding at end of year:	2,130	$ 13.43	2,167	$ 13.33	2,232	$ 13.21	2,287	$ 13.13

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Range of Exercise Prices	Total Options Outstanding	For the year ended December 31, 2017 Options Outstanding Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Options Exercisable Number Exercisable	Weighted Average Exercise Price
$10.00-$11.54	35	1.1	$ 10.54	35	$ 10.54
$13.46-$22.35	2,095	1.7	$ 13.48	2,095	$ 13.48
	2,130			2,130	
Aggregate Intrinsic Value	$ 21,374			$ 21,374	

Restricted Stock Unit Awards

The Company recognized approximately $4.5 million of share-based compensation for the year ended December 31, 2017, $2.6 million of share-based compensation for the transition period ended December 31, 2016, $4.4 million of share-based compensation in fiscal 2016 and $4.7 million of share-based compensation in fiscal 2015 related to restricted stock unit awards. As of December 31, 2017, there were approximately $8.2 million of unrecognized compensation costs, net of estimated forfeitures, related to restricted stock unit awards, which are expected to be recognized over a remaining weighted average period of 2.3 years. Approximately 185,000 restricted stock units vested in the year ended December 31, 2017, of which the fair value of these units was $3.4 million. Approximately 207,000 restricted stock units vested in the transition period ended December 31, 2016, of which the fair value of these units was $5.1 million. Approximately 223,000 restricted stock units vested in fiscal 2016 and 232,000 restricted stock units vested in fiscal 2015. The fair value of these units was $3.5 million and $5.2 million, respectively. Upon vesting, restricted stock units are generally net share-settled to cover the required minimum withholding tax and the remaining amount is converted into an equivalent number of shares of common stock.

During the year ended December 31, 2017, the Company granted approximately 21,000 shares of fully-vested common stock to its five non-employee directors, in connection with its non-employee director compensation plan, which shares had a grant date fair value of approximately $0.4 million. During the transition period ended December 31, 2016, the Company granted approximately 10,000 shares of fully-vested common stock to its five non-employee directors, in connection with its non-employee director compensation plan, which shares had a grant date fair value of approximately $0.3 million. During the years ended May 31, 2016 and 2015, the Company granted approximately 28,000 and 21,000 shares, respectively, of fully-vested common stock to its five non-employee directors, in connection with its non-employee director compensation plan. These shares had a grant date fair value of approximately $0.5 million and $0.4 million, respectively, which is included in the share-based compensation expense recorded during the years ended May 31, 2016 and 2015.

	For the year ended December 31, 2017		For the transition period ended December 31, 2016		For the year ended May 31, 2016		2015	
	Units	Weighted Average Grant-Date Fair Value	Units	Weighted Average Grant-Date Fair Value	Units	Weighted Average Grant-Date Fair Value	Units	Weighted Average Grant-Date Fair Value
Outstanding at beginning of period:	569	$ 20.81	575	$ 18.85	564	$ 20.47	628	$ 19.37
Granted	183	$ 21.26	219	$ 24.48	264	$ 16.73	192	$ 21.87
Released	(185)	$ 20.49	(207)	$ 19.40	(223)	$ 20.40	(232)	$ 18.17
Forfeited	(35)	$ 21.45	(18)	$ 19.55	(30)	$ 19.26	(24)	$ 20.57

Outstanding at end of period:	532	$ 21.05	569	$ 20.81	575	$ 18.85	564	$ 20.47

Performance Restricted Stock Units

The Company maintains Performance Restricted Stock Units (PRSUs) that have been granted to select executives and senior officers whose ultimate payout is based on the Company's performance over a one-year period based on three metrics, as defined: (1) Operating Income, (2) Adjusted EBITDAS and (3) Revenue. There is a discretionary portion of the PRSUs based on individual performance, at the discretion of the Compensation Committee (Discretionary PRSUs). PRSUs and Discretionary

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PRSUs generally vest ratably on each of the first four anniversary dates upon completion of the performance period, for a total requisite service period of up to five years and have no dividend rights.

PRSUs are equity-classified and compensation costs are initially measured using the fair value of the underlying stock at the date of grant, assuming that the target performance conditions will be achieved. Cumulative compensation costs related to the PRSUs are subsequently adjusted for changes in the expected outcomes of the performance conditions.

