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, 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: 001-33288

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

Delaware (State or other jurisdiction of incorporation or organization)	**06-1185400** (I.R.S. Employer Identification No.)
1020 West Park Avenue, Kokomo, Indiana (Address of principal executive offices)	**46904-9013** (Zip Code)

Registrant's telephone number, including area code **(765) 456-6000**

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 and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer ☐	Accelerated filer ☒
Non-accelerated filer (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 ☒

As of May 3, 2018, the registrant had 12,520,020 shares of Common Stock, $.001 par value, outstanding.

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Item 1. Unaudited Condensed Consolidated Financial Statements

HAYNES INTERNATIONAL, INC. and SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	September 30, 2017	March 31, 2018 (Unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 46,328	$ 17,534
Accounts receivable, less allowance for doubtful accounts of $620 and $1,298 at September 30, 2017 and March 31, 2018, respectively	61,602	65,737
Inventories	244,457	267,870
Income taxes receivable	—	10,849
Other current assets	2,781	3,669
Total current assets	355,168	365,659
Property, plant and equipment, net	192,556	187,465
Deferred income taxes	58,133	28,731
Other assets	5,107	5,441
Goodwill	4,789	4,789
Other intangible assets, net	6,066	5,802
Total assets	$ 621,819	$ 597,887
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 32,802	$ 34,235
Accrued expenses	14,108	14,988
Income taxes payable	195	—
Accrued pension and postretirement benefits	5,095	5,095
Deferred revenue—current portion	2,500	2,500
Total current liabilities	54,700	56,818
Long-term obligations (less current portion) (Note 14)	7,896	8,592
Deferred revenue (less current portion)	20,329	19,079
Deferred income taxes	1,741	1,741
Accrued pension benefits (less current portion)	90,957	88,571
Accrued postretirement benefits (less current portion)	112,424	112,881
Total liabilities	288,047	287,682
Commitments and contingencies (Note 6)	—	—
Stockholders' equity:		
Common stock, $0.001 par value (40,000,000 shares authorized, 12,544,933 and 12,562,133 shares issued and 12,509,757 and 12,520,020 shares outstanding at September 30, 2017 and March 31, 2018, respectively)	13	13
Preferred stock, $0.001 par value (20,000,000 shares authorized, 0 shares issued and outstanding)	—	—
Additional paid-in capital	248,733	250,050
Accumulated earnings	159,366	129,256
Treasury stock, 35,176 shares at September 30, 2017 and 42,113 shares at March 31, 2018	(1,646)	(1,869)
Accumulated other comprehensive loss	(72,694)	(67,245)
Total stockholders' equity	333,772	310,205
Total liabilities and stockholders' equity	$ 621,819	$ 597,887

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

HAYNES INTERNATIONAL, INC. and SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except per share data)

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2018	Six Months Ended March 31, 2017	Six Months Ended March 31, 2018
Net revenues	$ 103,112	$ 110,206	$ 196,467	$ 199,899
Cost of sales	93,324	98,754	176,192	181,437
Gross profit	9,788	11,452	20,275	18,462
Selling, general and administrative expense	10,541	12,284	20,853	23,054
Research and technical expense	991	965	1,934	1,853
Operating income (loss)	(1,744)	(1,797)	(2,512)	(6,445)
Interest income	(44)	(17)	(101)	(35)
Interest expense	236	229	405	459
Income (loss) before income taxes	(1,936)	(2,009)	(2,816)	(6,869)
Provision for (benefit from) income taxes	(46)	59	(254)	17,725
Net income (loss)	$ (1,890)	$ (2,068)	$ (2,562)	$ (24,594)
Net income (loss) per share:				
Basic	$ (0.15)	$ (0.17)	$ (0.20)	$ (1.99)
Diluted	$ (0.15)	$ (0.17)	$ (0.20)	$ (1.99)
Weighted Average Common Shares Outstanding				
Basic	12,401	12,422	12,391	12,417
Diluted	12,401	12,422	12,391	12,417
Dividends declared per common share	$ 0.22	$ 0.22	$ 0.44	$ 0.44

