UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-Q

(MARK ONE)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2020

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 1-10596

ESCO TECHNOLOGIES INC.

(Exact name of registrant as specified in its charter)

MISSOURI (State or other jurisdiction of incorporation or organization)	43-1554045 (I.R.S. Employer Identification No.)
9900A CLAYTON ROAD ST. LOUIS, MISSOURI (Address of principal executive offices)	63124-1186 (Zip Code)

(314) 213-7200

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	ESE	New York Stock Exchange

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
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 ☒

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

Class	**Shares outstanding at April 30, 2020**
Common stock, $.01 par value per share	26,037,248

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

ESCO TECHNOLOGIES INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(Dollars in thousands, except per share amounts)

	Three Months Ended March 31, 2020	2019
Net sales	$ 180,492	171,243
Costs and expenses:		
Cost of sales	113,242	103,547
Selling, general and administrative expenses	39,982	39,327
Amortization of intangible assets	5,220	4,371
Interest expense, net	1,320	1,853
Other expenses (income), net	703	2,022
Total costs and expenses	160,467	151,120
Earnings before income taxes	20,025	20,123
Income tax expense	2,203	2,301
Earnings from continuing operations	17,822	17,822
Earnings from discontinued operations, net of tax expense of $257	—	975
Gain on sale of discontinued operations	—	—
Earnings from discontinued operations	—	975
Net earnings	$ 17,822	18,797
Earnings per share:		
Basic - Continuing operations	$ 0.69	0.69
- Discontinued operations	0.00	0.04
- Net earnings	$ 0.69	0.73
Diluted - Continuing operations	$ 0.68	0.68
- Discontinued operations	0.00	0.04
- Net earnings	$ 0.68	0.72

See accompanying notes to consolidated financial statements.

ESCO TECHNOLOGIES INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(Dollars in thousands, except per share amounts)

	Six Months Ended March 31, 2020	Six Months Ended March 31, 2019
Net sales	$ 352,220	334,608
Costs and expenses:		
Cost of sales	219,969	206,001
Selling, general and administrative expenses	82,087	77,867
Amortization of intangible assets	11,030	8,771
Interest expense, net	3,741	3,708
Other expenses (income), net	998	(5,357)
Total costs and expenses	317,825	290,990
Earnings before income taxes	34,395	43,618
Income tax expense	5,809	8,446
Earnings from continuing operations	28,586	35,172
(Loss) earnings from discontinued operations, net of tax expense of $269 and $52	(601)	942
Gain on sale of discontinued operations, net of tax expense of $23,734	76,614	—
Earnings from discontinued operations	76,013	942
Net earnings	$ 104,599	36,114
Earnings per share:		
Basic - Continuing operations	$ 1.10	1.36
- Discontinued operations	2.93	0.04
- Net earnings	$ 4.03	1.40
Diluted - Continuing operations	$ 1.09	1.34
- Discontinued operations	2.91	0.04
- Net earnings	$ 4.00	1.38

See accompanying notes to consolidated financial statements.

ESCO TECHNOLOGIES INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)
(Dollars in thousands)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Net earnings	$ 17,822	18,797	104,599	36,114
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(6,885)	677	(2,962)	(3,852)
Net unrealized gain on derivative instruments	—	126	—	100
Total other comprehensive income (loss), net of tax	(6,885)	803	(2,962)	(3,752)
Comprehensive income	$ 10,937	19,600	101,637	32,362

See accompanying notes to consolidated financial statements.

ESCO TECHNOLOGIES INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Unaudited)
(Dollars in thousands)

	March 31, 2020	September 30, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 100,195	61,808
Accounts receivable, net	157,050	158,715
Contract assets	96,100	110,211
Inventories, net	141,027	124,956
Other current assets	17,228	14,190
Assets of discontinued operations – current	—	25,314
Total current assets	511,600	495,194
Property, plant and equipment, net of accumulated depreciation of $122,204 and $113,520, respectively	139,248	127,843
Intangible assets, net of accumulated amortization of $118,277 and $107,247, respectively	371,779	381,605
Goodwill	389,630	390,256
Operating lease assets	18,901	—
Other assets	10,421	4,445
Assets of discontinued operations - other	—	67,377
Total assets	$ 1,441,579	1,466,720
LIABILITIES AND SHAREHOLDERS’ EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 20,000	20,000
Accounts payable	53,617	63,800
Contract liabilities	95,382	81,177
Accrued salaries	27,062	37,194
Accrued other expenses	54,968	37,947
Liabilities of discontinued operations - current	—	11,517
Total current liabilities	251,029	251,635
Pension obligations	22,861	22,682
Deferred tax liabilities	61,690	60,856
Non-current operating lease liabilities	15,010	—
Other liabilities	34,782	36,326
Long-term debt	130,000	265,000
Liabilities of discontinued operations - other	—	3,999
Total liabilities	515,372	640,498
Shareholders’ equity:		
Preferred stock, par value $.01 per share, authorized 10,000,000 shares	—	—
Common stock, par value $.01 per share, authorized 50,000,000 shares, issued 30,596,940 and 30,596,940 shares, respectively	306	306
Additional paid-in capital	294,787	292,408
Retained earnings	785,184	684,741
Accumulated other comprehensive loss, net of tax	(46,936)	(43,974)
	1,033,341	933,481
Less treasury stock, at cost: 4,607,911 and 4,615,627 common shares, respectively	(107,134)	(107,259)
Total shareholders’ equity	926,207	826,222
Total liabilities and shareholders’ equity	$ 1,441,579	1,466,720

See accompanying notes to consolidated financial statements.

ESCO TECHNOLOGIES INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(Dollars in thousands)

	Six Months Ended March 31, 2020	Six Months Ended March 31, 2019
Cash flows from operating activities:		
Net earnings	$ 104,599	36,114
Earnings from discontinued operations	(76,013)	(942)
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation and amortization	20,583	16,837
Stock compensation expense	2,896	2,557
Changes in assets and liabilities	(16,247)	(28,124)
Change in property, plant and equipment due to gain on sale of building	—	(8,922)
Pension contributions	—	(833)
Effect of deferred taxes	834	(1,431)
Net cash provided by operating activities – continuing operations	36,652	15,256
Net cash (used) provided by operating activities – discontinued operations	(14,622)	1,736
Net cash provided by operating activities	22,030	16,992
Cash flows from investing activities:		
Proceeds from sale of building and land	—	17,201
Additions to capitalized software	(4,280)	(4,494)
Capital expenditures	(21,211)	(10,127)
Net cash (used) provided by investing activities – continuing operations	(25,491)	2,580
Proceeds from sale of discontinued operations	183,997	—
Capital expenditures – discontinued operations	(1,728)	(7,298)
Net cash provided (used) by investing activities – discontinued operations	182,269	(7,298)
Net cash provided (used) by investing activities	156,778	(4,718)
Cash flows from financing activities:		
Proceeds from long-term debt and short-term borrowings	10,000	23,000
Principal payments on long-term debt	(145,000)	(26,000)
Dividends paid	(4,156)	(4,146)
Other	—	370
Net cash used by financing activities – continuing operations	(139,156)	(6,776)
Net cash (used) provided by financing activities – discontinued operations	(2,140)	1,091
Net cash used by financing activities	(141,296)	(5,685)
Effect of exchange rate changes on cash and cash equivalents	875	(2,111)
Net increase in cash and cash equivalents	38,387	4,478
Cash and cash equivalents, beginning of period	61,808	30,477
Cash and cash equivalents, end of period	$ 100,195	34,955
Supplemental cash flow information:		
Interest paid	$ 3,477	3,594
Income taxes paid (including state and foreign)	23,098	13,450

See accompanying notes to consolidated financial statements.