Discretionary PRSUs are liability-classified and adjusted to fair value (with a corresponding adjustment to compensation expense) based upon the targeted number of shares to be awarded and the fair value of the underlying stock each reporting period until approved by the Compensation Committee, at which point they are classified as equity.

A summary of the Company's Performance Restricted Stock Unit activity is presented below:

	For the year ended December 31, 2017		For the Transition Period ended December 31, 2016	
	Units	Weighted Average Grant-Date Fair Value	Units	Weighted Average Grant-Date Fair Value
Outstanding at beginning of period:	290	$ 16.01	328	$ 17.02
Granted	128	$ 20.42	105	$ 24.90
Performance condition adjustments, net	(68)	$ 20.55	(54)	$ 24.49
Released	(72)	$ 15.82	(89)	$ 24.50
Forfeited	—	$ —	—	$ —
Outstanding at end of period:	278	$ 17.00	290	$ 16.01

In fiscal 2014, the company granted one-year, two-year and three-year PRSUs to its executive and certain other senior officers. These units had requisite service periods of three years and have no dividend rights. The actual payout of these units, before the fiscal 2016 modification as described below, was based on the Company's performance over one, two and three-year periods (based on pre-established targets) and a market condition modifier based on total shareholder return (TSR) compared to an industry peer group. The one-year and two-year performance conditions of the fiscal 2014 awards were evaluated before modification of the awards and not achieved. The one-year and two-year market conditions of the fiscal 2014 awards were evaluated before modification of the awards and achieved. Compensation costs related to the TSR conditions for the one-year and two-year 2014 awards described above were fixed at the measurement date, and not subsequently adjusted. The one-year and two-year awards related to market conditions were paid at 170% and 105%, respectively, of target, upon vesting during the transition period ended December 31, 2016. The three-year performance and market condition awards were surrendered as part of the fiscal 2016 modification described below.

In fiscal 2015, the company granted PRSUs to its executive and certain other senior officers. These units have requisite service periods of three years and have no dividend rights. The actual payout of these units, before the fiscal 2016 modification as described below, was based on the Company's performance over the three-year period (based on pre-established targets) and a market condition modifier based on (TSR) compared to an industry peer group. The 2015 awards were surrendered as part of the fiscal 2016 modification described below.

In the first quarter of fiscal 2016, the Company modified its equity compensation program and granted 154,000 PRSUs to its executive and certain other senior officers. As a condition for receiving any awards under the revised fiscal 2016 plan, the executive and senior officers surrendered and released all rights to receive any shares under the three-year 2014 awards and three-year 2015 awards with a performance or market condition. The Company has accounted for the fiscal 2016 awards as modifications in accordance with ASC 718, Compensation - Stock Compensation. These units have requisite service periods of five years and have no dividend rights.

The fiscal 2016 PRSUs increased by approximately 104,000 units to a total of 258,000 units, which represents Company performance above target as well as individual performance, and was approved by the Compensation Committee in August 2016.

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For the transition period ended December 31, 2016, 105,000 PRSUs were granted. There was a 73,000 unit reduction to these awards, which represents Company performance below target, during the transition period ended December 31, 2016. As of December 31, 2016, the aggregate liability related to 12,000 outstanding Discretionary PRSUs was less than $0.1 million and is classified within accrued expenses and other liabilities on the consolidated balance sheet. The Compensation Committee approved these PSUs in the first quarter of 2017, which reduced them by 3,000 units. The discretionary portion of these awards were reclassed from a liability to equity on the consolidated balance sheet upon Compensation Committee approval.

For the year ended December 31, 2017, 128,000 PRSUs were granted. There was a 65,000 unit reduction to these awards, which represents Company performance below target, during the year ended December 31, 2017. As of December 31, 2017, the aggregate liability related to 13,000 outstanding Discretionary PRSUs was less than $0.1 million and is classified within accrued expenses and other liabilities on the consolidated balance sheet.

Compensation expense related to all PRSUs described above was $1.7 million, $1.7 million, $1.6 million and $1.5 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015, respectively. At December 31, 2017, there was $2.3 million of total unrecognized compensation costs related to approximately 278,000 nonvested performance restricted stock units. These costs are expected to be recognized over a weighted-average period of approximately 2.0 years.
For the year ended December 31, 2017, the transition period ended December 31, 2016 and the fiscal years ended May 31, 2016 and 2015, the income tax benefit recognized on all share based compensation arrangements referenced above was approximately $2.2 million, $1.6 million, $2.2 million and $2.3 million, respectively.

