LYDALL INC /DE/
Form 10-Q
May 01, 2018

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

FORM 10-Q

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

For the quarterly period ended March 31, 2018

OR

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

For the transition period from to

Commission File Number: 1-7665

LYDALL, INC.
(Exact name of registrant as specified in its charter)

Delaware	06-0865505
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
One Colonial Road, Manchester, Connecticut	06042
(Address of principal executive offices)	(zip code)

(860) 646-1233
(Registrant’s telephone number, including area code)
None
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such a 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 ýNo ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ýNo ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer”, “accelerated

filer”, “smaller reporting company”, and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ýAccelerated filer ¨Non-accelerated filer (Do not check if a smaller reporting company) ¨Smaller reporting company ¨Emerging growth company¨

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

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

Indicate the number of shares outstanding of each of the issuer’s classes of common stock, as of the latest practicable date.

Common Stock $ .01 par value per share.
Total Shares outstanding April 16 , 2018 17,374,320

LYDALL, INC.
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Lydall, Inc. and its subsidiaries are hereafter collectively referred to as "Lydall," the "Company" or the "Registrant." Lydall and its subsidiaries' names, abbreviations thereof, logos, and product and service designators are all either the registered or unregistered trademarks or trade names of Lydall and its subsidiaries.

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Any statements contained in this Quarterly Report on Form 10-Q that are not statements of historical fact may be deemed to be forward-looking statements. All such forward-looking statements are intended to provide management's current expectations for the future operating and financial performance of the Company based on current assumptions relating to the Company's business, the economy and future conditions. Forward-looking statements generally can be identified through the use of words such as "believes," "anticipates," "may," "should," "will," "plans," "projects," "expects," "expectations," "estimates," "forecasts," "pre "prospects," "strategy," "signs" and other words of similar meaning in connection with the discussion of future operating or financial performance. Forward-looking statements may include, among other things, statements relating to future sales, earnings, cash flow, results of operations, uses of cash and other measures of financial performance. Because forward-looking statements relate to the future, they are subject to inherent risks, uncertainties and changes in circumstances that are difficult to predict. Accordingly, the Company's actual results may differ materially from those contemplated by the forward-looking statements. Investors, therefore, are cautioned against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Forward-looking statements in this Quarterly Report on Form 10-Q include, among others, statements relating to:

- Overall economic and business conditions and the effects on the Company's markets;
- Outlook for the second quarter and 2018, including expected impact of manufacturing inefficiencies and the Company's ability to improve operational effectiveness in the Thermal Acoustical Solutions segment;
- Expected vehicle production in the North American, European or Asian markets;
- Growth opportunities in markets served by the Company;
- Expected costs and future savings associated with restructuring programs;
- Expected gross margin, operating margin and working capital improvements from the application of Lean Six Sigma;
- Product development and new business opportunities;
- Future strategic transactions, including but not limited to: acquisitions, joint ventures, alliances, licensing agreements and divestitures;
- Pension plan funding;
- Future cash flow and uses of cash;
- Future amounts of stock-based compensation expense;
- Future earnings and other measurements of financial performance;
- Ability to meet cash operating requirements;
- Future levels of indebtedness and capital spending;
- Ability to meet financial covenants in the Company's amended revolving credit facility;
- Future impact of the variability of interest rates and foreign currency exchange rates;
- Expected future impact of recently issued accounting pronouncements upon adoption;
- Future effective income tax rates, including the impact of the U.S. Tax Cuts and Jobs Act, and realization of deferred tax assets;
- Estimates of fair values of reporting units and long-lived assets used in assessing goodwill and long-lived assets for possible impairment; and
- The expected outcomes of legal proceedings and other contingencies, including environmental matters.

All forward-looking statements are inherently subject to a number of risks and uncertainties that could cause the actual results of the Company to differ materially from those reflected in forward-looking statements made in this Quarterly Report on Form 10-Q, as well as in press releases and other statements made from time to time by the Company’s authorized officers. Such risks and uncertainties include, among others, worldwide economic cycles and political changes and uncertainties that affect the markets which the Company’s businesses serve, which could have an effect on demand for the Company’s products and impact the

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Company's profitability; challenges encountered by the Company in the execution of restructuring programs; challenges encountered in the combination of the former Thermal/Acoustical Fibers and Thermal/Acoustical Metals business segments; disruptions in the global credit and financial markets, including diminished liquidity and credit availability; changes in international trade agreements and policies including tariff regulation and trade restrictions; swings in consumer confidence and spending; unstable economic growth; volatility in foreign currency exchange rates; raw material pricing and supply issues; fluctuations in unemployment rates; retention of key employees; increases in fuel prices; and outcomes of legal proceedings, claims and investigations, as well as other risks and uncertainties identified in Part II, Item 1A - Risk Factors of this Quarterly Report on Form 10-Q, and Part I, Item 1A - Risk Factors of Lydall's Annual Report on Form 10-K for the year ended December 31, 2017. The Company does not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

LYDALL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In Thousands Except Per Share Data)

	Quarter Ended March 31,	
	2018	2017
	(Unaudited)	
Net sales	$191,660	$165,487
Cost of sales	152,153	124,989
Gross profit	39,507	40,498
Selling, product development and administrative expenses	25,471	25,350
Operating income	14,036	15,148
Interest expense	540	606
Other expense, net	315	333
Income before income taxes	13,181	14,209
Income tax expense	2,123	2,494
Loss from equity method investment	4	46
Net income	$11,054	$11,669
Earnings per share:		
Basic	$0.64	$0.69
Diluted	$0.64	$0.68
Weighted average number of common shares outstanding:		
Basic	17,164	16,983
Diluted	17,339	17,284

See accompanying Notes to Condensed Consolidated Financial Statements.

LYDALL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands)

	Quarter Ended March 31,	
	2018	2017
	(Unaudited)	
Net income	$11,054	$11,669
Other comprehensive income:		
Foreign currency translation adjustments	2,545	2,729
Pension liability adjustment, net of tax	198	172
Unrealized gain on hedging activities, net of tax	102	—
Comprehensive income	$13,899	$14,570

See accompanying Notes to Condensed Consolidated Financial Statements.

LYDALL, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In Thousands)

	March 31, 2018 (Unaudited)	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$49,103	$ 59,875
Accounts receivable, less allowances (2018 - $1,463; 2017 - $1,507)	136,078	116,712
Contract assets	25,005	—
Inventories	74,263	80,339
Taxes receivable	5,263	5,525
Prepaid expenses	4,016	4,858
Other current assets	6,765	6,186
Total current assets	300,493	273,495
Property, plant and equipment, at cost	405,428	397,152
Accumulated depreciation	(234,699)	(226,820)
Net, property, plant and equipment	170,729	170,332
Goodwill	68,958	68,969
Other intangible assets, net	39,031	40,543
Other assets, net	7,131	7,532
Total assets	$586,342	$ 560,871
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$283	$ 277
Accounts payable	80,405	71,931
Accrued payroll and other compensation	13,678	15,978
Accrued taxes	3,162	2,230
Other accrued liabilities	14,470	11,690
Total current liabilities	111,998	102,106
Long-term debt	76,862	76,913
Deferred tax liabilities	15,542	14,714
Benefit plan liabilities	8,489	9,743
Other long-term liabilities	3,618	3,999
Commitments and Contingencies (Note 14)		
Stockholders' equity:		
Preferred stock	—	—
Common stock	251	250
Capital in excess of par value	89,768	88,006
Retained earnings	387,435	374,783
Accumulated other comprehensive loss	(17,303)	(20,148)
Treasury stock, at cost	(90,318)	(89,495)
Total stockholders' equity	369,833	353,396
Total liabilities and stockholders' equity	$586,342	$ 560,871

See accompanying Notes to Condensed Consolidated Financial Statements.

LYDALL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands)

	Three Months Ended March 31,	
	2018	2017
	(Unaudited)	
Cash flows from operating activities:		
Net income	$11,054	$11,669
Adjustments to reconcile net income to net cash (used for) provided by operating activities:		
Depreciation and amortization	7,220	6,517
Long-lived asset impairment charge	—	772
Inventory step-up amortization	—	481
Deferred income taxes	601	185
Stock-based compensation	1,201	1,231
Loss from equity method investment	4	46
Changes in operating assets and liabilities:		
Accounts receivable	(18,626)	(7,780)
Contract assets	(5,745)	—
Inventories	(8,796)	(12,015)
Accounts payable	9,471	13,686
Accrued payroll and other compensation	(2,432)	(1,154)
Accrued taxes	877	574
Other, net	1,209	(1,854)
Net cash (used for) provided by operating activities	(3,962)	12,358
Cash flows from investing activities:		
Capital expenditures	(7,676)	(9,560)
Net cash used for investing activities	(7,676)	(9,560)
Cash flows from financing activities:		
Debt repayments	(57)	(10,467)
Common stock issued	666	155
Common stock repurchased	(823)	(2,497)
Net cash used for financing activities	(214)	(12,809)
Effect of exchange rate changes on cash	1,080	616
Decrease in cash and cash equivalents	(10,772)	(9,395)
Cash and cash equivalents at beginning of period	59,875	71,934
Cash and cash equivalents at end of period	$49,103	$62,539

Non-cash capital expenditures of $4.2 million and $4.1 million were included in accounts payable at March 31, 2018 and 2017, respectively.

See accompanying Notes to Condensed Consolidated Financial Statements.

LYDALL, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Unaudited)

In thousands of dollars and shares	Common Stock Shares	Common Stock Amount	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total Stockholders' Equity
Balance at December 31, 2017	25,018	$ 250	$88,006	$374,783	$ (20,148)	$(89,495)	$ 353,396
Net Income				11,054			11,054
Other comprehensive income, net of tax					2,845		2,845
Stock repurchased						(823)	(823)
Stock issued under employee plans	50	1	666				667
Stock-based compensation expense			1,096				1,096
Adoption of ASC 606				1,598			1,598
Balance at March 31, 2018	25,068	251	89,768	387,435	(17,303)	(90,318)	369,833

See accompanying Notes to Condensed Consolidated Financial Statements.

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LYDALL, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Basis of Financial Statement Presentation

Description of Business

Lydall, Inc. and its subsidiaries (the “Company” or “Lydall”) design and manufacture specialty engineered nonwoven filtration media, industrial thermal insulating solutions, and thermal and acoustical barriers for filtration/separation and heat abatement and sound dampening applications.

Basis of Presentation

The accompanying Condensed Consolidated Financial Statements include the accounts of Lydall, Inc. and its subsidiaries. All financial information is unaudited for the interim periods reported. All significant intercompany transactions have been eliminated in the Condensed Consolidated Financial Statements. The Condensed Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The year-end Condensed Consolidated Balance Sheet was derived from the December 31, 2017 audited financial statements, but does not include all disclosures required by U.S. GAAP. Management believes that all adjustments, which include only normal recurring adjustments necessary for a fair statement of the Company’s condensed consolidated financial position, results of operations and cash flows for the periods reported, have been included. For further information, refer to the audited consolidated financial statements and accompanying notes included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017.

Effective January 1, 2018, the Company combined the Thermal/Acoustical Metals and Thermal/Acoustical Fibers operating segments into a single operating segment named Thermal Acoustical Solutions. Combining these automotive segments into one segment is expected to allow the Company to better serve its customers, leverage operating disciplines and drive efficiencies across the global automotive operations. Refer to Note 13 "Segment Information" for further information. Prior period segment amounts throughout the Notes to the Condensed Consolidated Financial Statements have been recast to reflect the new segment structure. The recast of historical business segment information had no impact on the Company’s consolidated financial results.

Effective January 1, 2018 the Company adopted the requirements of Accounting Standards Update ("ASU") No. 2014-09 (“ASC 606”) using the modified retrospective method. Therefore, the comparative information has not been adjusted and continues to be reported under the prior guidance of ASC 605. The details of the significant changes and quantitative impact of the changes are disclosed in Note 2 “Revenue from Contracts with Customers.”

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-09, “Revenue from Contracts with Customers (Topic 606)”. The amended guidance establishes a single comprehensive model for companies to use in accounting for revenue arising from contracts with customers and will supersede most of the existing revenue recognition guidance, including industry-specific guidance.

The amended guidance clarifies that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for

those goods or services. In applying the amended guidance, an entity will (1) identify the contract(s) with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the contract's performance obligations; and (5) recognize revenue when (or as) the entity satisfies a performance obligation. ASC 606 is effective for the Company's interim and annual reporting periods beginning January 1, 2018, and is to be adopted using either a full retrospective or modified retrospective transition method.

The Company adopted the amended guidance and all related amendments using the modified retrospective approach on January 1, 2018, at which time it became effective for the Company. The Company recognized the cumulative effect of initially applying the new revenue standard to all contracts that were not completed on the date of adoption as an adjustment to the opening balance of retained earnings. (See Note 2. "Revenue from Contracts with Customers").