1. BASIS OF PRESENTATION

The accompanying consolidated financial statements, in the opinion of management, include all adjustments, consisting of normal recurring accruals, necessary for a fair presentation of the results for the interim periods presented. The consolidated financial statements are presented in accordance with the requirements of Form 10-Q and consequently do not include all the disclosures required for annual financial statements by accounting principles generally accepted in the United States of America (GAAP). For further information, refer to the consolidated financial statements and related notes included in the Company’s Annual Report on Form 10-K for the fiscal year ended September 30, 2019. Certain 2019 amounts have been reclassified to conform with the 2020 presentation.

The Company’s results for the three-month period ended March 31, 2020 are not necessarily indicative of the results for the entire 2020 fiscal year. References to the second quarters of 2020 and 2019 represent the fiscal quarters ended March 31, 2020 and 2019, respectively. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities. Actual results could differ from those estimates.

Beginning in the first quarter of 2020, Management has renamed the Filtration / Fluid Flow (Filtration) segment as Aerospace & Defense (A&D) to better reflect the composition of the segment’s products, end markets and customer characteristics. The A&D’s segment’s individual legal and operating entities, historical financial results, and management structure are unchanged from what was formerly presented as Filtration.

2. TECHNICAL PACKAGING DIVESTITURE

On December 31, 2019, the Company completed the sale of its Technical Packaging business segment, consisting of the Company's wholly-owned subsidiaries Thermoform Engineered Quality LLC, Plastique Ltd. and Plastique sp. z o.o. (the "Technical Packaging Business"), to Sonoco Plastics, Inc. and Sonoco Holdings, Inc. ("Buyers"), two wholly-owned subsidiaries of Sonoco Products Company, pursuant to the Equity Purchase Agreement entered into on November 15, 2019. The companies within this segment provide innovative solutions to the medical and commercial markets for thermoformed packages and specialty products using a wide variety of thin gauge plastics and pulp. Results of operations, financial position and cash flows for the Technical Packaging business is reflected as discontinued operations in the consolidated financial statements and related notes for all periods presented.

Net sales from the Technical Packaging business were zero and $16.5 million in the second quarter and first six months of 2020, respectively, compared to $22.7 million and $41.9 million in the corresponding periods of 2019. The Company received net proceeds from the sale of approximately $184 million and recorded a $76.6 million after-tax gain on the sale in the first quarter of 2020. The Company expects to finalize the working capital adjustment during the third quarter of 2020.

The major classes of assets and liabilities of the Technical Packaging business included in the Consolidated Balance Sheet at September 30, 2019 are shown below (in millions).

	September 30, 2019
Assets:	
Accounts receivable, net	$ 15.7
Contract assets, net	5.1
Inventories	3.9
Other current assets	0.6
Current assets	25.3
Property, plant & equipment, net	33.6
Intangible assets, net	11.4
Goodwill	19.0
Other assets	3.4
Total assets	$ 92.7
Liabilities:	
Accounts payable	$ 7.6
Accrued expenses and other current liabilities	3.9
Current liabilities	11.5
Other liabilities	4.0
Total liabilities	$ 15.5

3. ACCOUNTING STANDARDS UPDATE

In February 2016, the FASB issued ASU No. 2016-062, "*Leases*" (ASU 2016-062) which supersedes ASC 840, "*Leases*" and creates a new topic, ASC 842, "*Leases*." Subsequent to the issuance of ASU 2016-062, ASC 842 was amended by various updates that amend and clarify the impact and implementation of the aforementioned update. Effective October 1, 2019, the Company adopted these updates using the optional transition method. These updates require lessees to recognize a lease liability and a lease asset for all leases, including operating leases, with a term greater than 12 months on its balance sheet. Upon initial application, the provisions of these updates are required to be applied using the modified retrospective method, which requires retrospective adoption to each prior reporting period presented with the cumulative effect of adoption recorded to the earliest reporting period presented. An optional transition method can be utilized which requires retrospective adoption beginning on the date of adoption with the cumulative effect of initially applying these updates recognized at the date of initial adoption. The standard also provided several optional practical expedients for use in transition. The Company elected to use what the FASB has deemed the “package of practical expedients,” which allowed the Company not to reassess previous conclusions regarding lease identification, lease classification and the accounting treatment for initial direct costs. These updates also expand the required quantitative and qualitative disclosures surrounding leases. The adoption resulted in the addition of "right of use" assets and lease liabilities of approximately $20 million in the consolidated balance sheet, with no significant change to the Company’s consolidated statements of operations or cash flows. Refer to Note 16 for further discussion.

4. EARNINGS PER SHARE (EPS)

Basic EPS is calculated using the weighted average number of common shares outstanding during the period. Diluted EPS is calculated using the weighted average number of common shares outstanding during the period plus shares issuable upon the assumed exercise of dilutive common share options and vesting of performance-accelerated restricted shares (restricted shares) by using the treasury stock method. The number of shares used in the calculation of earnings per share for each period presented is as follows (in thousands):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Weighted Average Shares Outstanding - Basic	25,988	25,918	25,985	25,915
Dilutive Options and Restricted Shares	100	118	141	163
Adjusted Shares - Diluted	26,088	26,036	26,126	26,078

5. SHARE-BASED COMPENSATION

The Company provides compensation benefits to certain key employees under several share-based plans providing for performance-accelerated restricted shares (restricted shares), and to non-employee directors under a non-employee directors compensation plan.

Performance-Accelerated Restricted Share Awards

Compensation expense related to the restricted share awards was $1.1 million and $2.3 million for the three and six-month periods ended March 31, 2020, respectively, and $0.9 million and $2.0 million for the corresponding periods in 2019. There were 175,577 non-vested shares outstanding as of March 31, 2020.

Non-Employee Directors Plan

Compensation expense related to the non-employee director grants was $0.3 million and $0.6 million for the three and six-month periods ended March 31, 2020, respectively, and $0.3 million and $0.5 million for the corresponding periods in 2019.

The total share-based compensation cost that has been recognized in the results of operations and included within selling, general and administrative expenses (SG&A) was $1.5 million and $2.9 million for the three and six-month periods ended March 31, 2020, respectively, and $1.2 million and $2.6 million for the corresponding periods in 2019. The total income tax benefit recognized in results of operations for share-based compensation arrangements was $0.3 million and $0.7 million for the three and six-month periods ended March 31, 2020, respectively, and $0.3 million and $0.6 million for the corresponding periods in 2019. As of March 31, 2020, there was $6.8 million of total unrecognized compensation cost related to share-based compensation arrangements. That cost is expected to be recognized over a remaining weighted-average period of 2.1 years.

6. INVENTORIES

Inventories, net, from continuing operations consist of the following:

(In thousands)	March 31, 2020	September 30, 2019
Finished goods	$ 23,898	23,550
Work in process	39,768	26,407
Raw materials	77,361	74,999
Total inventories	$ 141,027	124,956

7. GOODWILL AND OTHER INTANGIBLE ASSETS

Included on the Company's Consolidated Balance Sheets at March 31, 2020 and September 30, 2019 are the following intangible assets gross carrying amounts and accumulated amortization from continuing operations:

(Dollars in thousands)	March 31, 2020	September 30, 2019
Goodwill	$ 389,630	390,256
Intangible assets with determinable lives:		
Patents		
Gross carrying amount	$ 2,067	1,945
Less: accumulated amortization	806	748
Net	$ 1,261	1,197
Capitalized software		
Gross carrying amount	$ 83,243	78,962
Less: accumulated amortization	53,034	48,530
Net	$ 30,209	30,432
Customer relationships		
Gross carrying amount	$ 226,946	227,225
Less: accumulated amortization	61,486	55,326
Net	$ 165,460	171,899
Other		
Gross carrying amount	$ 5,081	5,441
Less: accumulated amortization	2,953	2,645
Net	$ 2,128	2,796
Intangible assets with indefinite lives:		
Trade names	$ 172,721	175,281

The changes in the carrying amount of goodwill attributable to each business segment for the six months ended March 31, 2020 is as follows on a continuing operations basis:

(Dollars in millions)	USG	Test	Aerospace & Defense	Total
Balance as of September 30, 2019	254.0	34.1	102.2	390.3
Foreign currency translation	(0.6)	(0.1)	—	(0.7)
Balance as of March 31, 2020	$ 253.4	34.0	102.2	389.6

8. BUSINESS SEGMENT INFORMATION

The Company is organized based on the products and services that it offers, and classifies its continuing business operations in three reportable segments for financial reporting purposes: Aerospace & Defense (formerly called Filtration/Fluid Flow), RF Shielding and Test (Test), and Utility Solutions Group (USG). The Aerospace & Defense segment's operations consist of PTI Technologies Inc. (PTI), VACCO Industries (VACCO), Crissair, Inc. (Crissair), Westland Technologies Inc. (Westland), Mayday Manufacturing Co. and its affiliate Hi-Tech Metals, Inc. (collectively referred to as Mayday) and Globe Composite Solutions, LLC (Globe). The companies within this segment primarily design and manufacture specialty filtration and naval products, including hydraulic filter elements and fluid control devices used in commercial aerospace applications; unique filter mechanisms used in micro-propulsion devices for satellites and custom designed filters for manned aircraft and submarines; products and systems to reduce vibration and/or acoustic signatures and otherwise reduce or obscure a vessel's signature, and other communications, sealing, surface control and hydrodynamic related applications to enhance U.S. Navy maritime survivability; precision-tolerance machined components for the aerospace and defense industry; and metal processing services. The Test segment's operations consist primarily of ETS-Lindgren Inc. (ETS-Lindgren). ETS-Lindgren is an industry leader in providing its customers with the ability to identify, measure and contain magnetic, electromagnetic and acoustic energy. ETS-Lindgren also manufactures radio frequency shielding products and components used by manufacturers of medical equipment, communications systems, electronic products, and shielded rooms for high-security data processing and secure communication. The USG segment's operations consist primarily of Doble Engineering Company (Doble), Morgan Schaffer Inc. (Morgan Schaffer), and NRG Systems, Inc. (NRG). Doble provides high-end, intelligent, diagnostic test and data management solutions for the electric power delivery industry and is a leading supplier of partial discharge testing instruments used to assess the integrity of high voltage power delivery equipment. Morgan Schaffer provides an integrated offering of dissolved gas analysis, oil testing, and data management solutions for the electric power industry. NRG designs and manufactures decision support tools for the renewable energy industry, primarily wind.

Management evaluates and measures the performance of its reportable segments based on “Net Sales” and “EBIT”, which are detailed in the table below. EBIT is defined as earnings from continuing operations before interest and taxes. The table below is presented on the basis of continuing operations and excludes discontinued operations.

(In thousands)	**Three Months Ended March 31,**		**Six Months Ended September 30,**	
	2020	**2019**	**2020**	**2019**
NET SALES				
Aerospace & Defense	$ 95,124	79,478	172,635	145,702
Test	41,600	42,875	82,983	84,161
USG	43,768	48,890	96,602	104,745
Consolidated totals	$ 180,492	171,243	352,220	334,608
EBIT				
Aerospace & Defense	$ 21,736	17,443	34,249	28,053
Test	5,651	5,554	10,307	8,864
USG	4,866	8,767	14,153	30,313
Corporate (loss)	(10,908)	(9,788)	(20,573)	(19,904)
Consolidated EBIT	21,345	21,976	38,136	47,326
Less: Interest expense	(1,320)	(1,853)	(3,741)	(3,708)
Earnings before income taxes	$ 20,025	20,123	34,395	43,618

Non-GAAP Financial Measures

The financial measure "EBIT" is presented in the above table and elsewhere in this Report. EBIT on a consolidated basis is a non-GAAP financial measure. Management believes that EBIT is useful in assessing the operational profitability of the Company's business segments because it excludes interest and taxes, which are generally accounted for across the entire Company on a consolidated basis. EBIT is also one of the measures used by management in determining resource allocations within the Company as well as incentive compensation. A reconciliation of EBIT to net earnings from continuing operations is set forth in Item 2, Management's Discussion and Analysis of Financial Condition and Results of Operations – EBIT.

The Company believes that the presentation of EBIT provides important supplemental information to investors to facilitate comparisons with other companies, many of which use similar non-GAAP financial measures to supplement their GAAP results. However, the Company's non-GAAP financial measures may not be comparable to other companies' non-GAAP financial performance measures. Furthermore, the use of non-GAAP financial measures is not intended to replace any measures of performance determined in accordance with GAAP.

9. DEBT

The Company's debt is summarized as follows:

(In thousands)	March 31, 2020	September 30, 2019
Total borrowings	$ 150,000	285,000
Current portion of long-term debt	(20,000)	(20,000)
Total long-term debt, less current portion	$ 130,000	265,000

On September 27, 2019, the Company entered into a new five-year credit facility ("the Credit Facility"), modifying its previous credit facility which would have matured December 21, 2020. The Credit Facility includes a $500 million revolving line of credit as well as provisions allowing for the increase of the credit facility commitment amount by an additional $250 million, if necessary, with the consent of the lenders. The bank syndication supporting the facility is comprised of a diverse group of eight banks led by JP Morgan Chase Bank, N.A., as Administrative Agent. The Credit Facility matures September 27, 2024.

At March 31, 2020, the Company had approximately $341 million available to borrow under the Credit Facility, plus the $250 million increase option, subject to lender approval, in addition to $100.2 million cash on hand. The Company classified $20.0 million as the current portion of long-term debt as of March 31, 2020, as the Company intends to repay this amount within the next twelve months; however, the Company has no contractual obligation to repay such amount during the next twelve months. The letters of credit issued and outstanding under the Credit Facility totaled $9.8 million at March 31, 2020.

Interest on borrowings under the Credit Facility is calculated at a spread over either the London Interbank Offered Rate (LIBOR), the New York Federal Reserve Bank Rate or the prime rate, depending on various factors. The Credit Facility also requires a facility fee ranging from 10 to 25 basis points per annum on the unused portion. The Credit Facility is secured by the unlimited guaranty of the Company's direct and indirect material U.S. subsidiaries and the pledge of 100% of the equity interests of its direct and indirect material foreign subsidiaries. The financial covenants of the Credit Facility include a leverage ratio and an interest coverage ratio. The weighted average interest rates were 3.24% and 3.21% for the three and six-month periods ending March 31, 2020, respectively , and 3.20% and 3.23% for the three and six-month periods ending March 31, 2019. As of March 31, 2020, the Company was in compliance with all covenants.

10. INCOME TAX EXPENSE

The second quarter 2020 effective income tax rate from continuing operations was 11.0% compared to 11.4% in the second quarter of 2019. The effective income tax rate in the first six months of 2020 was 16.9% compared to 19.4% for the first six months of 2019. The income tax expense in the second quarter of 2020 was favorably impacted by the release of a valuation allowance of $2.8 million for foreign net operating losses decreasing the second quarter and year-to-date effective tax rate by 14.3% and 8.2%, respectively. The income tax expense in the second quarter and first six months of 2019 was favorably impacted by tax planning strategies to increase the foreign tax credits claimed retrospectively. The Company reduced the valuation allowance for excess foreign tax credits by $2.3 million and recorded an amended return receivable of $0.2 million, which favorably impacted the 2019 second quarter and year-to-date effective tax rate by 12.9% and 5.9%, respectively.