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

HAYNES INTERNATIONAL, INC. and SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)
(in thousands)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2017	2018	2017	2018
Net income (loss)	$ (1,890)	$ (2,068)	$ (2,562)	$ (24,594)
Other comprehensive income (loss), net of tax:				
Pension and postretirement	2,579	1,311	5,159	2,616
Foreign currency translation adjustment	835	2,316	(2,191)	2,833
Other comprehensive income (loss)	3,414	3,627	2,968	5,449
Comprehensive income (loss)	$ 1,524	$ 1,559	$ 406	$ (19,145)

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

HAYNES INTERNATIONAL, INC. and SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

	Six Months Ended March 31,	
	2017	2018
Cash flows from operating activities:		
Net income (loss)	$ (2,562)	$ (24,594)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation	10,597	11,449
Amortization	245	264
Pension and post-retirement expense - U.S. and U.K.	11,714	7,107
Stock compensation expense	1,225	1,317
Deferred revenue	(6,238)	(1,250)
Deferred income taxes	3,259	27,858
Loss on disposition of property	431	55
Change in assets and liabilities:		
Restricted cash	5,023	—
Accounts receivable	(4,596)	(2,925)
Inventories	(7,653)	(21,548)
Other assets	(833)	(1,184)
Accounts payable and accrued expenses	12,369	2,385
Income taxes	(5,972)	(11,066)
Accrued pension and postretirement benefits	(5,780)	(4,905)
Net cash provided by (used in) operating activities	11,229	(17,037)
Cash flows from investing activities:		
Additions to property, plant and equipment	(9,780)	(6,338)
Net cash provided by (used in) investing activities	(9,780)	(6,338)
Cash flows from financing activities:		
Dividends paid	(5,505)	(5,509)
Payment for purchase of treasury stock	(266)	(223)
Payments on long-term obligation	(83)	(109)
Net cash provided by (used in) financing activities	(5,854)	(5,841)
Effect of exchange rates on cash	(527)	422
Increase (decrease) in cash and cash equivalents:	(4,932)	(28,794)
Cash and cash equivalents:		
Beginning of period	59,297	46,328
End of period	$ 54,365	$ 17,534
Supplemental disclosures of cash flow information:		
Interest (net of capitalized interest)	$ 376	$ 430
Income taxes paid (refunded), net	$ 2,830	$ 918
Capital expenditures incurred, but not yet paid	$ 1,035	$ 1,738

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

HAYNES INTERNATIONAL, INC. and SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)
(in thousands, except share and per share data)

Note 1. Basis of Presentation

Interim Financial Statements

The accompanying unaudited condensed interim consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"), and such principles are applied on a basis consistent with information reflected in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017 filed with the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to the rules and regulations promulgated by the SEC related to interim financial statements. In the opinion of management, the interim financial information includes all adjustments and accruals which are necessary for a fair presentation of results for the respective interim periods. The results of operations for the three and six months ended March 31, 2018 are not necessarily indicative of the results to be expected for the full fiscal year ending September 30, 2018 or any interim period.

Principles of Consolidation

The consolidated financial statements include the accounts of Haynes International, Inc. and directly or indirectly wholly-owned subsidiaries (collectively, the "Company"). All intercompany transactions and balances are eliminated.

Note 2. Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The objective of the update is to recognize 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. ASU 2015-14 deferred the effective date of the update to annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The Company has chosen to implement this standard on a modified prospective basis beginning on October 1, 2019 and is in the process of evaluating the impact on the financial statements, if any.

In July 2015, the FASB issued ASU 2015-11, *Inventory (Topic 330)*. The objective of this update is to simplify the measurement of inventory valuation at the lower of cost or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. It is effective for annual reporting periods beginning after December 15, 2016 and interim periods within fiscal years beginning after December 15, 2017. The Company adopted these changes in the first quarter of fiscal 2018, which did not result in a material impact to the Company's consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This new guidance will require that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The new lease accounting requirements are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, *Compensation – Retirement Benefits (Topic 715)*. This new guidance requires entities to (1) disaggregate the service cost component from the other components of net benefit cost and present it with other current compensation costs for related employees in the income statement and (2) present the other components elsewhere in the income statement and outside of income from operations if that subtotal is presented. In addition, the ASU requires entities to disclose the income statement lines that contain the other components if they are not presented on appropriately described separate lines. This new guidance is effective for fiscal years beginning after December 15, 2017, including interim periods within those annual periods, with early adoption permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements.