At the adoption date, the cumulative impact of revenue that would have been recognized over time, was $19.6 million. The impact was primarily driven by tooling net sales of $16.3 million from customer contracts within the Thermal Acoustical Solutions ("TAS") segment. The related adoption impact to retained earnings was $1.6 million, net of tax. The impact to net sales and net income as a result of applying ASC 606 was an increase of $6.3 million and $0.2 million, respectively, for the quarter ended March 31, 2018.

In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments - Overall" (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities". This ASU revises an entity's accounting related to (1) the classification and measurement of investments in equity securities and (2) the presentation of certain fair value changes for financial liabilities measured at fair value. It also amends certain disclosure requirements associated with the fair value of financial instruments. This ASU is effective for fiscal years beginning after December 15, 2017. In February 2018, the FASB issued ASU 2018-03, "Technical Corrections and Improvements to Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities", which clarifies various aspects of the guidance issued in ASU 2016-01. The adoption of these amendments is not required for public business entities with fiscal years beginning between December 15, 2017 and June 15, 2018 until the interim period beginning after June 15, 2018, however early adoption is permitted. The Company adopted both ASUs effective January 1, 2018. The adoption of these ASUs did not have any impact on the Company's consolidated financial statements and disclosures.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments", which provides guidance on eight specific cash flow classification issues. Prior to this ASU, GAAP did not include specific guidance on these eight cash flow classification issues. This ASU is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The adoption of this ASU did not have any impact on the Company's consolidated financial statements and disclosures.

In October 2016, the FASB issued ASU 2016-16, "Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory" as part of the Board's initiative to reduce complexity in accounting standards. This ASU eliminates an exception in ASC 740, which prohibits the immediate recognition of income tax consequences of intra-entity asset transfers other than inventory. This ASU requires entities to recognize the immediate current and deferred income tax effects of intra-entity asset transfers. This ASU is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The adoption of this ASU did not have any impact on the Company's consolidated financial statements and disclosures.

In November 2016, the FASB issued ASU No. 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash", which clarifies guidance and presentation related to restricted cash in the statement of cash flows, including stating that restricted cash should be included within cash and cash equivalents on the statement of cash flows. The ASU was effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The Company adopted this ASU effective January 1, 2018. The adoption of this ASU did not have any impact on the Company's consolidated financial statements and disclosures.

In January 2017, the FASB issued ASU No. 2017-01, "Business Combinations (Topic 805): Clarifying the Definition of a Business", which adds guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. The amendments of this ASU provide a screen to determine when an integrated set of assets and activities is not a business. This ASU was effective for fiscal years beginning after December 15, 2017. The adoption of this ASU did not have any impact on the Company's consolidated financial statements and disclosures.

In March 2017, the FASB issued ASU No. 2017-07, "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost". This ASU requires an entity to report the service cost component of net benefit costs in the same line item(s) as other compensation costs arising from services rendered by the pertinent employees during the period. This ASU also requires the other components of net benefit cost, which includes interest costs and actual return on plan assets to be presented in the income statement

separately from the service cost component and outside a subtotal of income from operations. This ASU was effective for fiscal year beginning after December 15, 2017. As required for retrospective adoption, the Company reclassified net benefit costs of $0.1 million from cost of sales and $0.1 million from the selling, product development and administrative expenses to other expense, net, in the Consolidated Statement of Operations for the quarter ended March 31, 2017. The adoption of this ASU had minimal impact on the Company's consolidated financial statements and disclosures for the quarter ended March 31, 2018.

In May 2017, the FASB issued ASU No. 2017-09, "Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting". This ASU requires an entity to apply modification accounting in Topic 718 when there are changes to the terms or conditions of a share-based payment award, unless the fair value, vesting conditions, and classification of the modified award are the same as the original award immediately before the original award is modified. This ASU was effective for fiscal years beginning after December 15, 2017. The adoption of this ASU did not have any impact on the Company's consolidated financial statements and disclosures.

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)". This ASU requires entities that lease assets with lease terms of more than 12 months to recognize right-of-use assets and lease liabilities created by those leases on their balance sheets. This ASU will also require new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. This ASU is effective for fiscal

years beginning after December 15, 2018, with early adoption permitted. The Company is currently developing a plan to evaluate the method and impact the adoption of ASU 2016-02 will have on the Company's consolidated financial statements and disclosures.

Significant Accounting Policies

The Company's significant accounting policies are detailed in Note 1 "Significant Accounting Policies" within Part IV Item 15 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017. Significant changes to these accounting policies as a result of adopting ASC 606 "Revenue from Contracts with Customers" are discussed within Note 2, "Revenue from Contracts with Customers."

2. Revenue from Contracts with Customers

The Company accounts for revenue in accordance with ASC 606, Revenue from Contracts from Customers. These revenues are generated from the design and manufacture of specialty engineered filtration media, industrial thermal insulating solutions, automotive thermal and acoustical barriers for filtration/separation and thermal/acoustical applications. The Company's revenue recognition policies require the Company to make significant judgments and estimates. In applying the Company's revenue recognition policy, determinations must be made as to when control of products passes to the Company's customers which can be either at a point in time or over time. Revenue is generally recognized at a point in time when control passes to customers upon shipment of the Company's products and revenue is generally recognized over time when control of the Company's products transfers to customers during the manufacturing process (see description below). The Company analyzes several factors, including but not limited to, the nature of the products being sold and contractual terms and conditions in contracts with customers to help the Company make such judgments about revenue recognition.

The Company accounts for revenue from contracts with customers when there is approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Revenue is primarily derived from customer purchase orders, master sales agreements, and negotiated contracts, all of which represent contracts with customers.

The Company next identifies the performance obligations in the contract. A performance obligation is a promise to provide distinct goods or services. Performance obligations are the unit of account for purposes of applying the revenue standard and therefore determines when and how revenue is recognized. The Company determines the performance obligations at contract inception based on the goods that are promised in a contract with a customer. Typical performance obligations include automotive parts, automotive tooling, rolled good media and filter bags.

The transaction price in the contract is determined based on the consideration to which the Company will be entitled in exchange for transferring products to the customer, excluding amounts collected on behalf of third parties (for example, sales taxes). The transaction price is typically stated on the purchase order or in a negotiated agreement. Certain contracts may include variable consideration in the transaction price, such as rebates, pricing discounts, price concessions, sales incentives, index pricing or other provisions that can decrease the transaction price. Estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on reasonably available information (customer historical, current and forecasted data). In certain circumstances where a particular outcome is probable, the Company utilizes the most likely amount to which the Company expects to be entitled. The Company accounts for consideration payable to a customer as a reduction of the transaction price thereby reducing the amount of revenue recognized. Consideration payable to a customer includes cash amounts that the Company pays, or expects to pay, to a customer based on certain contract requirements.

The Company recognizes revenue as performance obligations are satisfied, which can be either over time or at a point in time, depending on when control of the Company's products transfers to its customers.

In circumstances when control transfers over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment.

The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products to be provided. The Company generally uses the cost-to-cost measure of progress for contracts because it best depicts the transfer of control to the customer which occurs as costs are incurred on contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred.

For tooling revenue recognized over time, the Company makes significant judgments which includes, but not limited to, estimated costs to completion, costs incurred to date, and assesses risks related to changes in estimates of revenues and costs. In doing so,

management must make assumptions regarding the work required to fulfill the performance obligations, which is dependent upon the execution by the Company's subcontractors, among other variables and contract requirements.

Changes in estimates for revenue recognized over time are recorded by the Company in the period they become known. Changes are recognized on a cumulative catch-up basis in net sales, costs of sales, and operating income. The cumulative catch up adjustment recognizes in the current period the cumulative effect of changes in estimates on current and prior periods.

Performance Obligations

The following is a description of products and performance obligations, separated by reportable segments, from which the Company generates its revenue. For more detailed information about reportable segments, see Note 13 “Segment Information.”

Segment Performance Materials

Products Products for this segment include filtration media solutions, thermal insulation solutions primarily for air, fluid power, and industrial applications, thermal insulation solutions for building products, appliances, and energy and industrial markets and air and liquid life science applications.

Performance Obligations These contracts typically have distinct performance obligations, which is the promise to transfer the media solutions to the Company’s customers.

The Company recognizes revenue at a point in time or over time, based upon when control of the underlying product transfers to the customer. If revenue is recognized at a point in time, the performance obligation is typically satisfied upon shipment and in accordance with shipping terms. In circumstances when control transfers over time, revenue is recognized based on the extent of progress towards completion of the performance obligation.

Customer payment terms are negotiated on a contract-by-contract basis and typically range from 30 to 90 days.

Segment Technical Nonwovens

Products This segment produces needle punch nonwoven solutions including industrial filtration and advanced materials products. Industrial Filtration products include nonwoven rolled-good felt media and filter bags used primarily in industrial air and liquid filtration applications. Advanced materials products include nonwoven rolled good media used in commercial applications and predominantly serves the geosynthetic, automotive, industrial, medical, and safety apparel markets. The automotive media is provided to tier-one suppliers as well as the Company’s Thermal Acoustical Solutions segment.

Performance Obligations These contracts typically have distinct performance obligations, which is the promise to transfer the industrial filtration or advanced materials products to the Company’s customers.

The Company recognizes revenue at a point in time or over time, based upon when control transfers to the customer. If revenue is recognized at a point in time, the performance obligation is typically satisfied upon shipment and in accordance with shipping terms. In circumstances when control transfers over time, revenue is recognized based on the extent of progress towards completion of the performance obligation.

Customer payment terms are negotiated on a contract-by-contract basis and typically range from 30 to 90 days.

For filter bag sales, the Company may enter into warranty agreements that are implied or sold with the product to provide assurance that a product will function as expected and in accordance with certain specifications. Therefore, this type of warranty is not a separate performance obligation.

Segment Thermal Acoustical Solutions

Products Parts - The segment produces a full range of innovative engineered products tailored for the transportation sector to thermally shield sensitive components from high heat, improve exhaust gas treatment and lower harmful emissions as well as assist in the reduction of noise vibration and harshness. The majority of products are sold to original equipment manufacturers and tier-one suppliers.

Tooling - The Company enters into contractual agreements with certain customers within the automotive industry, to design and develop molds, dies and tools (collectively, “tooling”).

Performance Obligations Parts - Customer contracts typically have distinct performance obligations, which is the promise to transfer manufactured parts to these customers. The Company recognizes parts revenue at a point in time or over time, based upon when control transfers to the customer. If revenue is recognized at a point in time, the performance obligation is typically satisfied upon shipment and in accordance with shipping terms. In circumstances when control transfers over time, revenue is recognized based on the extent of progress towards completion of the performance obligation.

Customer payment terms are negotiated on a contract-by-contract basis and typically range from 30 to 90 days.

Tooling - Customer contracts typically have distinct performance obligations and are generally completed within one year. The Company periodically enters into multiple contracts with a customer at or near the same time which may be combined for purposes of determining the appropriate transaction price. The Company allocates the transaction price to each performance obligation in the contract based on a relative stand-alone selling price using costs incurred plus expected margin. The corresponding revenues are recognized over time as the related performance obligations are satisfied.

Tooling customer payment terms typically range from 30 to 90 days after title transfers to the customer. Occasionally customers make progress payments as the tool is constructed.

Practical Expedients and Exemptions

The Company has elected to adopt the contract cost practical expedient. This expedient allows the Company to recognize its incremental costs of obtaining contracts, such as sales commissions, as an expense when incurred if the related contract revenue is expected to be recognized in one year or less. These costs are included in selling, product development and administrative expenses.

The Company has made an accounting policy election to record shipping and handling activities occurring after control has passed to the customer to be treated as a fulfillment cost rather than as a distinct performance obligation. Shipping and handling expenses consist primarily of costs incurred to deliver products to customers and internal costs related to preparing products for shipment and are recorded as a cost of sales. Amounts billed to customers as shipping and handling are classified as revenue when services are performed.

ASC 606 requires the disclosure of unsatisfied performance obligations related to contracts from customers at the end of each reporting period. The Company has elected the practical expedient because the Company’s contracts generally have a duration of one year or less, therefore no disclosure is required.

The Company has elected to adopt the practical expedient to disregard the need to adjust the promised amount of consideration for the effects of a significant financing component as the Company expects that the period of time

between when the products are transferred to the customer and when the Company is paid for those products will be one year or less.

Contract Assets and Liabilities

The Company's contract assets primarily include unbilled amounts typically resulting from sales under contracts when the over time method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer. These unbilled

accounts receivable in contract assets are transferred to accounts receivable upon invoicing, typically when the right to payment becomes unconditional in which case payment is due based only upon the passage of time.