11. SHAREHOLDERS' EQUITY

The change in shareholders' equity for the first three and six months of 2020 and 2019 is shown below (in thousands):

	Three Months Ended March 31,		Six Months Ended March 31,	
	2020	2019	2020	2019
Common stock				
Beginning balance	306	305	306	305
Stock plans	—	—	—	—
Ending balance	306	305	306	305
Additional paid-in-capital				
Beginning balance	293,056	292,293	292,408	291,190
Stock plans	1,731	1,319	2,379	2,422
Ending balance	294,787	293,612	294,787	293,612
Retained earnings				
Beginning balance	769,439	627,670	684,741	606,837
Net earnings common stockholders	17,822	18,797	104,599	36,114
Dividends paid	(2,077)	(2,074)	(4,156)	(4,147)
Adoption of accounting standards updates	—	(1,375)	—	4,214
Ending balance	785,184	643,018	785,184	643,018
Accumulated other comprehensive income (loss)				
Beginning balance	(40,051)	(36,083)	(43,974)	(31,528)
Foreign currency translation	(6,885)	677	(2,962)	(3,853)
Pension	—	—	—	—
Forward exchange contracts	—	126	—	101
Ending balance	(46,936)	(35,280)	(46,936)	(35,280)
Treasury stock				
Beginning balance	(107,259)	(107,394)	(107,259)	(107,394)
Issued under stock plans	125	135	125	135
Ending balance	(107,134)	(107,259)	(107,134)	(107,259)
Total equity	926,207	794,396	926,207	794,396

12. RETIREMENT PLANS

A summary of net periodic benefit expense for the Company's defined benefit plans for the three and six-month periods ended March 31, 2020 and 2019 is shown in the following table. Net periodic benefit cost for each period presented is comprised of the following:

(In thousands)	Three Months Ended March 31, 2020	Three Months Ended March 31, 2019	Six Months Ended March 31, 2020	Six Months Ended March 31, 2019
Defined benefit plans				
Interest cost	$ 824	875	1,648	1,750
Expected return on assets	(1,041)	(1,086)	(2,082)	(2,172)
Amortization of:				
Prior service cost	—	—	—	—
Actuarial loss	543	487	1,087	974
Net periodic benefit cost	$ 326	276	653	552

13. DERIVATIVE FINANCIAL INSTRUMENTS

Market risks relating to the Company's operations result primarily from changes in interest rates and changes in foreign currency exchange rates. The Company is exposed to market risk related to changes in interest rates and selectively uses derivative financial instruments, including forward contracts and swaps, to manage these risks. In 2018, the Company entered into three interest rate swaps with a notional amount of $150 million to hedge some of its exposure to variability in future LIBOR-based interest payments on variable rate debt, of which one swap is outstanding as of March 31, 2020. In addition, the Company's Canadian subsidiary Morgan Schaffer enters into foreign exchange contracts to manage foreign currency risk as a portion of their revenue is denominated in U.S. dollars. The Company expects hedging gains or losses to be essentially offset by losses or gains on the related underlying exposures. The amounts ultimately recognized may differ for open positions, which remain subject to ongoing market price fluctuations until settlement. All derivative instruments are reported in either accrued expenses or other assets on the balance sheet at fair value. For derivative instruments designated as cash flow hedges, the gain or loss on the derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item. The interest rate swaps entered into during 2018 were not designated as cash flow hedges and, therefore, the gain or loss on the derivative is reflected in earnings each period.

The following is a summary of the notional transaction amounts and fair values for the Company's outstanding derivative financial instruments by risk category and instrument type as of March 31, 2020:

(In thousands)	Notional amount	Fair Value (US$)	Fix Rate
Forward contracts	6,250	USD (381)	
Interest rate swap	150,000	USD (1,997)	2.24 %

14. FAIR VALUE MEASUREMENTS

The accounting guidance establishes a three-level hierarchy for disclosure of fair value measurements, based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date, as follows:

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Financial Assets and Liabilities

The Company has estimated the fair value of its financial instruments as of March 31, 2020 and September 30, 2019 using available market information or other appropriate valuation methodologies. The carrying amounts of cash and cash equivalents, receivables, inventories, payables, debt and other current assets and liabilities approximate fair value because of the short maturity of those instruments.

Fair Value of Financial Instruments

The Company's forward contracts and interest rate swaps are classified within Level 2 of the valuation hierarchy in accordance with FASB Accounting Standards Codification (ASC) 825, as presented below as of March 31, 2020:

(In thousands)	Level 1	Level 2	Level 3	Total
Assets (Liabilities):				
Forward contracts and interest rate swaps	$ —	(2,378)	$ —	(2,378)

Valuation was based on third party evidence of similarly priced derivative instruments.

Nonfinancial Assets and Liabilities

The Company's nonfinancial assets such as property, plant and equipment, and other intangible assets are not measured at fair value on a recurring basis; however they are subject to fair value adjustments in certain circumstances, such as when there is evidence that an impairment may exist. No impairments were recorded during the three and six-month periods ended March 31, 2020.

15. REVENUES

Disaggregation of Revenues

Revenues by customer type, geographic location, and revenue recognition method for the three and six-month periods ended March 31, 2020 are presented in the tables below as the Company deems it best depicts how the nature, amount, timing and uncertainty of net sales and cash flows are affected by economic factors. The table below also include a reconciliation of the disaggregated revenue within each reportable segment on a continuing operations basis.

Three months ended March 31, 2020 (In thousands)	Aerospace & Defense	Test	USG	Total
Customer type:				
Commercial	$ 51,550	$ 33,952	$ 43,736	$ 129,238
U.S. Government	43,574	7,648	32	51,254
Total revenues	$ 95,124	$ 41,600	$ 43,768	$ 180,492
Geographic location:				
United States	$ 81,458	$ 25,121	$ 28,706	$ 135,285
International	13,666	16,479	15,062	45,207
Total revenues	$ 95,124	$ 41,600	$ 43,768	$ 180,492
Revenue recognition method:				
Point in time	$ 46,610	$ 8,009	$ 32,209	$ 86,828
Over time	48,514	33,591	11,559	93,664
Total revenues	$ 95,124	$ 41,600	$ 43,768	$ 180,492

Six months ended March 31, 2020 *(In thousands)*	Aerospace & Defense	Test	USG	Total
Customer type:				
Commercial	$ 93,417	$ 69,194	$ 95,971	$ 258,582
U.S. Government	79,218	13,789	631	93,638
Total revenues	$ 172,635	$ 82,983	$ 96,602	$ 352,220
Geographic location:				
United States	$ 146,164	$ 49,959	$ 63,665	$ 259,788
International	26,471	33,024	32,937	92,432
Total revenues	$ 172,635	$ 82,983	$ 96,602	$ 352,220
Revenue recognition method:				
Point in time	$ 82,897	$ 17,019	$ 72,524	$ 172,440
Over time	89,738	65,964	24,078	179,780
Total revenues	$ 172,635	$ 82,983	$ 96,602	$ 352,220

Remaining Performance Obligations

Remaining performance obligations, which is the equivalent of backlog, represent the expected transaction price allocated to contracts that the Company expects to recognize as revenue in future periods when the Company performs under the contracts. These remaining obligations include amounts that have been formally appropriated under contracts with the U.S. Government, and exclude unexercised contract options and potential orders under ordering-type contracts such as Indefinite Delivery, Indefinite Quantity contracts. At March 31, 2020, the Company had $565 million in remaining performance obligations of which the Company expects to recognize revenues of approximately 68% in the next twelve months.

Contract assets and liabilities

Assets and liabilities related to contracts with customers are reported on a contract-by-contract basis at the end of each reporting period. At March 31, 2020, contract assets and liabilities totaled $96.1 million and $95.4 million, respectively. During the first six months of 2020, the Company recognized approximately $36.4 million in revenues that were included in the contract liabilities balance at the adoption date.

16. LEASES

As described in Note 3, effective October 1, 2019, the Company adopted ASC 842, Leases. The Company determines at lease inception whether an arrangement that provides control over the use of an asset is a lease. The Company recognizes at lease commencement a right-of-use (ROU) asset and lease liability based on the present value of the future lease payments over the lease term. The Company has elected not to recognize a ROU asset and lease liability for leases with terms of 12 months or less. Certain of the Company’s leases include options to extend the term of the lease for up to 20 years. When it is reasonably certain that the Company will exercise the option, Management includes the impact of the option in the lease term for purposes of determining total future lease payments. As most of the Company’s lease agreements do not explicitly state the discount rate implicit in the lease, Management uses the Company’s incremental borrowing rate on the commencement date to calculate the present value of future payments based on the tenor of each arrangement.