14. Income Taxes

Income before provision for income taxes is as follows:

	For the year ended December 31,	For the Transition Period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
(Loss) income before provision for income taxes from:				
U.S. operations	$ (7,303)	$ 5,116	$27,772	$26,893
Foreign operations	7,077	10,365	10,643	(1,162)
(Loss) Earnings before income taxes	$ (226)	$ 15,481	$38,415	$25,731

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The provision for income taxes consists of the following:

	For the year ended December 31,	For the Transition Period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Current				
Federal	$ 3,558	$ 1,990	$9,156	$8,489
States and local	39	483	1,537	1,177
Foreign	3,131	3,569	3,672	1,493
Reserve for uncertain tax positions	71	(39)	(529)	(48)
Total current	6,799	6,003	13,836	11,111
Deferred				
Federal	(3,857)	6	82	(145)
States and local	(810)	(28)	(51)	(126)
Foreign	(437)	(514)	(557)	(2,416)
Total deferred	(5,104)	(536)	(526)	(2,687)
Net change in valuation allowance	247	403	455	1,316
Net deferred	(4,857)	(133)	(71)	(1,371)
Provision for income taxes	$ 1,942	$ 5,870	$13,765	$9,740

The provision for income taxes differs from the amount computed by applying the statutory federal tax rate to income tax as follows:

	For the year ended December 31,		For the Transition period ended December 31,	
	2017		2016	
Federal tax at statutory rate	$(79)	35.0 %	$5,418	35.0 %
State taxes, net of federal benefit	(502)	221.6 %	296	1.9 %
Foreign tax	217	(95.8)%	(573)	(3.7)%
Contingent consideration	(63)	27.7 %	(4)	— %
Permanent differences	377	(166.4)%	373	2.4 %
Transition tax, net of foreign tax credits	3,942	(1,741.4)%	—	— %
Federal tax rate change due to the Tax Act	(1,956)	864.0 %	—	— %
Other	(241)	106.5 %	(43)	(0.3)%
Change in valuation allowance	247	(109.1)%	403	2.6 %
Total provision for income taxes	$1,942	(857.9)%	$5,870	37.9 %

On December 22, 2017, the United States enacted fundamental changes to the federal tax law following the passage of the Tax Act.

The Tax Act is complex and significantly changes the U.S. corporate tax system by, among other things, (a) reducing the federal corporate tax rate from 35% to 21% for tax years beginning after December 31, 2017, (b) replacing the prior system of taxing corporations on foreign earnings of their foreign subsidiaries when the earnings are repatriated with a partial territorial tax system that provides a 100% dividends-received deduction (DRD) to domestic corporations for foreign-sourced dividends received from 10%-or-more owned foreign corporations, (c) subjecting certain unrepatriated foreign earnings to a mandatory one-time transition tax on post-1986 earnings and profits ("the transition tax"), and (d) further limiting a public entity's ability to deduct compensation in excess of $1 million for covered employees.

Our income tax expense for 2017 was $1.9 million. This amount reflects a net tax benefit of $2.3 million as a result of the Tax Act due to the remeasurement of federal deferred tax assets and liabilities from 35% to 21%. This amount also includes a

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charge of $3.9 million due to the transition tax. Additionally, we incurred a charge attributable to reducing our deferred tax assets by $0.3 million due to changes made to executive compensation rules pursuant to the Tax Act.

	For the year ended May 31,			
	2016		2015	
Federal tax at statutory rate	$13,445	35.0 %	$9,006	35.0 %
State taxes, net of federal benefit	966	2.5 %	683	2.7 %
Foreign tax	(610)	(1.6)%	(517)	(2.0)%
Contingent consideration	(425)	(1.1)%	(914)	(3.6)%
Permanent differences	245	0.6 %	196	0.8 %
Other	(311)	(0.8)%	(30)	(0.1)%
Change in valuation allowance	455	1.2 %	1,316	5.1 %
Total provision for income taxes	$13,765	35.8 %	$9,740	37.9 %

Deferred income tax attributes resulting from differences between financial accounting amounts and income tax basis of assets and liabilities are as follows:

	December 31,	
	2017	2016
Deferred income tax assets		
Allowance for doubtful accounts	$838	$969
Inventory	265	236
Intangible assets	2,255	2,529
Accrued expenses	2,560	5,157
Net operating loss carryforward	3,729	4,094
Capital lease obligations	1,004	1,140
Capital losses	463	719
Foreign tax credit carryover	618	—
Deferred share-based compensation	4,080	5,802
Other	484	285
Deferred income tax assets	16,296	20,931
Valuation allowance	(4,044)	(3,896)
Net deferred income tax assets	12,252	17,035
Deferred income tax liabilities		
Property and equipment	(6,893)	(8,655)
Goodwill	(6,578)	(13,586)
Intangible assets	(5,972)	(5,051)
Other	(6)	(11)
Deferred income tax liabilities	(19,449)	(27,303)
Net deferred income taxes	$(7,197)	$(10,268)

As of December 31, 2017, the Company had federal net operating loss carry forwards (NOLs) in the amount of approximately $0.2 million which may be utilized subject to limitation under Internal Revenue Code section 382. The federal NOLs expire at various times from 2031 to 2033. In addition, as of December 31, 2017, the Company had state and foreign NOLs of $38.4 million and $11.0 million, respectively. The state NOLs expire at various times from 2020 to 2037. Approximately $0.7 million of the foreign NOLs expire at various times from 2022 to 2037, while the remainder of the Company's foreign NOLs do not expire.

In assessing the ability to realize deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. Valuation allowances are provided when management believes the Company's deferred tax assets are not recoverable based on an assessment of estimated future taxable income that incorporates ongoing, prudent and feasible tax planning strategies. At December 31, 2017 and December 31, 2016, the Company has a valuation

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allowance of approximately $4.0 million and $3.9 million, respectively, primarily against certain state and foreign NOLs, capital losses generated by the disposals of certain foreign subsidiaries and other specific deferred tax assets. The increase of $0.1 million is primarily attributable to a $0.2 million increase in against state deferred tax assets and a net $0.1 million decrease in federal valuation allowance attributable to the Tax Act. Except for those deferred tax assets subject to the valuation allowance, management believes that it will realize all deferred tax assets as a result of sufficient future taxable income in each tax jurisdiction in which the Company has deferred tax assets.

The following table summarizes the changes in the Company's gross unrecognized tax benefits, excluding interest and penalties:

	For the year ended December 31, 2017	For the Transition Period ended December 31, 2016
Balance at beginning of period	$ 267	$ 303
Additions for tax positions related to the current fiscal period	11	8
Additions for tax positions related to prior years	188	—
Decreases for tax positions related to prior years	—	(11)
Impact of foreign exchange fluctuation	10	—
Settlements	(198)	—
Reductions related to the expiration of statutes of limitations	(122)	(33)
Balance at end of period	$ 156	$ 267

The Company has recorded the unrecognized tax benefits in other long-term liabilities in the consolidated balance sheets. As of December 31, 2017 and December 31, 2016, there were approximately $0.2 million and $0.3 million of unrecognized tax benefits, respectively, including penalties and interest that if recognized would favorably affect the effective tax rate. Interest and penalties related to unrecognized tax benefits are recorded in income tax expense and are not significant for the year ended December 31, 2017, the transition period ended December 31, 2016 and the fiscal years ended May 31, 2016 and 2015. The Company anticipates a decrease to its unrecognized tax benefits of less than $0.1 million excluding interest and penalties within the next 12 months.

The Company is subject to taxation in the United States and various states and foreign jurisdictions. The Company is no longer subject to U.S. federal income tax examinations for years ending before May 31, 2015 and generally is no longer subject to state, local or foreign income tax examinations by tax authorities for years ending before May 31, 2014.

Net income (loss) of foreign subsidiaries was $4.1 million, $6.9 million, $7.5 million and $(0.8) million for the year ended December 31, 2017, the transition period ended December 31, 2016, fiscal 2016 and 2015, respectively. Generally, it has been our practice and intention to reinvest the earnings of our non-U.S. subsidiaries in those operations. As previously noted, the Tax Act made significant changes to the taxation of undistributed earnings, requiring that all previously untaxed earnings and profits of our controlled foreign operations be subjected to the transition tax. Since these earnings have now been subjected to U.S. federal tax they would only be potentially subject to limited other taxes, including foreign withholding and certain state taxes. As of December 31, 2017, the Company has not recognized U.S. tax expense on its undistributed international earnings or losses of its foreign subsidiaries since it intends to indefinitely reinvest the earnings outside the United States.