The Company's contract liabilities primarily relate to billings and advance payments received from customers, and deferred revenue. These contract liabilities represent the Company's obligation to transfer its products to its customers for which the Company has received, or is owed consideration from its customers. Contract liabilities are included in other accrued liabilities on the Company's Condensed Consolidated Balance Sheets.

Contract assets and liabilities consisted of the following (in thousands):

	March 31, 2018	January 1, 2018	Dollar Change
Contract assets	$ 25,005	$ 19,125	$ 5,880
Contract liabilities	$ 3,198	$ 2,820	$ 378

The $5.9 million increase in contract assets from January 1, 2018 to March 31, 2018 was primarily due to timing of billings to customers.

The $0.4 million increase in contract liabilities from January 1, 2018 to March 31, 2018 was primarily due to an increase in customer deposits partially offset by revenue recognized of $1.3 million in the first quarter related to contract liabilities at January 1, 2018.

Impacts on Financial Statements

The cumulative effect of the changes made to the Company's Condensed Consolidated January 1, 2018 Balance Sheet for the adoption of ASC 606 was as follows:

In thousands	December 31, 2017	Adjustments for Adoption of ASC606	January 1, 2018
Assets:			
Contract assets	$—	$ 19,125	$ 19,125
Inventories	$ 80,339	$ (15,184)	$ 65,155
Liabilities:			
Accounts payable	$ 71,931	$ 663	$ 72,594
Other accrued liabilities	$ 11,690	$ 1,209	$ 12,899
Deferred tax liabilities	$ 14,714	$ 471	$ 15,185
Stockholders' equity:			
Retained earnings	$ 374,783	$ 1,598	$ 376,381

The cumulative effect of the changes made to the Company’s Condensed Consolidated Balance Sheet for the adoption of ASC 606 was as follows:

In thousands	March 31, 2018 Balances Without Adoption of ASC 606	ASC 606 Adjustments	As Reported
Assets:			
Contract assets	$—	$ 25,005	$25,005
Inventories	$94,176	$ (19,913)	$74,263
Liabilities:			
Accounts payable	$76,742	$ 3,663	$80,405
Other accrued liabilities	$15,402	$ (932)	$14,470
Deferred tax liabilities	$15,015	$ 527	$15,542
Stockholders' equity:			
Retained earnings	$385,601	$ 1,834	$387,435

The cumulative effect of the changes made to the Company’s Condensed Consolidated Statement of Operations for the adoption of ASC 606 was as follows:

In thousands	Quarter Ended March 31, 2018 Results Without Adoption of ASC606	Effect of Change Higher (Lower)	As Reported
Net sales	$185,406	$ 6,254	$191,660
Cost of sales	146,191	5,962	152,153
Gross profit	39,215	292	39,507
Selling, product development and administrative expenses	25,471	—	25,471
Operating income	13,744	292	14,036
Interest expense	540	—	540
Other expense, net	315	—	315
Income before income taxes	12,889	292	13,181
Income tax expense	2,067	56	2,123
Loss from equity method investment	4	—	4
Net income	$10,818	$ 236	$11,054
Earnings per share:			
Basic	$0.63	$ 0.01	$0.64
Diluted	$0.62	$ 0.02	$0.64
Weighted average number of common shares outstanding:			

Basic	17,164	—	17,164
Diluted	17,339	—	17,339

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Disaggregated Revenue

The Company disaggregates revenue from customers by geographic region, as it believes this disclosure best depicts how the nature, amount, timing and uncertainty of the Company's revenue and cash flows are affected by economic factors. Disaggregated revenue by geographical region for the three months ended March 31, 2018 was as follows:

	Quarter Ended March 31, 2018				
In thousands	Performance Materials	Technical Nonwovens	Thermal Acoustical Solutions	Eliminations and Other	Consolidated Net Sales
North America	$19,161	$ 39,133	$ 69,979	$ (7,826)	$ 120,447
Europe	11,532	19,386	28,055	(185)	58,788
Asia	—	9,022	3,403	—	12,425
Total Net Sales	$30,693	$ 67,541	$ 101,437	$ (8,011)	$ 191,660

3. Inventories

Inventories as of March 31, 2018 and December 31, 2017 were as follows:

In thousands	March 31, 2018	December 31, 2017
Raw materials	$ 34,023	$ 28,672
Work in process	16,013	29,427
Finished goods	24,227	23,901
	74,263	82,000
Less: Progress billings	—	(1,661)
Total inventories	$ 74,263	$ 80,339

Included in work in process is gross tooling inventory of $6.5 million and $20.2 million at March 31, 2018 and December 31, 2017, respectively. Tooling inventory, net of progress billings, was $18.5 million at December 31, 2017. Effective January 1, 2018 the Company adopted ASC 606, Revenue from Contracts from Customers, under the modified retrospective transition method. The adoption of ASC 606 resulted in the reclassification of progress billings to contract liabilities. See Note 2, Revenue from Contracts with Customers, for further discussion of contract liabilities.

4. Goodwill and Other Intangible Assets

Goodwill:

The Company tests its goodwill for impairment annually in the fourth quarter, and whenever events or changes in circumstances indicate that the carrying value may exceed its fair value.

The changes in the carrying amount of goodwill by segment as of and for the quarter ended March 31, 2018 were as follows:

In thousands	December 31, 2017	Currency translation adjustments	Additions	March 31, 2018
Performance Materials	$ 13,307	$ 115	$ —	$13,422

Technical Nonwovens	55,662	(126)	—	55,536
Total goodwill	$ 68,969	$ (11)	$ —	$68,958

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Other Intangible Assets:

The table below presents the gross carrying amount and, as applicable, the accumulated amortization of the Company's acquired intangible assets other than goodwill included in "Other intangible assets, net" in the Condensed Consolidated Balance Sheets as of March 31, 2018 and December 31, 2017:

	March 31, 2018		December 31, 2017	
In thousands	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized intangible assets				
Customer Relationships	$39,399	$ (5,606)	$39,474	$ (4,460)
Patents	4,607	(3,942)	4,504	(3,821)
Technology	2,500	(685)	2,500	(644)
Trade Names	4,285	(1,689)	4,288	(1,461)
License Agreements	652	(652)	640	(640)
Other	601	(439)	586	(423)
Total amortized intangible assets	$52,044	$ (13,013)	$51,992	$ (11,449)

5. Long-term Debt and Financing Arrangements

On July 7, 2016, the Company amended its $100 million senior secured revolving credit facility ("Amended Credit Facility") which increased the available borrowing from $100 million to $175 million, added a fourth lender and extended the maturity date to July 7, 2021. The Amended Credit Facility is secured by substantially all of the assets of the Company. Under the terms of the Amended Credit Facility, the lenders are providing a $175 million revolving credit facility to the Company, under which the lenders may make revolving loans and issue letters of credit to or for the benefit of the Company and its subsidiaries. The Company may request the Amended Credit Facility be increased by an aggregate amount not to exceed $50 million through an accordion feature, subject to specified conditions set forth in the Amended Credit Facility.

The Amended Credit Facility contains a number of affirmative and negative covenants, including financial and operational covenants. The Company is required to meet a minimum interest coverage ratio. The interest coverage ratio requires that, at the end of each fiscal quarter, the ratio of consolidated EBIT to Consolidated Interest Charges, both as defined in the Amended Credit Facility, may not be less than 2.0 to 1.0 for the immediately preceding 12 month period. In addition, the Company must maintain a Consolidated Leverage Ratio, as defined in the Amended Credit Facility, as of the end of each fiscal quarter of no greater than 3.0 to 1.0. The Company must also meet minimum consolidated EBITDA as of the end of each fiscal quarter for the preceding 12 month period of $30 million. The Company was in compliance with all covenants at March 31, 2018 and December 31, 2017.

Interest is charged on borrowings at the Company's option of either: (i) Base Rate plus the Applicable Rate, or (ii) the Eurodollar Rate plus the Applicable Rate. The Base Rate is a fluctuating rate equal to the highest of (a) the federal funds rate plus 0.50%, (b) the prime rate as set by Bank of America, and (c) the Eurocurrency Rate plus 1.00%. The Eurocurrency Rate means (i) if denominated in LIBOR quoted currency, a fluctuating LIBOR per annum rate equal to the London Interbank Offered Rate; (ii) if denominated in Canadian Dollars, the rate per annum equal to the Canadian Dealer Offered Rate; or (iii) the rate per annum as designated with respect to such alternative currency at the time such alternative currency is approved by the Lenders. The Applicable Rate is determined based on the Company's Consolidated Leverage Ratio (as defined in the Amended Credit Agreement). The Applicable Rate added to the Base Rate Committed Loans ranges from 15 basis points to 100 basis points, and the Applicable Rate added to Eurocurrency Rate Committed Loans and Letters of Credit ranges from 75 basis points to 175 basis points. The

Company pays a quarterly fee ranging from 17.5 basis points to 30 basis points on the unused portion of the $175 million available under the Amended Credit Facility.

In April 2017, the Company entered into a three-year interest rate swap agreement transacted with a bank which converts the interest on the first notional $60.0 million of the Company's one-month LIBOR-based borrowings under its Amended Credit Facility from a variable rate, plus the borrowing spread, to a fixed rate of 1.58% plus the borrowing spread. The notional amount reduces quarterly by $5.0 million through March 31, 2020. The Company is accounting for the interest rate swap agreement as a cash flow hedge. Effectiveness of this derivative agreement is assessed quarterly by ensuring that the critical terms of the swap continue to match the critical terms of the hedged debt.

At March 31, 2018, the Company had borrowing availability of $94.5 million under the Amended Credit Facility, net of $76.6 million of borrowings outstanding and standby letters of credit outstanding of $3.9 million.

In addition to the amounts outstanding under the Amended Credit Facility, the Company has various acquired foreign credit facilities totaling approximately $10.0 million. At March 31, 2018, the Company's foreign subsidiaries had $0.1 million in borrowings outstanding as well as $3.0 million in standby letters of credit outstanding.

Total outstanding debt consists of:

In thousands	Effective Rate	Maturity	March 31, 2018	December 31, 2017
Revolver Loan, due July 7, 2021	2.88 %	2021	$76,600	$76,600
Capital Leases	1.65% - 2.09%	2019 - 2020	545	590
			77,145	77,190
Less portion due within one year			(283)	(277)
Total long-term debt			$76,862	$76,913

The carrying value of the Company’s $175 million Amended Credit Facility approximates fair value given the variable rate nature of the debt. The fair values of the Company’s long-term debt are determined using discounted cash flows based upon the Company’s estimated current interest cost for similar type borrowings or current market value, which falls under Level 2 of the fair value hierarchy. The carrying values of the long-term debt approximate fair market value.

The weighted average interest rate on long-term debt was 2.6% for the three months ended March 31, 2018 and 2.2% for the year ended December 31, 2017.

6. Derivatives

The Company selectively uses financial instruments to manage market risk associated with exposure to fluctuations in interest rates. These financial exposures are monitored and managed by the Company as an integral part of its risk management program. The Company’s interest rate exposure is most sensitive to fluctuations in interest rates in the United States and Europe, which impact interest paid on its debt. The Company has debt with variable rates of interest based generally on LIBOR. From time to time, the Company enters into interest rate swap agreements to manage interest rate risk. These instruments are designated as cash flow hedges and are recorded at fair value using Level 2 observable market inputs.

Derivative instruments are recognized as either assets or liabilities on the balance sheet in either current or non-current other assets or other accrued liabilities or other long-term liabilities depending upon maturity and commitment. For derivative instruments that are designated and qualify as a cash flow hedge, the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income and reclassified into earnings in the same period or periods in which the hedge transaction affects earnings. Any ineffective portion, or amounts related to contracts that are not designated as hedges, are recorded directly to earnings. The Company's policy for classifying cash flows from derivatives is to report the cash flows consistent with the underlying hedged item. The Company does not use derivatives for speculative or trading purposes.

In April 2017, the Company entered into a three-year interest rate swap agreement transacted with a bank which converts the interest on the first notional $60.0 million of the Company's one-month LIBOR-based borrowings under its Amended Credit Facility from a variable rate, plus the borrowing spread, to a fixed rate of 1.58% plus the borrowing spread. The notional amount reduces quarterly by $5.0 million through March 31, 2020. The interest rate swap agreement was accounted for as cash flow hedge. Effectiveness of this derivative agreement is assessed quarterly by ensuring that the critical terms of the swap continue to match the critical terms of the hedged debt.