The Company’s leases for real estate commonly include escalating payments. These variable lease payments are included in the calculation of the ROU asset and lease liability. In addition to the present value of the future lease payments, the calculation of the ROU asset also includes any deferred rent, lease pre-payments and initial direct costs of obtaining the lease.

In addition to the base rent, real estate leases typically contain provisions for common-area maintenance and other similar services, which are considered non-lease components for accounting purposes. Non-lease components are excluded from our ROU assets and lease liabilities and expensed as incurred.

The Company’s leases are for office space, manufacturing facilities, and machinery and equipment.

The components of lease costs are shown below:

(Dollars in thousands)	Three Months Ended March 31, 2020	Six Months Ended March 31, 2020
Finance lease cost		
Amortization of right-of-use assets	$ 622	$ 1,245
Interest on lease liabilities	323	651
Operating lease cost	1,402	2,750
Total lease costs	$ 2,347	$ 4,646

Additional information related to leases are shown below:

(Dollars in thousands)	Three Months Ended March 31, 2020	Six Months Ended September 30, 2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	$ 1,380	$ 2,717
Operating cash flows from finance leases	198	335
Financing cash flows from finance leases	376	727
Right-of-use assets obtained in exchange for lease liabilities		
Operating leases	$ 1,566	$ 22,268
Weighted-average remaining lease term		
Operating leases		6.37 years
Finance leases		12.97 years
Weighted-average discount rate		
Operating leases		3.14 %
Finance leases		4.29 %

The following is a reconciliation of future undiscounted cash flows to the operating and finance lease liabilities, and the related ROU assets, presented on our Consolidated Balance Sheet on March 31, 2020:

(Dollars in thousands) Years Ending September 30:	Operating Leases	Finance Leases
2020 (excluding the six months ended March 31, 2020)	$ 2,667	1,455
2021	4,696	2,930
2022	4,036	3,011
2023	3,090	3,094
2024 and thereafter	6,931	31,481
Total minimum lease payments	21,420	41,971
Less: amounts representing interest	2,202	10,821
Present value of net minimum lease payments	$ 19,218	31,150
Less: current portion of lease obligations	4,208	1,902
Non-current portion of lease obligations	15,010	29,248
ROU assets	$ 18,901	28,072

Operating lease liabilities are included in the Consolidated Balance Sheet in accrued other expenses and operating lease liabilities. Finance lease liabilities are included in accrued other expenses and other liabilities. Operating lease ROU assets are included as a caption on the Consolidated Balance Sheet and finance lease ROU assets are included in Property, plant and equipment on the Consolidated Balance sheets.

As the Company has not restated prior-year information for the adoption of ASC 842, the following presents the Company's future minimum lease payments for operating and capital leases under ASC 840 for continuing operations as of September 30, 2019:

(Dollars in thousands) Years Ending September 30:	Operating Leases	Finance Leases
2020	$ 5,574	2,518
2021	4,558	2,930
2022	3,950	3,012
2023	3,270	3,094
2024 and thereafter	8,443	31,499
Total minimum lease payments	$ 25,795	43,053
Less: amounts representing interest	*	11,241
Present value of net minimum lease payments	*	31,812
Less: Current portion of lease obligations	*	1,832
Non-current portion of lease obligations	*	29,980

* Not applicable for operating leases

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

COVID-19 TRENDS AND UNCERTAINTIES

The COVID-19 global pandemic has created significant and unprecedented challenges, and during these highly uncertain times, our top priority remains the health and safety of our employees, customers and suppliers, thereby securing the financial well-being of the Company and supporting business continuity. Our businesses have been deemed essential and are currently operational, supplying our customers with vital and necessary products. To date our global supply chains have not been materially affected by the global pandemic. Given our diverse portfolio of strong, durable businesses serving non-discretionary end-markets, the strength and resilience of our business model positions us to continue to support our long-term outlook.

Recognizing the uncertainty presented by this global pandemic, we are suspending our full-year 2020 financial guidance. Our businesses are facing varying levels of pressure depending on the markets they serve as outlined below and the impact on our business cannot be reasonably estimated at this time. In response to COVID-19, we have taken decisive actions to enhance our financial condition, while continuing to execute our long-term strategy for profitable growth. Some of the actions we have taken include: deferring a portion of executive compensation, reducing discretionary spending, minimizing capital spending, implementing hiring and salary freezes, and increasing our focus on optimizing free cash flow. These operational measures are prudent steps to maintain our liquidity and will help manage our financial flexibility as we work through near-term volatility. As of March 31, 2020, we had nearly $700 million of liquidity, with $100 million in cash, net debt of approximately $50 million. Additionally, we have no debt maturities nor repayment obligations coming due and payable until September 2024. The Company has made no changes to its dividend plan. We are also monitoring the impacts of COVID-19 on the fair value of assets. We do not currently anticipate any material impairments on assets as a result of COVID-19. A portion of our workforce has worked from home at times due to COVID-19, however we have not had to redesign or design new internal controls over financial reporting at this time. Depending on the duration of COVID-19, it may become necessary for us to redesign or design new internal controls over financial reporting in a future period. We do not believe such an event will have a material impact on our business. Further details by operating segment are outlined below.

In our A&D segment, we expect to see a slowdown in commercial aerospace deliveries and revenues over the remainder of the year but it is too early in the cycle to determine the impact from the current industry downturn as it relates to future build rates and airline passenger miles. The defense portion of A&D, both military aerospace and navy products is expected to remain in-line with current forecasts given its backlog coupled with the timing of expected platform deliveries. We had a temporary two-week shutdown in April of our Globe manufacturing facility due to a confirmed COVID-19 case but we are fully operational as of the current date.

In our Test segment, our second quarter revenues were negatively impacted by a decrease of approximately $2 million due to the China facility's temporary three-week shutdown in February, and delayed timing of installation projects caused by access limitations to customer sites due to COVID-19. We expect the Test segment to remain in-line with current forecasts over the remainder of the year given the strength of its backlog and its served markets, primarily related to new communications technologies such as 5G.

In our USG segment, our second quarter revenues were negatively impacted by approximately $5 million as several utility customers deferred purchase orders and maintenance-related project deliveries so they could divert resources to other issues such as critical power delivery given their concerns around COVID-19. Additionally, Doble's service business is largely on hold during the pandemic. We expect USG's customer spending softness to continue for the next few months before the utilities return to a more normal state of business in the later part of this fiscal year.

See the "Outlook" and "Part II – Other Information, Item 1A, Risk Factors" sections below for additional details.

RESULTS OF OPERATIONS

References to the second quarters of 2020 and 2019 represent the three-month periods ended March 31, 2020 and 2019, respectively.

OVERVIEW

In the second quarter of 2020, sales, net earnings and diluted earnings per share from continuing operations were $180.5 million, $17.8 million and $0.68 per share, respectively, compared to $171.2 million, $17.8 million and $0.68 per share, respectively, in the second quarter of 2019. In the first six months of 2020, sales, net earnings and diluted earnings per share were $352.2 million, $28.6 million and $1.09, respectively, compared to $334.6 million, $35.2 million and $1.34 per share, respectively, in the first six months of 2019. The decrease in net earnings and diluted earnings per share in the first six months of 2020 as compared to the first six months of 2019 was mainly due the gain of approximately $8 million on the sale of the Doble Watertown property in the first quarter of 2019.