The Company considers the accounting of the effects of the Tax Act to be estimates. The provisional amounts recorded are based on the Company's current interpretation and understanding of the Tax Act and may change as the Company receives additional clarification and implementation guidance and finalizes their analysis of all impacts and positions with regard to the Tax Act. The Company will continue to gather and evaluate the data and guidance to refine the income tax impact of the Tax Act. The effect of the change in federal corporate tax rate from 35% to 21% is subject to change based on resolution of estimates used in determining the amounts of deferred tax assets and liabilities that were remeasured. Our calculation of the transition tax is subject to further refinement as more information is gathered from our foreign subsidiaries, estimates used in the calculation are resolved, and as states provide guidance on how the transition tax may or may not apply in their respective jurisdictions. The reduction of the deferred tax asset related to executive compensation may be changed based upon actual 2018 compensation as compared to our projections of compensation that may be limited. Finally, the Tax Act also imposes a minimum tax on certain foreign subsidiaries deemed to be in excess of a routine return based on tangible asset investment, which is designed to discourage income shifting by subjecting certain foreign intangibles and other income to current U.S. tax.

Effective for tax years beginning after 2017, U.S. shareholders of certain foreign corporations are subject to current U.S. tax on their global intangible low-taxes income (GILTI). We have not yet evaluated our potential liability, if any, under the minimum tax for GILTI in 2018 or future years. Accordingly, we have not yet made an accounting policy election either to account for these effects in the future period when the tax arises or to recognize them as part of the deferred taxes. Pursuant to SAB 118, the Company will complete the accounting for the tax effects of all of the provisions of the Tax Act within the required measurement period not to extend beyond one year from the enactment date.

15. Employee Benefit Plans

The Company provides a 401(k) savings plan for eligible U.S. based employees. Employee contributions are discretionary up to the IRS limits each year and catch up contributions are allowed for employees 50 years of age or older. Under the 401(k) plan, employees become eligible to participate on the first day of the month after three months of continuous service. Under this plan, the Company matches 50% of the employee’s contributions up to 6% of the employee’s annual compensation, as defined by the plan. There is a five-year vesting schedule for the Company match. The Company’s contribution to the plan was $3.7 million, $2.0 million, $3.5 million and $3.0 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015, respectively.

The Company participates with other employers in contributing to the Boilermaker-Blacksmith National Pension Trust (EIN 48-6168020) (“Boilermakers”) and Plumbers and Pipefitters National Pension Fund (EIN 52-6152779) (“Pipefitters”), multi-employer defined benefit pension plans, which covers certain U.S. based union employees. The plans provide multiple plan benefits with corresponding contribution rates that are collectively bargained between participating employers and their affiliated Boilermakers and Pipefitters local unions. Both the Boilermakers and Pipefitters plans are between 65 percent and 80 percent funded as of the latest Form 5500 filed. The Company’s contributions to the Boilermakers and Pipefitters plans, collectively, were $2.4 million, $1.5 million, $2.5 million and $2.5 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015. These contributions represented less than five percent of total contributions made to the plans.

The Company has benefit plans covering certain employees in selected foreign countries. Amounts charged to expense under these plans were not significant in any year.

16. Related Party Transactions

On August 17, 2016, the Company entered into an agreement with its then Chairman, CEO and Director, Dr. Sotirios Vahaviolos, to purchase up to 1 million of his shares, commencing in October 2016. Refer to Note 20 for further details of the treasury stock repurchases from Dr. Vahaviolos.

The Company leases its headquarters under an operating lease from a shareholder and officer of the Company. On August 1, 2014, the Company extended its lease at its headquarters requiring monthly payments through October 2024. Total rent payments made during the year ended December 31, 2017 were approximately $0.9 million. See Note 18 — Commitments and Contingencies for further detail related to operating leases.

The Company has a lease for office space located in France, which is partly owned by a shareholder and officer. Total rent payments made during the year ended December 31, 2017 were approximately $0.2 million.

The Company has a lease for office space located in Brazil, which is partly owned by a shareholder and officer. Total rent payments made during the year ended December 31, 2017 were approximately $0.1 million.

The Company receives benefits consulting services from Capital Management Enterprise (“CME”), which is owned by one of its non-employee directors, Manuel N. Stamatakis. The Company does not pay any fees directly to CME. Any compensation CME receives is from third-party benefit providers.