The following table sets forth the fair value amounts of derivative instruments held by the Company:

In thousands	March 31, 2018		December 31, 2017	
	Asset Derivatives	Liability Derivatives	Asset Derivatives	Liability Derivatives
Derivatives designated as hedging instruments:				
Interest rate contract	$ 289	$ —	$ 157	$ —
Total derivatives	$ 289	$ —	$ 157	$ —

The following table sets forth the income recorded in accumulated other comprehensive income (loss), net of tax, for the quarters ended March 31, 2018 and 2017 for derivatives held by the Company and designated as hedging instruments:

	Quarter Ended March 31, 2018	Quarter Ended March 31, 2017
Cash flow hedges:		
Interest rate contract	$102	$ —
	$102	—

7. Equity Compensation Plans

As of March 31, 2018, the Company's equity compensation plans consisted of the 2003 Stock Incentive Compensation Plan (the "2003 Plan") and the 2012 Stock Incentive Plan (the "2012 Plan" and together with the 2003 Plan, the "Plans") under which incentive and non-qualified stock options and time and performance based restricted shares have been granted to employees and directors from authorized but unissued shares of common stock or treasury shares. The 2003 Plan is not active, but continues to govern all outstanding awards granted under the plan until the awards themselves are exercised or terminate in accordance with their terms. The 2012 Plan, approved by shareholders on April 27, 2012, authorizes 1.75 million shares of common stock for awards. The 2012 Plan also authorizes an additional 1.2 million shares of common stock to the extent awards granted under prior stock plans that were outstanding as of April 27, 2012 are forfeited. The 2012 Plan provides for the following types of awards: options, restricted stock, restricted stock units and other stock-based awards.

The Company accounts for the expense of all share-based compensation by measuring the awards at fair value on the date of grant. The Company recognizes expense on a straight-line basis over the vesting period of the entire award. Options issued by the Company under its stock option plans have a term of ten years and generally vest ratably over a period of three to four years. Time-based restricted stock grants are expensed over the vesting period of the award, which is typically two to four years. The number of performance based restricted shares that vest or forfeit depend upon achievement of certain targets during the performance period. The Company accounts for forfeitures as they occur. Compensation expense for performance based awards is recorded based upon the service period and management's assessment of the probability of achieving the performance goals and will be adjusted based upon actual achievement.

The Company incurred equity compensation expense of $1.2 million for each of the quarters ended March 31, 2018 and March 31, 2017, for the Plans, including restricted stock awards. No equity compensation costs were capitalized as part of inventory.

Stock Options

The following table is a summary of outstanding and exercisable options as of March 31, 2018:

In thousands except per share amounts	Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value
Outstanding at March 31, 2018	417	$ 34.36	$ 6,732
Exercisable at March 31, 2018	207	$ 21.90	$ 5,611
Unvested at March 31, 2018	210	$ 46.64	$ 1,121

There were 11,180 stock options granted and 27,041 stock options exercised during the quarter ended March 31, 2018. The amount of cash received from the exercise of stock options was $0.7 million during the quarter ended March 31,

2018 . The intrinsic value of stock options exercised was $0.6 million with a tax benefit of $0.1 million during the quarter ended March 31, 2018.

There were no stock options granted and 12,164 stock options exercised during the quarter ended March 31, 2017. The amount of cash received from the exercise of stock options was $0.2 million during the quarter ended March 31,2017. The intrinsic value of stock options exercised was $0.5 million with a tax benefit of $0.2 million during the quarter ended March 31, 2017.

At March 31, 2018, the total unrecognized compensation cost related to non-vested stock option awards was approximately $3.3 million, with a weighted average expected amortization period of 3.0 years.

Restricted Stock

Restricted stock includes both performance-based and time-based awards. There were 8,106 time-based restricted stock shares granted during the quarter ended March 31, 2018. There were 15,190 performance-based restricted shares granted during the quarter ended March 31, 2018. There were 48,035 performance-based restricted shares that vested during the quarter ended March 31, 2018 in accordance with plan provisions. There were 5,164 time-based restricted shares that vested during the quarter ended March 31, 2018.

There were no time-based restricted shares granted during the quarter ended March 31, 2017. There were 18,100 performance-based restricted shares granted during the quarter ended March 31, 2017. There were 108,600 performance-based restricted shares that vested during the quarter ended March 31, 2017 in accordance with Plan provisions. There were 9,288 time-based restricted shares that vested during the quarter ended March 31, 2017.

At March 31, 2018, there were 187,902 unvested restricted stock awards with total unrecognized compensation cost related to these awards of $5.6 million with a weighted average expected amortization period of 2.1 years. Compensation expense for performance based awards is recorded based on the service period and management’s assessment of the probability of achieving the performance goals.

8. Stock Repurchases

During the three months ended March 31, 2018, the Company purchased 18,561 shares of common stock valued at $0.8 million, through withholding, pursuant to provisions in agreements with recipients of restricted stock granted under the Company’s equity compensation plans, in which the Company withholds that number of shares having fair value equal to each recipient’s minimum tax withholding due.

9. Restructuring

In April 2017, the Company commenced a restructuring plan in the Technical Nonwovens segment which includes plant consolidations and transfer of equipment to other facilities within the segment's Europe and China operations. The consolidation of certain plants, which is expected to conclude in the second quarter of 2019, is expected to reduce operating costs, increase efficiency and enhance the Company’s flexibility by better aligning its manufacturing footprint with the segment's customer base. Accordingly, the Company expects to record total pre-tax expenses of approximately $5.0 million, in connection with this restructuring plan, of which approximately $4.8 million is expected to result in cash expenditures over the period of consolidation. The Company also expects to incur cash expenditures of approximately $3.5 million for capital expenditures associated with this plan.

During the quarter ended March 31, 2018, the Company recorded pre-tax restructuring expenses of $0.5 million. Restructuring expenses of $0.4 million, primarily related to severance and equipment move costs, were recorded in selling, product development and administrative expenses and $0.1 million of severance and engineering costs were recorded in cost of sales during the quarter ended March 31, 2018. The Company expects to record approximately $1.5 million of restructuring expenses in the second quarter of 2018 and $3.5 million for the year ended December 31, 2018.

Actual pre-tax expenses incurred and total estimated pre-tax expenses for the restructuring program by type are as follows:

In thousands	Severance and	Contract Termination	Facility Exit, Move and	Total

	Related Expenses	Expenses	Set-up Expenses	
Total estimated expenses	1,200	300	3,500	5,000
Expenses incurred through December 31, 2017	181	154	327	662
Estimated remaining expense at December 31, 2017	1,019	146	3,173	4,338
Expense incurred during quarter ended:				
March 31, 2018	$ 315	$ —	$ 219	$534
Total pre-tax expense incurred	$ 496	$ 154	$ 546	$1,196
Estimated remaining expense at March 31, 2018	704	146	2,954	3,804

There were cash outflows of $0.3 million for the restructuring program for the quarter ended March 31, 2018.

Accrued restructuring costs were as follows at March 31, 2018:

In thousands	Total
Balance as of December 31, 2017	$333
Pre-tax restructuring expenses, excluding depreciation	469
Cash paid	(320)
Balance as of March 31, 2018	$482

10. Employer Sponsored Benefit Plans

As of March 31, 2018, the Company maintains a defined benefit pension plan that covers certain domestic Lydall employees (“domestic pension plan”) that is closed to new employees and benefits are no longer accruing. The domestic pension plan is noncontributory and benefits are based on either years of service or eligible compensation paid while a participant is in the plan. The Company’s funding policy is to fund not less than the ERISA minimum funding standard and not more than the maximum amount that can be deducted for federal income tax purposes.

As of January 1, 2018 the Company adopted ASU No. 2017-07, "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost". This ASU required the other components of net benefit cost, which includes interest costs, expected return on plan assets, and amortization of actuarial loss be presented in the income statement outside a subtotal of income from operations for the quarter ended March 31, 2018. The retrospective adoption of this ASU resulted in the reclassification of net benefit costs of $0.1 million from cost of sales and $0.1 million from the selling, product development and administrative expenses to the other expense, net line in the Consolidated Statement of Operations for the quarter ended March 31, 2017.

The Company expects to contribute approximately $3.0 million to $4.0 million in cash for the domestic pension plan in 2018, and is evaluating this strategy as a result of the recent changes to U.S. tax law enacted on December 22, 2017. Contributions of $1.2 million were made during the quarter ended March 31, 2018 and during the quarter ended March 31, 2017.

The following is a summary of the components of net periodic benefit cost, which is recorded in other expense, net, for the domestic pension plan for the quarters ended March 31, 2018 and 2017:

	Quarter Ended March 31,	
In thousands	2018	2017
Components of net periodic benefit cost		
Interest cost	$470	$514
Expected return on assets	(650)	(594)
Amortization of actuarial loss	256	273
Net periodic benefit cost	$76	$193

11. Income Taxes

On December 22, 2017, the United States enacted significant changes to U.S. tax law following the passage and signing of the Tax Cuts and Jobs Act (the "Tax Reform Act"). The Company has followed guidance in Staff Accounting Bulletin No.118 ("SAB 118"), which provides a measurement period, not to exceed one year from the enactment of the Tax Reform Act, and recorded provisional items related to the one-time mandatory repatriation of foreign earnings and the revaluation of deferred tax assets and liabilities for the year ended December 31, 2017. For

the quarter ended March 31, 2018, the Company continued to perform analysis and evaluate interpretations and additional regulatory guidance, but did not record any adjustments to these provisional items, nor deemed any of them as complete.

The Company's effective tax rate for the first quarter of 2018 was 16.1% compared to an effective tax rate of 17.6% for the first quarter of 2017. The effective tax rate in the first quarter of 2018 was impacted by the reduction of the U.S. corporate tax rate from 35% to 21% under the Tax Reform Act, tax benefits of $0.3 million related to stock vesting and the geographical mix of earnings.

The effective rate in the first quarter of 2017 of 17.6% was favorably impacted by a tax benefit of $1.6 million related to stock vesting as well as the geographical mix of earnings.

The Company and its subsidiaries file a consolidated federal income tax return, as well as returns required by various state and foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities, including such major jurisdictions as the United States, France, Germany, China, the United Kingdom, Canada and the Netherlands. With few exceptions, the Company is no longer subject to U.S. federal examinations for years before 2015, state and local examinations for years before 2013, and non-U.S. income tax examinations for years before 2003.
The Company’s effective tax rates in future periods could be affected by earnings being higher or lower in countries where tax rates differ from the United States federal tax rate, the relative impact of permanent tax adjustments on higher or lower earnings from domestic operations, changes in net deferred tax asset valuation allowances, stock vesting, the completion of acquisitions or divestitures, changes in tax rates or tax laws and the completion of tax projects and audits.

12. Earnings Per Share

For the quarters ended March 31, 2018 and 2017, basic earnings per share were computed by dividing net income by the weighted average number of shares of common stock outstanding during the period. Unexercised stock options and unvested restricted shares are excluded from this calculation but are included in the diluted earnings per share calculation using the treasury stock method as long as their effect is not antidilutive.

The following table provides a reconciliation of weighted-average shares used to determine basic and diluted earnings per share:

	Quarter Ended March 31,	
In thousands	2018	2017
Basic average common shares outstanding	17,164	16,983
Effect of dilutive options and restricted stock awards	175	301
Diluted average common shares outstanding	17,339	17,284

For each of the quarters ended March 31, 2018 and 2017, stock options for 137,709 shares and 38,280 shares of Common Stock were not considered in computing diluted earnings per common share because they were antidilutive.

13. Segment Information

As of March 31, 2018, the Company’s reportable segments are Performance Materials, Technical Nonwovens, and Thermal Acoustical Solutions.

Effective January 1, 2018, the Thermal/Acoustical Metals and Thermal/Acoustical Fibers operating segments were combined into a single operating segment named Thermal Acoustical Solutions. These automotive segments were combined into one segment to allow the Company to better serve its customers, leverage operating disciplines and drive efficiencies across the global automotive operations.

Prior period segment amounts throughout the Notes to the Condensed Consolidated Financial Statements have been recast to reflect the results of the new segment structure. The recast of historical business segment information had no impact on the consolidated financial results.

Performance Materials Segment

The Performance Materials segment includes filtration media solutions primarily for air, fluid power, and industrial applications ("Filtration"), thermal insulation solutions for building products, appliances, and energy and industrial markets ("Thermal Insulation") and air and liquid life science applications ("Life Sciences Filtration"). Filtration products include LydAir® MG (Micro-Glass) Air Filtration Media, LydAir® MB (Melt Blown) Air Filtration Media, LydAir® SC (Synthetic Composite) Air Filtration Media, and Arioso™ Membrane Composite Media. These products constitute the critical media component of clean-air systems for applications in clean-space, commercial, industrial and residential HVAC, power generation, and industrial processes. Lydall has leveraged its extensive technical expertise and applications knowledge into a suite of media products covering the vast liquid filtration landscape across the engine and industrial fields. The LyPore® Liquid Filtration Media series address a variety of application needs in fluid power including hydraulic filters, air-water and air-oil coalescing, industrial fluid processes and diesel fuel filtration.