NET SALES

In the second quarter of 2020, net sales of $180.5 million were $9.3 million, or 5.4%, higher than the $171.2 million in the second quarter of 2019. In the first six months of 2020, net sales of $352.2 million were $17.6 million, or 5.3%, higher than the $334.6 million in the first six months of 2019. The increase in net sales in the second quarter of 2020 as compared to the second quarter of 2019 was due to a $15.6 million increase in the Aerospace & Defense segment, partially offset by a $1.2 million decrease in the Test segment and a $5.1 million decrease in the USG segment. The increase in net sales in the first six months of 2020 as compared to the first six months of 2019 was due to a $26.9 million increase in the Aerospace & Defense segment, partially offset by a $1.1 million decrease in the Test segment and an $8.2 million decrease in the USG segment.

-Aerospace & Defense (A&D)

In the second quarter of 2020, net sales of $95.1 million were $15.6 million, or 19.6%, higher than the $79.5 million in the second quarter of 2019. In the first six months of 2020, net sales of $172.6 million were $26.9 million, or 18.5%, higher than the $145.7 million in the first six months of 2019. The sales increase in the second quarter of 2020 compared to the second quarter of 2019 was mainly due to the addition of $9.0 million in net sales from Globe, a $3.8 million increase in net sales at VACCO due to increased revenue from space products, a $2.6 million increase in net sales at PTI due to higher aerospace assembly shipments, a $0.5 million increase in net sales at Mayday, and a $0.4 million increase in net sales at Crissair, partially offset by a $0.7 million decrease in net sales at Westland due to timing of revenue on government programs. The sales increase in the first six months of 2020 compared to the first six months of 2019 was due to the addition of $17.8 million in net sales from Globe, a $5.3 million increase in net sales at VACCO due to increased revenue from space products, a $4.0 million increase in net sales at PTI due to higher aerospace assembly shipments, a $0.6 million increase in net sales at Mayday, and a $1.2 million increase in net sales at Crissair, partially offset by a $2.0 million decrease in net sales at Westland due to timing of revenue on government programs.

-Test

In the second quarter of 2020, net sales of $41.6 million were $1.3 million, or 3.0%, lower than the $42.9 million in the second quarter of 2019. In the first six months of 2020, net sales of $83.0 million were $1.2 million, or 1.4%, lower than the $84.2 million in the first six months of 2019. The decrease in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was primarily due to lower sales from the segment's Asian operations due to the temporary three-week shutdown of the China facility due to COVID-19 and the timing of test and measurement chamber projects.

-USG

In the second quarter of 2020, net sales of $43.8 million were $5.1 million, or 10.4% lower than the $48.9 million in the second quarter of 2019. In the first six months of 2020, net sales of $96.6 million were $8.1 million, or 7.7%, lower than the $104.7 million in the first six months of 2019. The decrease in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was mainly due to lower product and software sales at Doble primarily driven by the impact of COVID-19 as customers delayed orders and on-site testing.

ORDERS AND BACKLOG

Backlog from continuing operations was $565.4 million at March 31, 2020 compared with $451.6 million at September 30, 2019. The Company received new orders totaling $245.6 million in the second quarter of 2020 compared to $209.4 million in the second quarter of 2019. Of the new orders received in the second quarter of 2020, $156.0 million related to Aerospace & Defense products, $41.8 million related to Test products, and $47.8 million related to USG products. Of the new orders received in the second quarter of 2019, $100.8 million related to Aerospace & Defense products, $57.6 million related to Test products, and $51.0 million related to USG products.

The Company received new orders totaling $466.1 million in the first six months of 2020 compared to $390.5 million in the first six months of 2019. Of the new orders received in the first six months of 2020, $285.0 million related to Aerospace & Defense products, $80.3 million related to Test products, and $100.8 million related to USG products. Of the new orders received in the first six months of 2019, $184.5 million related to Aerospace & Defense products, $103.0 million related to Test products, and $103.0 million related to USG products.

SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

Selling, general and administrative (SG&A) expenses from continuing operations for the second quarter of 2020 were $40.0 million (22.2% of net sales), compared with $39.3 million (23.0% of net sales) for the second quarter of 2019. For the first six months of 2020, SG&A expenses were $82.1 million (23.3% of net sales) compared to $77.9 million (23.3% of net sales) for the first six months of 2019. The increase in SG&A in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was mainly due to the addition of Globe and higher spending on R&D / new product development.

AMORTIZATION OF INTANGIBLE ASSETS

Amortization of intangible assets from continuing operations was $5.2 million and $11.0 million for the second quarter and first six months of 2020, respectively, compared to $4.4 million and $8.8 million for the corresponding periods of 2019. Amortization expenses consist of amortization of acquired intangible assets from acquisitions and other identifiable intangible assets (primarily software). The increase in amortization expense in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was mainly due to an increase in amortization of intangible assets related to the Globe acquisition and an increase in amortization of capitalized software at Doble.

OTHER EXPENSES (INCOME), NET

Other expenses, net, was $0.7 million in the second quarter of 2020 compared to other expenses, net, of $2.0 million in the second quarter of 2019. There were no individually significant items in other expenses (income), net, in the second quarter of 2020. The principal component of other expenses, net, in the second quarter of 2019 was $0.9 million of restructuring charges related to the consolidation of VACCO’s aircraft/aerospace business into PTI’s aerospace facility in Oxnard, California and the completion of other restructuring activities begun in 2018; and losses on derivative instruments.

Other expenses, net, was $1.0 million in the first six months of 2020 compared to other income, net, of $5.4 million in the first six months of 2019. The principal component of other expenses, net, in the first six months of 2020 were losses on derivative instruments of $0.8 million. The principal component of other income, net, in the first six months of 2019 was a gain of approximately $8 million on the sale of the Doble Watertown, MA building and land, partially offset by certain restructuring activities at Doble, PTI and VACCO and losses on derivative instruments.

EBIT

The Company evaluates the performance of its operating segments based on EBIT, and provides EBIT on a consolidated basis, which is a non-GAAP financial measure. Please refer to the discussion of non-GAAP financial measures in Note 8 to the Consolidated Financial Statements, above. EBIT was $21.3 million (11.8% of net sales) for the second quarter of 2020 compared to $22.0 million (12.8% of net sales) for the second quarter of 2019. For the first six months of 2020, EBIT was $38.1 million (10.8% of net sales) compared to $47.3 million (14.1% of net sales) for the first six months of 2019.

The following table presents a reconciliation of EBIT to net earnings from continuing operations.

	Three Months Ended March 31,		Six Months Ended March 31,	
(In thousands)	**2020**	**2019**	**2020**	**2019**
Consolidated EBIT	$ 21,345	21,976	38,136	47,326
Less: Interest expense, net	(1,320)	(1,853)	(3,741)	(3,708)
Less: Income tax	(2,203)	(2,301)	(5,809)	(8,446)
Net earnings from continuing operations	$ 17,822	17,822	28,586	35,172

-Aerospace & Defense

EBIT in the second quarter of 2020 was $21.7 million (22.8% of net sales) compared to $17.4 million (21.9% of net sales) in the second quarter of 2019. EBIT in the first six months of 2020 was $34.2 million (19.8% of net sales) compared to $28.1 million (19.3% of net sales) in the first six months of 2019. The increase in EBIT in the second quarter of 2020 compared to the second quarter of 2019 was mainly due to the $2.4 million contribution from Globe, and a $1.0 million increase at PTI and a $0.7 million increase at VACCO both due to higher sales volumes. The increase in EBIT in the first six months of 2020 compared to the first six months of 2019 was mainly due to the $4.6 million contribution from Globe and a $1.6 million increase at PTI due to higher sales volumes.

-Test

EBIT in the second quarter of 2020 was $5.7 million (13.6% of net sales) compared to $5.6 million (13.0% of net sales) in the second quarter of 2019. EBIT in the first six months of 2020 was $10.3 million (12.4% of net sales) compared to $8.9 million (10.6% of net sales) in the first six months of 2019. The increase in EBIT in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was primarily due to product mix and higher margins on projects mainly from the segment's U.S. operations.