17. Obligations under Capital Leases

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The Company leases certain office space, and service equipment under capital leases, requiring monthly payments ranging from less than $1 thousand to $73 thousand, including effective interest rates that range from approximately 1% to 7% expiring through June 2029. The net book value of assets under capital lease obligations was $19.5 million and $17.6 million at December 31, 2017 and December 31, 2016, respectively.

Scheduled future minimum lease payments subsequent to December 31, 2017 are as follows:

2018	$5,899
2019	3,788
2020	2,485
2021	1,778
2022	634
Thereafter	760
Total minimum lease payments	15,344
Less: amount representing interest	(731)
Present value of minimum lease payments	14,613
Less: current portion of obligations under capital leases	(5,875)
Obligations under capital leases, net of current portion	$8,738

18. Commitments and Contingencies

Operating Leases

The Company is party to various non-cancelable operating lease agreements, primarily for its international and domestic office and lab space. Future minimum lease payments under noncancelable operating leases in each of the five years and thereafter subsequent to December 31, 2017 are as follows:

2018	$11,542
2019	8,888
2020	6,902
2021	4,881
2022	4,304
Thereafter	12,915
Total	$49,432

Total rent expense was $11.8 million, $6.6 million, $11.2 million and $10.6 million for the year ended December 31, 2017, the transition period ended December 31, 2016 and the years ended May 31, 2016 and 2015, respectively.

Legal Proceedings and Government Investigations

The Company is subject to periodic lawsuits, investigations and claims that arise in the ordinary course of business. The Company cannot predict with certainty the ultimate resolution of lawsuits, investigations and claims asserted against it. Except for the matters described below, the Company does not believe that any currently pending legal proceeding to which the Company is a party will have a material adverse effect on its business, results of operations, cash flows or financial condition. The costs of defense and amounts that may be recovered against the Company may be covered by insurance for certain matters.

Litigation and Commercial Claims

The Company was a defendant in a consolidated class and collective action, Edgar Viceral and David Kruger v Mistras Group, et al, pending in the U.S. District Court for the Northern District of California, originally filed in April 2015. The Company settled the consolidated class and collective action that resulted in the Company recording a pre-tax charge of $6.3 million in the fourth quarter of fiscal 2016, and the Company paid the settlement in the quarter ended March 31, 2017.

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The Company was a defendant in the lawsuit AGL Services Company v. Mistras Group, Inc., pending in U.S. District Court for
the Northern District of Georgia, filed November 2016. The case involved radiography work performed by the Company in
2012 on the construction of a pipeline project in the U.S. The owner of the pipeline project claimed damages of approximately $5.8 million. At a trial concluded on October 26, 2017, the jury awarded the plaintiff its damage claim plus interest, which the Company believes is fully covered by insurance.

The Company's subsidiary in France has been involved in a dispute with a former owner of a business in France purchased by the Company's French subsidiary. The former owner received a judgment in his favor in the amount of approximately $0.4 million for payment of the contingent consideration portion of the purchase price for the business. The Company recorded a reserve for the full amount of the judgment during the three months ended June 30, 2016. The Company's subsidiary appealed the judgment and the entire judgment was overturned on appeal, however the full appeals process is not yet completed, and therefore, we have not adjusted the reserve as of December 31, 2017.

The Company was a defendant in a lawsuit, Triumph Aerostructures, LLC d/b/a Triumph Aerostructures-Vought Aircraft Division v. Mistras Group, Inc., pending in Texas State district court, 193rd Judicial District, Dallas County, Texas, filed September 2016. The plaintiff alleged that in 2014 Mistras delivered a defective Ultrasonic inspection system and alleged damages of approximately $2.3 million, the amount it paid for the system. In January 2018, the Company agreed to settle this matter for a payment of $1.6 million and Mistras subsequently obtained ownership of the underlying ultrasonic inspection system. A charge for $1.6 million was recorded in 2017 and payment was made in February 2018.