Thermal Insulation products are high performance nonwoven veils, papers, mats and specialty composites for the building products, appliance, and energy and industrial markets. The Manniglas® Thermal Insulation brand is diverse in its product application ranging from high temperature seals and gaskets in ovens and ranges to specialty veils for HVAC and cavity wall insulation. The Lytherm® Insulation Media product brand services Lydall's high temperature technology portfolio, traditionally utilized in the industrial market for kilns and furnaces used in metal processing. Lydall's Cryotherm® Super-Insulating Media, CRS-Wrap® Super-Insulating Media and Cryo-Lite™ Cryogenic Insulation products are industry standards for state-of-the-art cryogenic insulation designs used by manufacturers of cryogenic equipment for liquid gas storage, piping, and transportation.

Life Sciences Filtration is comprised of products which have been designed to meet the stringent requirements of critical applications including biopharmaceutical pre-filtration and clarification, lateral flow diagnostic and analytical testing, respiratory protection, potable water filtration and high purity process filtration such as that found in food and beverage and medical applications. Lydall also offers ultra-high molecular weight polyethylene membranes under the Solupor® trade name. These specialty microporous membranes are utilized in various markets and applications including air and liquid filtration and transdermal drug delivery. Solupor® membranes incorporate a unique combination of high mechanical strength, chemical inertness, gamma stability and very high porosity making them ideal for many applications.

Technical Nonwovens Segment

The Technical Nonwovens segment primarily produces needle punch nonwoven solutions for myriad industries and applications. Products are manufactured and sold globally under the leading brands of Lydall Industrial Filtration, Southern Felt, Gutsche, and Texel. Industrial Filtration products include nonwoven rolled-good felt media and filter bags used primarily in industrial air and liquid filtration applications. Nonwoven filter media is the most effective solution to satisfy increasing emission control regulations in a wide range of industries, including power, cement, steel, asphalt, incineration, mining, food, and pharmaceutical. Advanced Materials products include nonwoven rolled-good media used in commercial applications and predominantly serves the geosynthetics, automotive, industrial, medical, and safety apparel markets. Automotive media is provided to Tier I/II suppliers and as well as the Company's Thermal Acoustical Solutions segment.

Technical Nonwovens segment products include air and liquid filtration media sold under the brand names Fiberlox® high performance filtration felts, Checkstatic™ conductive filtration felts, Microfelt® high efficiency filtration felts, Pleatlox® pleatable filtration felts, Ultratech™ PTFE filtration felts, Powertech® and Powerlox® power generation filtration felts, Microcap® high efficiency liquid filtration felts, Duotech membrane composite filtration felts, along with our porotex® family of high temperature filtration felts including microvel® and optivel® products. Technical Nonwovens Advanced Materials products are sold under the brand names Thermofit® thermo-formable products, Ecoduo® recycled content materials, Duotex® floor protection products, and Versaflex® composite molding materials. Technical Nonwovens also offers extensive finishing and coating capabilities which provide custom engineered properties tailored to meet the most demanding applications. The business leverages a wide range of fiber types and extensive technical capabilities to provide products that meet our customers' needs across a variety of applications providing both high performance and durability.

Thermal Acoustical Solutions Segment

The Thermal Acoustical Solutions segment offers a full range of innovative engineered products tailored for the transportation sector to thermally shield sensitive components from high heat, improve exhaust gas treatment and lower harmful emissions as well as assist in the reduction of noise vibration and harshness (NVH). Lydall products are found in the interior (dash insulators, cabin flooring), underbody (wheel well, aerodynamic belly pan, fuel tank,

exhaust, tunnel, spare tire) and under hood (engine compartment, outer dash, powertrain, catalytic converter, turbo charger, manifolds) of cars, trucks, SUVs, heavy duty trucks and recreational vehicles.

Thermal Acoustical Solutions segment products offer thermal and acoustical insulating solutions comprised of organic and inorganic fiber composites that provide weight reduction, superior noise suppression and increased durability over conventional designs, as well as products that efficiently combine multiple layers of metal and thermal - acoustical insulation media to provide an engineered shielding solution for an array of application areas for the automotive and truck markets. Lydall’s dBCore® is a lightweight acoustical composite that emphasizes absorption principles over heavy-mass type systems. Lydall’s dBLyte® is a high-performance acoustical barrier with sound absorption and blocking properties and can be used throughout a vehicle’s interior to minimize intrusive noise from an engine compartment and road. Lydall’s ZeroClearance® is an innovative thermal solution that utilizes an adhesive backing for attachment and is used to protect vehicle components from excessive heat. Lydall’s flux® product family includes several patented or IP-rich products that address applications which include: Direct Exhaust Mount heat shields, which are assembled to high temperature components like catalytic converters, turbochargers or exhaust manifolds using aluminized and stainless steel and high performance and high temperature heat insulating materials; Powertrain heat shields that absorb noise at the source and do not contribute to the engine's noise budget; and durable, thermally robust solutions for temperature sensitive plastic components such as fuel tanks that are in proximity to high temperature heat sources.

The tables below present net sales and operating income by segment for the quarters ended March 31, 2018 and 2017, and also a reconciliation of total segment net sales and operating income to total consolidated net sales and operating income.

Consolidated net sales by segment:

	Quarter Ended March 31,	
In thousands	2018	2017
Performance Materials Segment:		
Filtration	$20,690	$18,846
Thermal Insulation	7,507	7,425
Life Sciences Filtration	2,496	2,480
Performance Materials Segment net sales	30,693	28,751
Technical Nonwovens Segment:		
Industrial Filtration	40,231	34,214
Advanced Materials (1)	27,310	24,704
Technical Nonwovens net sales	67,541	58,918
Thermal Acoustical Solutions Segment:		
Parts	88,122	81,814
Tooling	13,315	2,971
Thermal Acoustical Solutions Segment net sales	101,437	84,785
Eliminations and Other (1)	(8,011)	(6,967)
Consolidated Net Sales	$191,660	$165,487

Operating income by segment:

	Quarter Ended March 31,	
In thousands	2018	2017 (2)
Performance Materials	$2,641	$1,658
Technical Nonwovens	5,006	4,668
Thermal Acoustical Solutions	12,614	14,796
Corporate Office Expenses	(6,225)	(5,974)
Consolidated Operating Income	$14,036	$15,148

(1) Included in the Technical Nonwovens segment and Eliminations and Other is $7.1 million and $6.3 million in intercompany sales to the Thermal Acoustical Solutions segment for the quarters ended March 31, 2018 and 2017, respectively.

(2) First quarter 2017 segment operating income amounts of $0.2 million have been reclassified to other expense, net, to give effect to the adoption of ASU No. 2017-07, "Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost".

14. Commitments and Contingencies

Environmental Remediation

The Company elected to remediate environmental contamination discovered prior to the closing of the Texel acquisition in 2016 at a certain property in the province of Quebec, Canada ("the Property") that was acquired by Lydall. The Company records accruals for environmental costs when such losses are probable and reasonably estimable. In 2016, the Company, through the engagement of a third-party environmental service firm, determined the final scope and timing of the remediation project and estimated the cost of the remediation project to range between $0.9 million and $1.5 million, which was further refined in July of 2017 to the top end of this range at $1.5 million and remains as the Company's best estimate as of March 31, 2018. During 2017, the environmental liability was reduced by $0.7 million, reflecting payments made to vendors, resulting in a balance of $0.8 million at December 31, 2017. During the three months ended March 31, 2018, the environmental liability was further reduced by $0.4 million, reflecting payments to vendors. The remaining balance for the environmental liability of $0.4 million (which remains fully offset as described below) is included within other long-term liabilities on the Company's balance sheet at March 31, 2018.

Pursuant to the Share Purchase Agreement, ADS, Inc. ("ADS") has agreed to indemnify the Company from all costs and liabilities associated with the contamination and remediation work, including the costs of preparation and approval of the remediation plan and other reports in relation therewith. This indemnity was secured by an environmental escrow account, which was established in the amount of $3.0 million Canadian Dollars (approximately $2.3 million U.S. Dollars as of March 31, 2018). Should the costs and liabilities exceed the environmental escrow amount, the Company also has access to the general indemnity escrow account, which was originally established in the amount of $14.0 million Canadian Dollars (approximately $10.9 million U.S. Dollars as of March 31, 2018), and based on the Share Purchase Agreement was reduced to approximately $7.0 million Canadian Dollars (approximately $5.4 million U.S. Dollars as of March 31, 2018). Based on the foregoing, an indemnification asset of $0.9 million was also recorded in other assets at December 31, 2016, and subsequently increased to $1.5 million in July of 2017, as the Company believed, and still believes collection from ADS is probable. The indemnification asset was decreased by $0.7 million, reflecting indemnification from ADS for payments made by the Company to its vendors during 2017. During the three months ended March 31, 2018, the indemnification asset was further reduced by $0.4 million, reflecting indemnification from ADS for payments made by the Company to its vendors The resulting indemnification asset balance was $0.4 million at March 31, 2018. The accrual for remediation costs will be adjusted as further information develops, estimates change and payments to vendors are made for remediation, with an off-setting adjustment to the indemnification asset from ADS if collection is deemed probable.

In the fourth quarter of 2016, as part of a groundwater discharging permitting process, water samples collected from wells and process water basins at the Company’s Rochester New Hampshire manufacturing facility, within the Performance Materials segment, showed concentrations of Perfluorinated Compounds (“PFCs”) in excess of state ambient groundwater quality standards.
In January 2017, the Company received a notification from the State of New Hampshire Department of Environmental Services (“NHDES”) naming Lydall Performance Materials, Inc. a responsible party with respect to the discharge of regulated contaminants and, as such, is required to take action to investigate and remediate the impacts in accordance with standards established by the NHDES. The Company conducted a site investigation, the scope of which was reviewed by the NHDES, in order to assess the extent of potential soil and groundwater contamination and develop a remedial action. Based on input received from NHDES in March 2017 with regard to the scope of the site investigation, the Company recorded $0.2 million of expense in the first quarter of 2017 associated with the expected costs of conducting this site investigation.

In the fourth quarter of 2017, the Company completed its state-approved site investigation report and submitted it to the NHDES. During the year ended December 31, 2017, the environmental liability of $0.2 million was reduced by $0.2 million reflecting payments made to vendors, resulting in no balance at December 31, 2017.

In the first quarter of 2018, the Company received a response from the NHDES to the site investigation report outlining proposed remedial actions. The Company recorded $0.1 million of expense in the first quarter of 2018 associated with the expected costs to remediate the impacts of the discharge of regulated contaminants in accordance with standards established by the NHDES. Additionally, the Company expects to incur approximately $0.2 million of capital expenditures in 2018, which will be recorded as incurred, in relation to the lining of the Company's fresh water waste lagoons.

While the site investigation is complete, the Company cannot be sure that costs will not exceed the current estimates until this matter is closed with the NHDES, nor that any future corrective action at this location would not have a material effect on the Company’s financial condition, results of operations or liquidity. Provisions for such matters are charged to expense when it is probable that a liability has been incurred and reasonable estimates of the liability can be made. Estimates of environmental liabilities are based on a variety of matters, including, but not limited to, the

stage of investigation, the stage of the remedial design, evaluation of existing remediation technologies, and presently enacted laws and regulations. In future periods, a number of factors could significantly impact any estimates of environmental remediation costs.

15. Changes in Accumulated Other Comprehensive Income (Loss)

The following table discloses the changes by classification within accumulated other comprehensive income (loss) for the periods ended March 31, 2018 and 2017:

In thousands	Foreign Currency Translation Adjustment	Defined Benefit Pension Adjustment	Gains and Losses on Cash Flow Hedges	Total Accumulated Other Comprehensive (Loss) Income
Balance at December 31, 2016	$ (27,885)	$ (20,065)	$ —	$ (47,950)
Other Comprehensive Income	2,729	—	—	2,729
Amounts reclassified from accumulated other comprehensive loss	—	172 (a)	—	172
Balance at March 31, 2017	(25,156)	(19,893)	—	(45,049)
Balance at December 31, 2017	(2,221)	(18,049)	122	(20,148)
Other Comprehensive Income	2,545	—	102 (b)	2,647
Amounts reclassified from accumulated other comprehensive loss	—	198 (a)	—	198
Balance at March 31, 2018	$ 324	$ (17,851)	$ 224	$ (17,303)

(a) Amount represents amortization of actuarial losses, a component of net periodic benefit cost. This amount was $0.2 million, net of $0.1 million tax benefit for the quarters ended March 31, 2018 and 2017.