-USG

EBIT in the second quarter of 2020 was $4.9 million (11.1% of net sales) compared to $8.8 million (17.9% of net sales) in the second quarter of 2019. EBIT in the first six months of 2020 was $14.2 million (14.7% of net sales) compared to $30.3 million (28.9% of net sales) in the first six months of 2019. The decrease in EBIT in the second quarter of 2020 compared to the second quarter of 2019 was mainly due to a decrease in EBIT from Doble due to lower sales volumes of higher margin products and software mentioned above and the timing of their annual Client conference (second quarter of 2020 versus third quarter of 2019). The decrease in EBIT in the first six months of 2020 as compared to the first six months of 2019 was mainly due to the gain on sale of the Doble Watertown facility of approximately $8 million in the first quarter of 2019 as well as a decrease in EBIT from Doble due to lower sales volumes in the first six months of 2020. In addition, EBIT in the first quarter of 2020 was negatively impacted by approximately $0.6 million of facility move costs at Doble.

-Corporate

Corporate costs included in EBIT were $10.9 million and $20.6 million in the second quarter and first six months of 2020, respectively, compared to $9.8 million and $19.9 million in the corresponding periods of 2019. The increase in Corporate costs in the second quarter and first six months of 2020 compared to the corresponding periods of 2019 was mainly due to losses on derivative instruments of $0.8 million recorded in the first six months of 2020.

INTEREST EXPENSE, NET

Interest expense was $1.3 million and $3.7 million in the second quarter and first six months of 2020, respectively, and $1.9 million and $3.7 million in the corresponding periods of 2019. The decrease in interest expense in the second quarter of 2020 as compared to the second quarter of 2019 was mainly due to lower average outstanding borrowings ($150 million compared to $217 million) at relatively consistent average interest rates of 3.2%.

INCOME TAX EXPENSE

The second quarter 2020 effective income tax rate from continuing operations was 11.0% compared to 11.4% in the second quarter of 2019. The effective income tax rate in the first six months of 2020 was 16.9% compared to 19.4% for the first six months of 2019. The income tax expense in the second quarter of 2020 was favorably impacted by the release of a valuation allowance of $2.8 million for foreign net operating losses decreasing the second quarter and year-to-date effective tax rate by 14.3% and 8.2%, respectively. The income tax expense in the second quarter and first six months of 2019 was favorably impacted by tax planning strategies to increase the foreign tax credits claimed retrospectively. The Company reduced the valuation allowance for excess foreign tax credits by $2.3 million and recorded an amended return receivable of $0.2 million, which favorably impacted the 2019 second quarter and year-to-date effective tax rate by 12.9% and 5.9%, respectively.

CAPITAL RESOURCES AND LIQUIDITY

The Company’s overall financial position and liquidity remains strong. The effects of COVID-19 have not materially affected liquidity. Working capital from continuing operations (current assets less current liabilities) increased to $260.6 million at March 31, 2020 from $229.8 million at September 30, 2019. Inventories increased by $16.1 million during this period due to a $10.0 million increase within the Aerospace & Defense segment, a $3.2 million increase within the Test segment and a $2.9 million increase within the USG segment, resulting primarily from the timing of receipt of raw materials and work-in-process due to timing of projects.

Net cash provided by operating activities from continuing operations was $36.7 million and $10.5 million in the first six months of 2020 and 2019, respectively. The increase in net cash provided by operating activities from continuing operations in the first six months of 2020 as compared to the first six months of 2019 was driven by lower working capital requirements.

Capital expenditures from continuing operations were $21.2 million and $10.1 million in the first six months of 2020 and 2019, respectively. The increase in the first six months of 2020 was mainly due to the building improvement additions at the new Doble headquarters facility of approximately $7 million and a $2.7 million increase in capital expenditures at VACCO primarily for construction of a new parking lot and certain machinery and equipment. In addition, the Company incurred expenditures for capitalized software of $4.3 million and $4.5 million in the first six months of 2020 and 2019, respectively.

Credit Facility

At March 31, 2020, the Company had approximately $341 million available to borrow under its bank credit facility, a $250 million increase option subject to lender approval, and $100.2 million cash on hand. At March 31, 2020, the Company had $150 million of outstanding borrowings under the credit facility in addition to outstanding letters of credit of $9.8 million. Cash flow from operations and borrowings under the Company's credit facility are expected to meet the Company's capital requirements and operational needs for the foreseeable future. The Company's ability to access the additional $250 million increase option of the credit facility is subject to acceptance by participating or other outside banks.

Dividends

A dividend of $0.08 per share, totaling $2.1 million, was paid on January 17, 2020 to stockholders of record as of January 2, 2020. Subsequent to March 31, 2020, a quarterly dividend of $0.08 per share, totaling $2.1 million, was paid on April 17, 2020 to stockholders of record as of April 2, 2020.

OUTLOOK

During the second quarter of 2020, business disruptions related to the COVID-19 pandemic began to affect the Company's operations. Given the considerable uncertainty around the extent and duration of these economic circumstances, it is difficult to predict how our future operations will be affected using our normal forecasting methodologies, therefore, the Company is suspending its previously issued fiscal year 2020 guidance.

CRITICAL ACCOUNTING POLICIES

Management has evaluated the accounting policies used in the preparation of the Company's financial statements and related notes and believes those policies to be reasonable and appropriate. Certain of these accounting policies require the application of significant judgment by Management in selecting appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. These judgments are based on historical experience, trends in the industry, information provided by customers and information available from other outside sources, as appropriate. The most significant areas involving Management judgments and estimates may be found in the Critical Accounting Policies section of Management's Discussion and Analysis and in Note 1 to the Consolidated Financial Statements contained in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

OTHER MATTERS

Contingencies

As a normal incident of the business in which the Company is engaged, various claims, charges and litigation are asserted or commenced against the Company. Additionally, the Company is currently involved in various stages of investigation and remediation relating to environmental matters. In the opinion of Management, the aggregate costs involved in the resolution of these matters, and final judgments, if any, which might be rendered against the Company, are adequately reserved, are covered by insurance, or would not have a material adverse effect on the Company's results from operations, capital expenditures, or competitive position.

FORWARD LOOKING STATEMENTS

Statements contained in this Form 10-Q regarding future events and the Company's future results that reflect or are based on current expectations, estimates, forecasts, projections or assumptions about the Company's performance and the industries in which the Company operates are considered "forward-looking statements" within the meaning of the safe harbor provisions of the Federal securities laws. These include, but are not necessarily limited to, statements about: the effects of the COVID-19 pandemic including any impairment to the Company's assets, impacts to commercial aerospace, military and navy markets which the Company serves, and the strength of the markets served by the Company's Test and USG segments; the adequacy of the Company's credit facility and the Company's ability to increase it; the outcome of current litigation, claims and charges; timing of the repayment of the current portion of the Company's long-term debt; the extent to which hedging gains or losses are offset by losses or gains on related underlying exposures; the Company's ability to hedge against or otherwise manage them through the use of derivative financial instruments; and any other statements contained herein which are not strictly historical. Words such as expects, anticipates, targets, goals, projects, intends, plans, believes, estimates, variations of such words, and similar expressions are intended to identify such forward-looking statements.