Government Investigations

In May 2015, the Company received a notice from the U.S. Environmental Protection Agency ("EPA") that it performed a preliminary assessment at a leased facility the Company operates in Cudahy, California. Based upon the preliminary assessment, the EPA is conducting an investigation of the site, which includes taking groundwater and soil samples. The purpose of the investigation is to determine whether any hazardous materials were released from the facility. The Company has been informed that certain hazardous materials and pollutants have been found in the ground water in the general vicinity of the site and the EPA is attempting to ascertain the origination or source of these materials and pollutants. Given the historic industrial use of the site, the EPA determined that the site of the Cudahy facility should be examined, along with numerous other sites in the vicinity. At this time, the Company is unable to determine whether it has any liability in connection with this matter and if so, the amount or range of any such liability, and accordingly, has not established any reserves for this matter.

Other Potential Contingencies

Some the Company's workforce is unionized and the terms of employment for these workers are governed by collective bargaining agreements, or CBAs. Under these CBAs, the Company's subsidiaries are required to contribute to the national pension funds for the unions representing these employees, which are multi-employer pension plans. The Company was notified that a significant project was awarded to another contractor in early 2018, and as a result, the Company and its subsidiaries may experience a significant reduction in the number of its employees covered by CBAs. Under certain circumstances, such a reduction in the number of employees participating in a multi-employer pension plan could result in a complete or partial withdrawal liability to these multi-employer pension plans under ERISA. Presently, the Company is uncertain when or whether its subsidiaries will incur withdrawal liability and, if such liability is incurred, whether it will be material.

Acquisition-related contingencies

The Company is liable for contingent consideration in connection with certain of its acquisitions. As of December 31, 2017, total potential acquisition-related contingent consideration ranged from zero to $8.5 million and would be payable upon the achievement of specific performance metrics by certain of the acquired companies over the next 2.5 years of operations. See Note 7 - Acquisitions to these consolidated financial statements for further information with respect to the Company’s acquisitions completed during the year ended December 31, 2017 and the transition period ended December 31, 2016.

19. Segment Disclosure

The Company’s three operating segments are:

- Services. This segment provides asset protection solutions predominantly in North America, with the largest concentration in the United States, followed by Canada, consisting primarily of non-destructive testing, and inspection

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and engineering services that are used to evaluate the structural integrity and reliability of critical energy, industrial and public infrastructure.

- International. This segment offers services, products and systems similar to those of the other segments to select markets within Europe, the Middle East, Africa, Asia and South America, but not to customers in China and South Korea, which are served by the Products and Systems segment.

- Products and Systems. This segment designs, manufactures, sells, installs and services the Company's asset protection products and systems, including equipment and instrumentation, predominantly in the United States.

Costs incurred for general corporate services, including finance, legal, and certain other costs that are provided to the segments are reported within Corporate and eliminations. Sales to the International segment from the Products and Systems segment and subsequent sales by the International segment of the same items are recorded and reflected in the operating performance of both segments. Additionally, engineering charges and royalty fees charged to the Services and International segments by the Products and Systems segment are reflected in the operating performance of each segment. All such intersegment transactions are eliminated in the Company's consolidated financial reporting.

The accounting policies of the reportable segments are the same as those described in Note 2 — Summary of Significant Accounting Policies. Segment income from operations is one of the primary performance measures used by the Chief Executive Officer, who is the chief operating decision maker, to assess the performance of each segment and make decisions as to resource allocations. Certain general and administrative costs such as human resources, information technology and training are allocated to the segments. Segment income from operations excludes interest and other financial charges and income taxes. Corporate and other assets are comprised principally of cash, deposits, property, plant and equipment, domestic deferred taxes, deferred charges and other assets. Corporate loss from operations consists of administrative charges related to corporate personnel and other charges that cannot be readily identified for allocation to a particular segment.

Selected financial information by segment for the periods shown was as follows (intercompany transactions are eliminated in Corporate and eliminations):

	For the year ended December 31,	For the Transition Period ended December 31,	For the year ended May 31,	
	2017	2016	2016	2015
Revenues				
Services	$543,565	$293,218	$553,279	$540,224
International	144,265	104,013	143,025	146,953
Products and Systems	23,297	14,541	30,293	31,255
Corporate and eliminations	(10,157)	(7,611)	(7,416)	(7,180)
	$700,970	$404,161	$719,181	$711,252

	For the year ended December 31,	For the Transition Period ended December	For the year ended May 31,

		31,		
	2017	2016	2016	2015
Gross profit				
Services	$139,160	$75,784	$145,262	$135,201
International	38,974	34,210	43,613	34,572
Products and Systems	9,798	6,920	14,022	14,314
Corporate and eliminations	(220)	90	111	646
	$187,712	$117,004		