(b) Amount represents unrealized gains on the fair value of hedging activities, net of taxes, for the quarter ended March 31, 2018.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW AND OUTLOOK

Business

Lydall, Inc. and its subsidiaries (collectively, the "Company" or "Lydall") design and manufacture specialty engineered nonwoven filtration media, industrial thermal insulating solutions, and thermal and acoustical barriers for filtration/separation and heat abatement and sound dampening applications. Lydall principally conducts its business through three reportable segments: Performance Materials, Technical Nonwovens and Thermal Acoustical Solutions, with sales globally. The Performance Materials segment includes filtration media solutions for air, fluid power, and industrial applications ("Filtration"), air and liquid life science applications ("Life Sciences Filtration"), and thermal insulation solutions for building products, appliances, and energy and industrial markets ("Thermal Insulation"). The Technical Nonwovens ("TNW") segment consists of Industrial Filtration products that include nonwoven rolled-goods felt media and filter bags used primarily in industrial air and liquid filtration applications as well as Advanced Materials products that include nonwoven rolled-good media that is used in other commercial applications and predominantly serves the geosynthetics, automotive, industrial and medical markets. Advanced Materials products also include automotive rolled-good material for use in the Thermal Acoustical Solutions segment manufacturing process. Nonwoven filter media is used to satisfy increasing emission control regulations in a wide range of industries, including power, cement, steel, asphalt, incineration, food, and pharmaceutical. The Thermal Acoustical Solutions ("TAS") segment offers innovative engineered products to assist in noise and heat abatement within the transportation sector.

Effective January 1, 2018, the Company combined the Thermal/Acoustical Metals and Thermal/Acoustical Fibers operating segments into a single operating segment named Thermal Acoustical Solutions. Combining these automotive segments into one segment is expected to allow the Company to better serve its customers, leverage operating disciplines and drive efficiencies across the global automotive operations.

First Quarter 2018 Highlights

Below are financial highlights comparing Lydall's quarter ended March 31, 2018 ("Q1 2018") results to its quarter ended March 31, 2017 ("Q1 2017") results:

- Net sales were $191.7 million in Q1 2018, compared to $165.5 million in Q1 2017, an increase of $26.2 million, or 15.8%. The change in consolidated net sales is summarized in the following table:

Components (in thousands)	Change in Net Sales	Percent Change	
Parts volume and pricing change	6,924	4.2	%
Change in tooling sales	9,542	5.8	%
Foreign currency translation	9,707	5.8	%
Total	$26,173	15.8	%

- On January 1, 2018 the Company adopted Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers" ("ASC 606"). The impact of adopting ASC 606 resulted in an increase to net sales of $6.3 million, of which $6.2 million related to tooling sales, and an increase to net income of $0.2 million for the quarter ended March 31, 2018.

- Gross margin decreased 390 basis points to 20.6% in the first quarter of 2018, primarily driven by the Thermal Acoustical Solutions segment, and to a lesser extent the Technical Nonwovens and Performance Materials segments. The Thermal Acoustical Solutions segment negatively impacted consolidated gross margin by approximately 290 basis points due to a sharp increase in demand on key platforms in North America, and coupled with equipment downtime and other inefficiencies, resulted in excessive manufacturing and freight costs to meet customer delivery schedules. Also, increased aluminum costs and reduced customer pricing for certain parts contributed to lower gross margin.

- Operating income was $14.0 million, or 7.3%, of net sales in Q1 2018, compared to $15.1 million, or 9.2% of net sales, in Q1 2017. Operating margin declined due to the negative impact of lower gross margin of 390 basis points. Decreased gross margin was partially offset by a 200 basis point reduction in selling, product development and administrative expenses as a percentage of net sales compared to the first quarter of 2017 primarily due to managed spending coupled

with sales growth. The following components are included in operating income for Q1 2018 and Q1 2017 and impact the comparability of each quarter:

Components (in thousands except per share amounts)	Q1 2018 Operating income effect	Q1 2018 EPS impact	Q1 2017 Operating income effect	Q1 2017 EPS impact
TNW restructuring expenses	(534)	$(0.03)	—	$—
Strategic initiatives expenses	(122)	$(0.01)	(160)	$(0.01)
Severance expenses	—	$—	(988)	$(0.03)
Inventory step-up purchase accounting adjustments	—	$—	(481)	$(0.02)
Impairment charge	—	$—	(772)	$(0.03)

- The Company's effective tax rate for Q1 2018 was 16.1% compared to 17.6% in Q1 2017. The effective tax rate in the first quarter of 2018 was impacted by the reduction of the U.S. corporate tax rate from 35% to 21% under the U.S. Tax Cuts and Jobs Act, while the first quarter of 2017 was impacted by 11.4% due to tax benefits from stock vesting.

- Net income was $11.1 million, or $0.64 per diluted share, in Q1 2018 and $11.7 million, or $0.68 per diluted share, in Q1 2017.

Liquidity

Cash flows used in operations in the first quarter of 2018 were $4.0 million compared with cash provided by operations of $12.4 million in the first quarter of 2017. The reduction in cash from operations was primarily caused by increased accounts receivable since December 31, 2017 driven by increased sales and lower accounts payable based on timing of inventory and capital expenditures. Cash was $49.1 million at March 31, 2018, compared to $59.9 million at December 31, 2017, with availability of $94.5 million on the Company's domestic credit facility at March 31, 2018.

Outlook

Looking forward in the second quarter of 2018, the Company expects robust backlog and order activity to continue across all segments and overall organic growth to be in a range consistent with the first quarter of 2018. The TAS segment expects commodity inflation and reduced customer pricing on certain applications to continue. Meaningful improvements are being made to address TAS manufacturing processes and equipment efficiency to reduce excessive manufacturing costs and improve gross margin. Overall, the Company expects quarterly sequential improvement in consolidated gross margin in the second quarter, but the Company does expect consolidated gross margin to be lower than the same period last year. The Company remains focused on executing the Technical Nonwovens' restructuring plan that is expected to reduce operating costs and increase efficiency. The Company will also continue to pursue organic and inorganic opportunities to drive profitable growth.

Results of Operations

All of the following tabular comparisons, unless otherwise indicated, are for the quarters ended March 31, 2018 (Q1-18) and March 31, 2017 (Q1-17).

Net Sales

Quarter Ended

In thousands	Q1-18	Q1-17	Percent Change
Net sales	$191,660	$165,487	15.8 %

Net sales for the first quarter of 2018 increased by $26.2 million, or 15.8%, compared to the first quarter of 2017. Foreign currency translation had a favorable impact on net sales of $9.7 million, or 5.8% of consolidated net sales, in the first quarter of 2018 compared to the first quarter of 2017. Net sales increased in the Thermal Acoustical Solutions segment by $16.7 million, or 10.1% of consolidated net sales, including increased tooling sales of $10.3 million. The increase in tooling sales was primarily due to the Company's adoption of ASC 606 which resulted in the recognition of $6.2 million of Thermal Acoustical Solutions tooling sales as the Company's performance obligations were satisfied over time in the first quarter of 2018 compared to the first quarter

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of 2017 when tooling sales were recognized when delivered and accepted by the customer. The Technical Nonwovens segment reported sales growth of $8.6 million, or 5.2% of consolidated net sales, primarily due to increased industrial filtration sales of $6.0 million in the first quarter of 2018 compared to the first quarter of 2017. The Performance Materials segment reported growth in net sales of $1.9 million, or 1.2% of consolidated net sales.

Cost of Sales

	Quarter Ended		
In thousands of dollars	Q1-18	Q1-17	Percent Change
Cost of sales	$152,153	$124,989	21.7 %

Cost of sales for the first quarter of 2018 increased by $27.2 million, or 21.7%, compared to the first quarter of 2017. The increase in cost of sales was primarily due to increased net sales across all segments and included $6.1 million of tooling costs in the Thermal Acoustical Solutions segment related to the adoption of ASC 606 that under prior accounting rules would be recognized upon delivery and acceptance by the customer. Other items contributing to the increase in cost of sales for the first quarter of 2018 compared to the first quarter of 2017 were incremental manufacturing costs, primarily in the Thermal Acoustical Solutions segment related to incremental scrap, excessive overtime and expedited freight expenses from equipment downtime and other inefficiencies, including interruptions in production associated with pre-launch activities and prototypes. Cost of sales also increased in the first quarter of 2018 compared to the first quarter of 2017 due to raw material commodity increases, primarily in the Thermal Acoustical Solutions and Technical Nonwovens segments. These increases to cost of sales were partially offset by improved mix of products in the Thermal Acoustical Solutions segment and the absence of $0.5 million in purchase accounting adjustments to cost of sales related to inventory step-up in the Technical Nonwovens segment. Foreign currency translation increased cost of sales in the first quarter of 2018 compared to the first quarter of 2017 by $8.2 million, or 6.6%.

Gross Profit

	Quarter Ended		
In thousands	Q1-18	Q1-17	Percent Change
Gross profit	$39,507	$40,498	(2.4)%
Gross margin	20.6 %	24.5 %	

Gross margin for the first quarter of 2018 was 20.6% compared to 24.5% in the first quarter of 2017. The Thermal Acoustical Solutions segment negatively impacted consolidated gross margin by approximately 290 basis points, primarily related to incremental scrap, excessive overtime and expedited freight expenses from equipment downtime and other inefficiencies, including interruptions in production associated with pre-launch activities and prototypes. Also, increased aluminum costs and reduced customer pricing for certain parts contributed to lower gross margin in the segment. The Technical Nonwovens segment negatively impacted consolidated gross margin by approximately 50 basis points, primarily related to restructuring related expenses of $0.4 million, or 20 basis points, as well as unfavorable mix and increased variable overhead expenses, partially offset by the absence of the negative impact of $0.5 million, or 30 basis points, of purchase accounting adjustments relating to inventory step up in the first quarter of 2017. Additionally, the Performance Materials segment negatively impacted consolidated gross margin by approximately 50 basis points, primarily as a result of unfavorable absorption of fixed costs.

Selling, Product Development and Administrative Expenses

	Quarter Ended	
In thousands	Q1-18	Q1-17

			Percent Change
Selling, product development and administrative expenses	$25,471	$25,350	0.5 %
Percentage of sales	13.3 %	15.3 %	

Selling, product development and administrative expenses for the first quarter of 2018 increased by $0.1 million compared to the first quarter of 2017. This increase was primarily related to greater professional fees of $0.7 million, salaries of $0.5 million and intangible amortization expense of $0.3 million. These increases were primarily offset by the absence of a non-cash long-lived asset impairment charge of $0.8 million incurred in the first quarter of 2017 in the Performance Materials segment, lower severance expense of $0.3 million and a decrease in other administrative expenses of $0.3 million. Selling, product development and

administrative expenses decreased 200 basis points as a percentage of net sales compared to the first quarter of 2017 primarily due to managed spending coupled with sales growth.

Interest Expense

	Quarter Ended		
In thousands	Q1-18	Q1-17	Percent Change
Interest expense	$540	$606	(10.9)%
Weighted average interest rate	2.6 %	1.8 %	

The decrease in interest expense for the quarter ended March 31, 2018 compared to the quarter ended March 31, 2017 was due to lower average borrowings outstanding, partially offset by increased interest rates under the Company's Amended Credit Facility used to finance both the Texel and Gutsche acquisitions in 2016.

Other Income/Expense, net

	Quarter Ended		
In thousands	Q1-18	Q1-17	Dollar Change
Other expense, net	$315	$333	$ (18)

Other expense, net, for the quarter ended March 31, 2018 compared to the quarter ended March 31, 2017 was relatively flat, as net foreign currency losses recognized on the revaluation of cash, trade payables and receivables and intercompany loans denominated in currencies other than the functional currencies of the Company's subsidiaries was consistent with prior year.

Income Taxes

On December 22, 2017, the United States enacted significant changes to U.S. tax law following the passage and signing of the Tax Cuts and Jobs Act (the "Tax Reform Act"). The Company has followed guidance in Staff Accounting Bulletin No.118 ("SAB 118"), which provides a measurement period, not to exceed one year from the enactment of the Tax Reform Act, and recorded provisional items related to the one-time mandatory repatriation of foreign earnings and the revaluation of deferred tax assets and liabilities for the year ended December 31, 2017. For the quarter ended March 31, 2018, the Company continued to perform analysis and evaluate interpretations and additional regulatory guidance but did not record any adjustments to these provisional items and has not deemed any of them as complete.

The Company's effective tax rate for the first quarter of 2018 was 16.1% compared to an effective tax rate of 17.6% for the first quarter of 2017. The effective tax rate in the first quarter of 2018 was impacted by the reduction of the U.S. corporate tax rate from 35% to 21% under the Tax Reform Act, tax benefits of $0.3 million related to stock vesting and the geographical mix of earnings. The effective rate in the first quarter of 2017 of 17.6% was favorably impacted by a tax benefit of $1.6 million related to stock vesting as well as the geographical mix of earnings. The Company now expects its ordinary effective tax rate in 2018 to be in the range of 18% to 20%.