Investors are cautioned that such statements are only predictions and speak only as of the date of this Form 10-Q, and the Company undertakes no duty to update them except as may be required by applicable laws or regulations. The Company's actual results in the future may differ materially from those projected in the forward-looking statements due to risks and uncertainties that exist in the Company's operations and business environment, including but not limited to those described in Item 1A, "Risk Factors," of the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019 and this Quarterly Report on Form 10-Q, and the following: the impact of the COVID-19 pandemic including labor shortages, facility closures, material shortages, transportation delays, termination or delays of Company contracts, the inability of our suppliers or customers to perform, and weakening of economic conditions in served markets; the impacts of natural disasters on the Company's operations and those of the Company's customers and suppliers; the timing and content of future contract awards or customer orders; the appropriation, allocation and availability of Government funds; the termination of Government and other customer contracts or orders; financial exposure in connection with the Company's guarantee of a certain Aclara lease; weakening of economic conditions in served markets; the success of the Company's competitors; changes in customer demands or customer insolvencies; competition; intellectual property rights; technical difficulties; the availability of selected acquisitions; delivery delays or defaults by customers; performance issues with key customers, suppliers and subcontractors; material changes in the costs and availability of certain raw materials; labor disputes; changes in U.S. tax laws and regulations; other changes in laws and regulations including but not limited to changes in accounting standards and foreign taxation; changes in interest rates; costs relating to environmental matters arising from current or former facilities; uncertainty regarding the ultimate resolution of current disputes, claims, litigation or arbitration; and the integration of recently acquired businesses.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risks relating to the Company's operations result primarily from changes in interest rates and changes in foreign currency exchange rates. The Company is exposed to market risk related to changes in interest rates and selectively uses derivative financial instruments, including forward contracts and swaps, to manage these risks. In 2018, the Company entered into three interest rate swaps with a notional amount of $150 million to hedge some of its exposure to variability in future interest payments on variable rate debt, of which one swap is outstanding as of March 31, 2020. In addition, the Company's Canadian subsidiary Morgan Schaffer enters into foreign exchange contracts to manage foreign currency risk as a portion of their revenue is denominated in U.S. dollars. All derivative instruments are reported on the balance sheet at fair value. For derivative instruments designated as cash flow hedges, the gain or loss on the respective derivative is deferred in accumulated other comprehensive income until recognized in earnings with the underlying hedged item. The interest rate swaps entered into during 2018 were not designated as cash flow hedges and, therefore, the gain or loss on the derivative is reflected in earnings each period. There has been no material change to the Company's market risks since September 30, 2019. See Note 13 to the Consolidated Financial Statements in Item 1 of this Report for a summary of the Company's outstanding derivative financial instruments as of March 31, 2020. Refer to the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2019 for further discussion about market risk.

ITEM 4. CONTROLS AND PROCEDURES

The Company carried out an evaluation, under the supervision and with the participation of Management, including the Company’s Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company’s disclosure controls and procedures as of the end of the period covered by this report. Based upon that evaluation, the Company’s Chief Executive Officer and Chief Financial Officer concluded that the Company’s disclosure controls and procedures were effective as of that date. Disclosure controls and procedures are controls and procedures that are designed to ensure that information required to be disclosed in Company reports filed or submitted under the Securities Exchange Act of 1934 (the “Exchange Act”) is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms. There has been no change in the Company’s internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during the period covered by this report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1A. RISK FACTORS

“Item 1A. Risk Factors” of our most recent Form 10-K, filed November 29, 2019, includes a discussion of our risk factors. The information presented below updates, and should be read in conjunction with, the risk factors and information disclosed in our Form 10-K.

The COVID-19 pandemic and its widespread effects on the United States and global economies may have a material adverse effect on our business which could continue for an unknown period of time.

The rapid spread of the COVID-19 virus, as well as the measures governments and private organizations have implemented in order to stem the spread of this pandemic, is resulting in significant worldwide disruptions and contractions in economic activity, including those resulting from “shelter in place” and similar orders, restrictions on non-essential business operations and travel, and increased unemployment. Significant governmental and business resources are being reallocated from normal governmental and business expenditures toward COVID-19 prevention and treatment as well as toward attempting to mitigate the effects of the pandemic on individuals physically or economically harmed by these economic disruptions.

The Company is subject to postponement or cancellation of certain contracts to which it is a party, including a substantial number of government contracts which may be delayed or terminated for convenience without penalty. Current restrictions and conditions may also prevent or delay the Company in accessing customer facilities to deliver products and provide services, and may disrupt or delay the Company’s supply chain. While the Company's businesses have been classified as essential businesses and allowed to remain in operation in jurisdictions in which facility closures have been mandated, the Company can give no assurance that this will not change in the future or that the Company's businesses will be classified as essential in each of the jurisdictions in which it operates. Further, although the Company has implemented prevention procedures at its own facilities, including enhanced cleaning procedures, social distancing efforts and working from home where feasible, and substantially all of its facilities have so far remained in business, due to the nature of the COVID-19 pandemic there can be no assurance that the Company will not suffer facility closures or other adverse effects on its business operations in the future.

These facts and circumstances may have a material adverse effect on the Company’s business, results of operations, financial condition and cash flows. The extent to which the COVID-19 pandemic will impact the Company’s business, results of operations, financial condition and cash flows in the future, and the length of time these impacts may continue, will depend on future developments that are highly uncertain and cannot be predicted at this time, including new information that may emerge concerning the severity of COVID-19, the longevity of COVID-19 and the actions to contain its impact.

ITEM 6. EXHIBITS

Exhibit Number	Description	Document Location
3.1(a)	Restated Articles of Incorporation	Exhibit 3(a) to the Company's Form 10-K for the fiscal year ended September 30, 1999
3.1(b)	Amended Certificate of Designation, Preferences and Rights of Series A Participating Cumulative Preferred Stock of the Registrant	Exhibit 4(e) to the Company's Form 10-Q for the fiscal quarter ended March 31, 2000
3.1(c)	Articles of Merger effective July 10, 2000	Exhibit 3(c) to the Company's Form 10-Q for the fiscal quarter ended June 30, 2000
3.1(d)	Amendment of Articles of Incorporation effective February 5, 2018	Exhibit 3.1 to the Company's Form 8-K filed February 7, 2018
3.2	Bylaws	Exhibit 3.1 to the Company's Form 8-K filed November 19, 2019
31.1	Certification of Chief Executive Officer	Filed herewith
31.2	Certification of Chief Financial Officer	Filed herewith
32	Certification of Chief Executive Officer and Chief Financial Officer	Filed herewith
101.INS	XBRL Instance Document*	Submitted herewith
101.SCH	XBRL Schema Document*	Submitted herewith
101.CAL	XBRL Calculation Linkbase Document*	Submitted herewith
101.DEF	XBRL Definition Linkbase Document*	Submitted herewith
101.LAB	XBRL Label Linkbase Document*	Submitted herewith
101.PRE	XBRL Presentation Linkbase Document*	Submitted herewith
104	Cover Page Interactive Data File (contained in Exhibit 101)	Submitted herewith

* Exhibit 101 to this report consists of documents formatted in XBRL (Extensible Business Reporting Language). The financial information contained in the XBRL – related documents is "unaudited" or "unreviewed".

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.

ESCO TECHNOLOGIES INC.

/s/ Gary E. Muenster

Gary E. Muenster
Executive Vice President and Chief Financial Officer
(As duly authorized officer and principal accounting and financial officer of the registrant)

Dated: May 8, 2020

Exhibit 31.1

CERTIFICATION

I, Victor L. Richey, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ESCO Technologies Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 8, 2020

/s/ Victor L. Richey
Victor L. Richey
Chairman, Chief Executive Officer and President

Exhibit 31.2

CERTIFICATION

I, Gary E. Muenster, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ESCO Technologies Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 8, 2020

/s/ Gary E. Muenster
Gary E. Muenster
Executive Vice President and Chief Financial Officer

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of ESCO Technologies Inc. (the "Company") on Form 10-Q for the period ended March 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Victor L. Richey, Chairman, Chief Executive Officer and President of the Company, and Gary E. Muenster, Executive Vice President and Chief Financial Officer of the Company, certify, to the best of our knowledge, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 8, 2020

/s/ Victor L. Richey
Victor L. Richey
Chairman, Chief Executive Officer and President
ESCO Technologies Inc.

/s/ Gary E. Muenster
Gary E. Muenster
Executive Vice President and Chief Financial Officer
ESCO Technologies Inc.