The Company and its subsidiaries file a consolidated federal income tax return, as well as returns required by various state and foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities, including such major jurisdictions as the United States, France, Germany, China, the United Kingdom, Canada and the Netherlands. With few exceptions, the Company is no longer subject to U.S. federal examinations for years before 2015, state and local examinations for years before 2013, and non-U.S. income tax examinations for

years before 2003.

The Company's effective tax rates in future periods could be affected by earnings being higher or lower in countries where tax rates differ from the United States federal tax rate, the relative impact of permanent tax adjustments on higher or lower earnings from domestic operations, changes in net deferred tax asset valuation allowances, stock vesting, the completion of acquisitions or divestitures, changes in tax rates or tax laws and the completion of tax projects and audits.

Segment Results

The following tables present net sales information for the key product and service groups included within each operating segment as well as other products and services and operating income by segment, for the quarter ended March 31, 2018 compared with the quarter ended March 31, 2017:

Net sales by segment:

	Quarter Ended		
In thousands	Q1-18	Q1-17	Dollar Change
Performance Materials Segment:			
Filtration	$20,690	$18,846	$1,844
Thermal Insulation	7,507	7,425	82
Life Sciences Filtration	2,496	2,480	16
Performance Materials Segment net sales	30,693	28,751	1,942
Technical Nonwovens Segment:			
Industrial Filtration	40,231	34,214	6,017
Advanced Materials (1)	27,310	24,704	2,606
Technical Nonwovens net sales	67,541	58,918	8,623
Thermal Acoustical Solutions Segment:			
Parts	88,122	81,814	6,308
Tooling	13,315	2,971	10,344
Thermal Acoustical Solutions Segment net sales	101,437	84,785	16,652
Eliminations and Other (1)	(8,011)	(6,967)	(1,044)
Consolidated Net Sales	$191,660	$165,487	$26,173

Operating income by segment:

	Quarter Ended				
	Q1-18		Q1-17		
In thousands	Operating Income	Operating Margin %	Operating Income	Operating Margin %	Dollar Change
Performance Materials	$2,641	8.6%	$1,658	5.8%	$983
Technical Nonwovens	5,006	7.4%	4,668	7.9%	338
Thermal Acoustical Solutions	12,614	12.4%	14,796	17.5%	(2,182)
Corporate Office Expenses	(6,225)		(5,974)		(251)
Consolidated Operating Income	$14,036	7.3%	$15,148	9.2%	$(1,112)

(1) Included in the Technical Nonwovens segment and Eliminations and Other is $7.1 million and $6.3 million in intercompany sales to the Thermal Acoustical Solutions segment for the quarters ended March 31, 2018 and 2017, respectively.

Performance Materials

Segment net sales increased $1.9 million, or 6.8%, in the first quarter of 2018 compared to the first quarter of 2017. The increase was primarily due to foreign currency translation which had a positive impact on net sales of $1.6 million, or 5.4%. Net sales of filtration products increased approximately $1.8 million, or 9.8%, due to increased

demand in the fluid power market, partially offset by decreased volume in the air filtration market, particularly in Europe. Thermal insulation and life sciences product net sales were essentially flat compared to the first quarter of 2017. The Company's adoption of ASC 606, which impacts the timing of revenue recognition, contributed $0.4 million of the sales increase.

The Performance Materials segment reported operating income of $2.6 million, or 8.6% of net sales, in the first quarter of 2018, compared to operating income of $1.7 million, or 5.8% of net sales, in the first quarter of 2017. The increase in operating margin of 280 basis points was attributable to decreased selling, product development and administrative expenses of $0.7 million, or 350 basis points as a percentage of net sales, due to the absence of $0.8 million of expense from a non-cash long-lived asset impairment charge in the first quarter of 2017. This increase to operating margin was partially offset by lower gross margin of approximately 70 basis points due to unfavorable absorption of fixed costs. Foreign currency translation had a positive impact on operating income of $0.1 million, or 8.2%, in the first quarter of 2018 compared to the first quarter of 2017.

Technical Nonwovens

Segment net sales increased $8.6 million, or 14.6%, in the first quarter of 2018 compared to the first quarter of 2017 primarily due to increased industrial filtration sales of $6.0 million, or 17.6%, particularly from increased demand in Europe and to a lesser extent, China and North America. Additionally, advanced materials sales increased $2.6 million, or 10.5%, due to increased demand in North America, coupled with increased sales of automotive rolled-good material for use in the Thermal Acoustical Solutions segment manufacturing process. Foreign currency translation had a positive impact on segment net sales of $4.0 million, or 6.9%, in the first quarter of 2018 compared to the first quarter of 2017. The Company's adoption of ASC 606, which impacts the timing of revenue recognition, had a minimal impact on net sales in the first quarter of 2018.

The Technical Nonwovens segment reported operating income of $5.0 million, or 7.4% of net sales, in the first quarter of 2018, compared to $4.7 million, or 7.9% of net sales, in the first quarter of 2017. The increase in segment operating income of $0.3 million was due to increased sales from improved global demand, primarily related to increased industrial filtration sales. The decrease in operating margin of 50 basis points was attributable to lower gross margin of approximately 140 basis points. Gross margin was negatively impacted by segment restructuring expenses of $0.4 million, or 70 basis points, as well as unfavorable mix and increased variable overhead expenses, partially offset by inventory step-up of $0.5 million, or 80 basis points, in the first quarter of 2017. Selling, product development and administrative expenses increased $0.5 million in the first quarter of 2018 compared to the first quarter of 2017, however, decreased by approximately 90 basis points as a percentage of net sales. The increase in selling, product development and administrative expenses was primarily related to increased salaries and sales commissions of $0.5 million and higher amortization of intangible assets of $0.3 million, partially offset by lower accrued incentive compensation of $0.3 million in the first quarter of 2018 compared to the first quarter of 2017. Foreign currency translation had a favorable impact on operating income of $0.2 million, or 4.0%, in the first quarter of 2018 compared to the first quarter of 2017.

Thermal Acoustical Solutions

Segment net sales increased $16.7 million, or 19.6%, in the first quarter of 2018 compared to the first quarter of 2017. Tooling net sales increased $10.3 million compared to the first quarter of 2017 due to new platform launches and the impact of the Company's adoption of ASC 606 effective January 1, 2018 which impacts the timing of revenue recognition. The new standard resulted in the recognition of an additional $6.2 million of segment tooling sales that under prior accounting rules would have been recognized upon delivery and acceptance by the customer in a later period. Additionally, parts net sales increased $6.3 million, or 7.7%, compared to the first quarter of 2017, primarily due to increased global demand, partially offset by reduced customer pricing on certain parts. The Company's adoption of ASC 606, which impacts the timing of revenue recognition, had a minimal impact on parts net sales in the first quarter of 2018. Foreign currency translation had a positive impact on segment net sales of $4.1 million, or 4.8%, in the first quarter of 2018 compared to the first quarter of 2017.

The Thermal Acoustical Solutions segment reported operating income of $12.6 million, or 12.4% of net sales, in the first quarter of 2018, compared to operating income of $14.8 million, or 17.5% of net sales, in the first quarter of 2017. The decrease in operating income of $2.2 million and operating margin of 510 basis points was due to lower gross margin of 620 basis points primarily due to incremental scrap, excessive overtime and expedited freight expenses from equipment downtime and other inefficiencies, including interruptions in production associated with pre-launch activities and prototypes. Additionally, increased aluminum costs and reduced customer pricing for certain parts contributed to lower gross margin. This decrease to gross margin was partially offset by a 110 basis point decrease in selling, product development and administrative expenses as a percentage of net sales. Lower severance and information technology expenses of $0.4 million and $0.3 million, respectively, were offset by increased accrued compensation expense of $0.3 million, consulting expenses of $0.2 million and other administrative expenses of $0.2 million in the first quarter of 2018 compared to the first quarter of 2017. Foreign currency translation had a favorable impact on operating income of $0.2 million, or 1.2%, in the third quarter of 2018 compared to the third quarter of 2017.

Corporate Office Expenses

Corporate office expenses for the first quarter of 2018 were $6.3 million, compared to $6.0 million in the first quarter of 2017. The increase of $0.3 million was primarily due to increased professional fees of $0.5 million, partially offset by decreased stock compensation expense of $0.2 million in the first quarter of 2018 compared to the first quarter of 2017.

Liquidity and Capital Resources

The Company assesses its liquidity in terms of its ability to generate cash to fund operating, investing and financing activities. The principal source of liquidity is operating cash flows. In addition to operating cash flows, other significant factors that affect the overall management of liquidity include capital expenditures, investments in businesses, strategic transactions, income tax payments, debt service payments, outcomes of contingencies, foreign currency exchange rates and pension funding. The Company manages worldwide cash requirements by considering available funds among domestic and foreign subsidiaries. The Company expects to finance its 2018 operating cash and capital spending requirements from existing cash balances, cash provided by operating activities and through borrowings under the Amended Credit Facility, as needed.

At March 31, 2018, the Company held $49.1 million in cash and cash equivalents, including $8.6 million in the U.S. with the remaining held by foreign subsidiaries.

Financing Arrangements

On July 7, 2016, the Company amended its $100 million senior secured revolving credit facility (“Amended Credit Facility”) which increased the available borrowing from $100 million to $175 million, added a fourth lender and changed the maturity date from January 31, 2019 to July 7, 2021. The Amended Credit Facility is secured by substantially all of the assets of the Company. The Company entered into this Amended Credit Facility in part to fund a majority of the 2016 acquisitions and provide additional capacity to support organic growth programs, fund capital investments and continue pursuits of attractive acquisitions.

Under the terms of the Amended Credit Facility, the lenders are providing a $175 million revolving credit facility to the Company, under which the lenders may make revolving loans and issue letters of credit to or for the benefit of the Company and its subsidiaries. The Company may request the Amended Credit Facility be increased by an aggregate amount not to exceed $50 million through an accordion feature, subject to specified conditions.

The Amended Credit Facility contains a number of affirmative and negative covenants, including financial and operational covenants. The Company is required to meet a minimum interest coverage ratio. The interest coverage ratio requires that, at the end of each fiscal quarter, the ratio of consolidated EBIT to Consolidated Interest Charges, both as defined in the Amended Credit Facility, may not be less than 2.0 to 1.0 for the immediately preceding 12 month period. In addition, the Company must maintain a Consolidated Leverage Ratio, as defined in the Amended Credit Facility, as of the end of each fiscal quarter of no greater than 3.0 to 1.0. The Company must also meet minimum consolidated EBITDA as of the end of each fiscal quarter for the preceding 12 month period of $30 million.

Interest is charged on borrowings at the Company’s option of either: (i) Base Rate plus the Applicable Rate, or (ii) the Eurodollar Rate plus the Applicable Rate. The Base Rate is a fluctuating rate equal to the highest of (a) the federal funds rate plus 0.50%, (b) the prime rate as set by Bank of America, and (c) the Eurocurrency Rate plus 1.00%. The Eurocurrency Rate means (i) if denominated in LIBOR quoted currency, a fluctuating LIBOR per annum rate equal to the London Interbank Offered Rate; (ii) if denominated in Canadian Dollars, the rate per annum equal to the Canadian Dealer Offered Rate; or (iii) the rate per annum as designated with respect to such alternative currency at the time such alternative currency is approved by the Lenders. The Applicable Rate is determined based on the Company’s Consolidated Leverage Ratio (as defined in the Amended Credit Agreement). The Applicable Rate added to the Base Rate Committed Loans ranges from 15 basis points to 100 basis points, and the Applicable Rate added to Eurocurrency Rate Committed Loans and Letters of Credit ranges from 75 basis points to 175 basis points. The Company pays a quarterly fee ranging from 17.5 basis points to 30 basis points on the unused portion of the $175

million available under the Amended Credit Facility. At March 31, 2018, the Company had borrowing availability of $94.5 million under the Amended Credit Facility net of $76.6 million of borrowings outstanding and standby letters of credit outstanding of $3.9 million.

In addition to the amounts outstanding under the Amended Credit Facility, the Company has various acquired foreign credit facilities totaling approximately $10.0 million. At March 31, 2018, the Company's foreign subsidiaries had $0.1 million in borrowings outstanding as well as $3.0 million in standby letters of credit outstanding.

In April 2017, the Company entered into a three-year interest rate swap agreement transacted with a bank which converts the interest on the first notional $60.0 million of the Company's one-month LIBOR-based borrowings under its revolver loan from a variable rate, plus the borrowing spread, to a fixed rate of 1.58% plus the borrowing spread. The notional amount reduces quarterly by $5.0 million through March 31, 2020. The Company is accounting for the interest rate swap agreement as a cash flow hedge. Effectiveness of this derivative agreement is assessed quarterly by ensuring that the critical terms of the swap continue to match the critical terms of the hedged debt.

Operating Cash Flows

Net cash used for operating activities in the first three months of 2018 was $4.0 million compared with net cash provided by operating activities of $12.4 million in the first three months of 2017. In the first three months of 2018, net income and non-cash adjustments were $20.1 million compared to $20.9 million in the first three months of 2017. Since December 31, 2017, net operating assets and liabilities increased by $24.0 million, primarily due to increases of $18.6 million in accounts receivable, $8.8 million in inventories and $5.7 million in contract assets, partially offset by an increase of $9.5 million in accounts payable. The increase in accounts receivable and contract assets was primarily due to higher net sales in the first quarter of 2018 compared to the fourth quarter of 2017 of $13.6 million, primarily from the Thermal Acoustical Solutions segment. The increase in inventory was principally due to higher raw material inventories, primarily associated with strategic purchases within the Technical Nonwovens segment to meet seasonal demands. The increase in accounts payable was primarily driven by the timing of vendor payments and payments for capital expenditures within the Thermal Acoustical Solutions segment during the first three months of 2018.

Investing Cash Flows

In the first three months of 2018 and 2017, net cash used for investing activities consisted of capital expenditures of $7.7 million and $9.6 million, respectively. Capital spending for 2018 is expected to be approximately $30 million to $35 million.

Financing Cash Flows

In the first three months of 2018, net cash used for financing activities was $0.2 million compared to net cash used by financing activities of $12.8 million in the first three months of 2017. Debt repayments were $0.1 million and $10.5 million in the first three months of 2018 and 2017, respectively. The Company acquired $0.8 million and $2.5 million in company stock through its equity compensation plans during the first three months of 2018 and 2017, respectively. The Company received $0.7 million from the exercise of stock options in the first three months of 2018, compared to $0.2 million in the first three months of 2017.

Critical Accounting Estimates

The preparation of the Company’s consolidated financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Note 1 of the “Notes to Consolidated Financial Statements” and Critical Accounting Estimates in Item 7 of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, and the “Notes to Condensed Consolidated Financial Statements” of this report describe the significant accounting policies and critical accounting estimates used in the preparation of the consolidated financial statements. The Company’s management is required to make judgments and estimates about the effect of matters that are inherently uncertain. Actual results could differ from management’s estimates. There have been no significant changes in the Company’s critical accounting estimates during the quarter ended March 31, 2018, except for those described in Note 2 of this report in relation to the Company's adoption of ASC 606.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on the Company’s judgment

and estimates of undiscounted future cash flows resulting from the use of the assets and their eventual disposition. Measurement of an impairment loss for long-lived assets that management expects to hold and use is based on the fair value of the assets. If the carrying values of the assets are determined to be impaired, then the carrying values are reduced to their estimated fair values. The fair values of the impaired assets are determined based on applying a combination of market approaches, including independent appraisals when appropriate, the income approach, which utilizes cash flow projections, and the cost approach.
During the first quarter of 2017, the Company tested for impairment a discrete long-lived asset group in the Performance Materials segment with a carrying value of $1.3 million, as a result of indicators of possible impairment. To determine the recoverability of this asset group, the Company completed an undiscounted cash flow analysis and compared it to the asset group carrying value. This analysis was primarily dependent on the expectations for net sales over the estimated remaining useful life of the underlying asset group. The impairment test concluded that the asset group was not recoverable as the resulting undiscounted cash flows were less than their carrying amount. Accordingly, the Company determined the fair value of the asset group to assess if there was an impairment. Determining fair value is judgmental in nature and requires the use of significant estimates and assumptions considered to be Level 3 inputs. To determine the estimated fair value of the asset group the Company used the market approach. Under the market approach, the determination of fair value considered market conditions including an independent appraisal of the components of the asset group. The estimated fair value of the asset group was $0.5 million, below its carrying value of $1.3

million, which resulted in a long-lived asset impairment charge of $0.8 million included in selling, product development and administrative expenses during the quarter ended March 31, 2017. This long-lived asset group, with a net book value of $0.5 million, is classified as held for sale as of March 31, 2018.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Lydall’s limited market risk exposures relate to changes in foreign currency exchange rates and interest rates.

Foreign Currency Risk

The Company has operations in France, Germany, China, the United Kingdom, Canada and the Netherlands, in addition to the United States. As a result of this, the Company’s financial results are affected by factors such as changes in foreign currency exchange rates or economic conditions in the foreign markets where the Company manufactures and distributes its products. The Company’s currency exposure is to the US Dollar, the Euro, the Chinese Yuan, the British Pound Sterling, the Canadian Dollar, the Japanese Yen and the Hong Kong Dollar. The Company’s foreign and domestic operations attempt to limit foreign currency exchange transaction risk by completing transactions in local functional currencies, whenever practicable. The Company may periodically enter into foreign currency forward exchange contracts to mitigate exposure to foreign currency volatility. In addition, the Company utilizes bank loans and other debt instruments throughout its operations. To mitigate foreign currency risk, such debt is denominated primarily in the functional currency of the operation maintaining the debt.
The Company also has exposure to fluctuations in currency risk on intercompany loans that the Company makes to certain of its subsidiaries. The Company may periodically enter into foreign currency forward contracts which are intended to offset the impact of foreign currency movements on the underlying intercompany loan obligations.

Interest Rate Risk

The Company’s interest rate exposure is most sensitive to fluctuations in interest rates in the United States and Europe, which impact interest paid on its debt. The Company has debt with variable rates of interest based generally on LIBOR. Increases in interest rates could therefore significantly increase the associated interest payments that the Company is required to make on this debt. From time to time, the Company may enter into interest rate swap agreements to manage interest rate risk. The Company has assessed its exposure to changes in interest rates by analyzing the sensitivity to Lydall’s earnings assuming various changes in market interest rates. Assuming a hypothetical increase of one percentage point in interest rates on the variable interest rate debt as of March 31, 2018, the Company’s net income would decrease by an estimated $0.3 million over a twelve-month period.

In April 2017, the Company entered into a three-year interest rate swap agreement transacted with a bank which converts the interest on the first notional $60.0 million of the Company's one-month LIBOR-based borrowings under its revolver loan from a variable rate, plus the borrowing spread, to a fixed rate of 1.58% plus the borrowing spread. The notional amount reduces quarterly by $5.0 million through March 31, 2020.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company’s management, including the Company’s President and Chief Executive Officer (the “CEO”) and the Executive Vice President and Chief Financial Officer (the "CFO"), conducted an evaluation of the effectiveness of the design and operation of the Company’s disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)). There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. The Company’s disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the

reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission (the "SEC"), and that such information is accumulated and communicated to management of the Company, with the participation of its CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Based on that evaluation, the CEO and CFO have concluded that the Company’s disclosure controls and procedures were effective as of March 31, 2018 at the reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There have not been any changes in the Company’s internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act) during the quarter ended March 31, 2018 that materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The Company is subject to legal proceedings, claims, investigations and inquiries that arise in the ordinary course of business such as, but not limited to, actions with respect to commercial, intellectual property, employment, personal injury, and environmental matters. The Company believes that it has meritorious defenses against the claims currently asserted against it and intends to defend them vigorously. While the outcome of litigation is inherently uncertain and the Company cannot be sure that it will prevail in any of the cases, subject to the matter referenced below, the Company is not aware of any matters pending that are expected to have a material adverse effect on the Company’s business, financial position, results of operations or cash flows.
In the fourth quarter of 2016, as part of a groundwater discharging permitting process, water samples collected from wells and process water basins at the Company’s Rochester New Hampshire manufacturing facility, within the Performance Materials segment, showed concentrations of Perfluorinated Compounds (“PFCs”) in excess of state ambient groundwater quality standards.
In January 2017, the Company received a notification from the State of New Hampshire Department of Environmental Services (“NHDES”) naming Lydall Performance Materials, Inc. a responsible party with respect to the discharge of regulated contaminants and, as such, is required to take action to investigate and remediate the impacts in accordance with standards established by the NHDES. The Company conducted a site investigation, the scope of which was reviewed by the NHDES, in order to assess the extent of potential soil and groundwater contamination and develop a remedial action. Based on input received from NHDES in March 2017 with regard to the scope of the site investigation, the Company recorded $0.2 million of expense in the first quarter of 2017 associated with the expected costs of conducting this site investigation.

In the fourth quarter of 2017, the Company completed its state-approved site investigation report and submitted it to the NHDES. During the year ended December 31, 2017, the environmental liability of $0.2 million was reduced by $0.2 million reflecting payments made to vendors, resulting in no balance at December 31, 2017.

In the first quarter of 2018, the Company received a response from the NHDES to the site investigation report outlining proposed remedial actions. The Company recorded $0.1 million of expense in the first quarter of 2018 associated with the expected costs to remediate the impacts of the discharge of regulated contaminants in accordance with standards established by the NHDES. Additionally, the Company expects to incur approximately $0.2 million of capital expenditures in 2018, which will be recorded as incurred, in relation to the lining of the Company's fresh water waste lagoons.

While the site investigation is complete, the Company cannot be sure that costs will not exceed the current estimates until this matter is closed with the NHDES, nor that any future corrective action at this location would not have a material effect on the Company’s financial condition, results of operations or liquidity. Provisions for such matters are charged to expense when it is probable that a liability has been incurred and reasonable estimates of the liability can be made. Estimates of environmental liabilities are based on a variety of matters, including, but not limited to, the stage of investigation, the stage of the remedial design, evaluation of existing remediation technologies, and presently enacted laws and regulations. In future periods, a number of factors could significantly impact any estimates of environmental remediation costs.

Item 1A. Risk Factors

See Part I, Item 1A of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, as updated by Part I, Item 1. Legal Proceedings of this report. The risks described in the Annual Report on Form 10-K, and the “Cautionary Note Concerning Forward-Looking Statements” in this report, are not the only risks faced by the Company. Additional risks and uncertainties not currently known or that are currently judged to be immaterial may also materially affect the Company’s business, financial position, results of operations or cash flows.

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

During the three months ended March 31, 2018, the Company acquired 18,561 shares of common stock through withholding, pursuant to provisions in agreements with recipients of restricted stock granted under the Company's equity compensation plans, in which the Company withholds that number of shares having fair value equal to each recipient's minimum tax withholding due.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number of Shares That May Yet Be Purchased Under the Program
January 1, 2018 - January 31, 2018	—	$ —	—	—
February 1, 2018 - February 28, 2018	18,561	$ 44.35	—	—
March 1, 2018 - March 31, 2018	—	$ —	—	—
	18,561	$ 44.35	—	—

Item 5. Other Information

Submission of Matters to a Vote of Security Holders

At the annual meeting of stockholders of the Company held on April 27, 2018, stockholders voted on three proposals presented to them for consideration:

1. Election of Nominees to the Board of Directors

The following nominees were elected to the Company's Board of Directors to serve until the next annual meeting to be held in 2019 and until their successors are duly elected and qualified. The results of the voting were as follows:

Director	For	Withheld	Broker Non-Votes
Dale G. Barnhart	14,852,898	120,527	737,095
David G. Bills	14,928,627	44,798	737,095
Kathleen Burdett	14,739,011	234,414	737,095
James J. Cannon	14,881,131	92,294	737,095
Matthew T. Farrell	14,515,244	458,181	737,095
Marc T. Giles	14,662,100	311,325	737,095
William D. Gurley	14,573,647	399,778	737,095
Suzanne Hammett	14,674,042	299,383	737,095
S. Carl Soderstorm, Jr.	14,461,593	511,832	737,095

2. Advisory Vote on Executive Compensation

Stockholders approved, on an advisory basis, the executive compensation of the Company's named executive officers. The results of the voting were as follows:

For	14,721,050
Against	241,576
Abstain	10,799
Broker Non-Votes	737,095

3. Ratification of Appointment of Independent Auditors

Stockholders ratified the appointment of PricewaterhouseCoopers LLP as the Company's independent auditors for fiscal year 2018. The results of the voting were as follows:

For	15,225,354
Against	484,930
Abstain	236

Item 6. Exhibits

Exhibit Number	Description
10.1	Employment Agreement with Randall B. Gonzales dated March 12, 2018, filed herewith.
10.2	Offer Letter for Randall B. Gonzales dated January 5, 2018, filed herewith.
31.1	Certification Pursuant to Rule 13a-14(a) and Rule 15d-14(a) under the Securities Exchange Act of 1934, of principal executive officer, filed herewith.
31.2	Certification Pursuant to Rule 13a-14(a) and Rule 15d-14(a) under the Securities Exchange Act of 1934, of principal financial officer, filed herewith.
32.1	Certifications Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

LYDALL, INC.

May 1, 2018 By: /s/ Randall B. Gonzales
Randall B. Gonzales
Executive Vice President and Chief Financial Officer
(On behalf of the Registrant and as
Principal Financial Officer)