Note 3. Inventories

The following is a summary of the major classes of inventories:

	September 30, 2017	March 31, 2018
Raw Materials	$ 18,731	$ 20,065
Work-in-process	130,019	150,404
Finished Goods	94,331	95,833
Other	1,376	1,568
	$ 244,457	$ 267,870

Note 4. Income Taxes

On December 22, 2017, the United States enacted the Tax Cuts and Jobs Act ("the Act"), which made significant changes to U.S. federal income tax law including, among other things, lowering corporate income tax rates, permitting bonus depreciation that will allow for full expensing of qualified property and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. Beginning October 1, 2017 and continuing through September 30, 2018, the Company's U.S. income will be taxed at a 24.5% federal tax rate after which time the federal tax rate applicable to the Company will be lowered to 21.0%. Deferred tax assets beginning as of December 31, 2017 were revalued to the lower statutory rates of 24.5% or 21.0%, depending upon the projected timing of the reversal of these assets. The estimated impact of the revaluation of the deferred tax assets has resulted in increased tax expense in the first six months of fiscal 2018 of $17,954. This amount was recorded as a discrete accounting adjustment and will be adjusted throughout the remainder of fiscal 2018 as the timing of the reversal of deferred tax assets becomes known. Other components of the Act, such as the transition tax applied on accumulated earnings and profits of controlled foreign corporations, have not been included in income tax expense as the impact, if any, cannot reasonably be determined at this time. An analysis of accumulated earnings and foreign tax credit pools must be completed before this amount can be determined.

Income tax expense for the three and six months ended March 31, 2017 and 2018 differed from the U.S. federal statutory rates of 35% and 24.5%, respectively, primarily due to state income taxes, differing tax rates on foreign earnings and discrete tax items that impacted income tax expense in these periods. In addition to the deferred tax asset revaluation adjustment of $17,954, current period tax expense was adversely impacted due to a lower rate applied against a pretax loss of $(2,009). Additionally, the low effective tax rate in the second quarter of fiscal 2018 was due to the Company's pre-tax loss in the United States and pre-tax income in the United Kingdom, which has a lower effective tax rate than the statutory rate. When incurring a pre-tax loss, the effective tax rate of the Company will be lower than the statutory rate if the estimated full-year pre-tax loss in the United States is a partial offset to estimated full year pre-tax income incurred in other jurisdictions. The effective tax rate for the three months ended March 31, 2018 was (2.9)% compared to 2.4% in the same period of fiscal 2017. The effective tax rate for the six months ended March 31, 2018 was (258.0)% compared to 9.0% in the same period of fiscal 2017.

Note 5. Pension and Post-retirement Benefits

Components of net periodic pension and post-retirement benefit cost for the three and six months ended March 31, 2017 and 2018 were as follows:

	Three Months Ended March 31,				Six Months Ended March 31,			
	Pension Benefits		Other Benefits		Pension Benefits		Other Benefits	
	2017	2018	2017	2018	2017	2018	2017	2018
Service cost	$ 1,570	$ 1,384	$ 87	$ 84	$ 3,141	$ 2,768	$ 174	$ 168
Interest cost	2,592	2,625	1,073	1,078	5,141	5,231	2,146	2,156
Expected return	(3,531)	(3,665)	—	—	(7,003)	(7,299)	—	—
Amortizations	2,994	1,294	1,070	751	5,975	2,583	2,140	1,500
Net periodic benefit cost	$ 3,625	$ 1,638	$ 2,230	$ 1,913	$ 7,254	$ 3,283	$ 4,460	$ 3,824

The Company contributed $3,000 to Company-sponsored domestic pension plans, $1,866 to its other post-retirement benefit plans and $421 to the U.K. pension plan for the six months ended March 31, 2018. The Company expects to make future contributions of $3,000 to its U.S. pension plan, $3,134 to its other post-retirement benefit plan and $382 to the U.K. pension plan for the remainder of fiscal 2018.

Note 6. Legal, Environmental and Other Contingencies

Legal

The Company is regularly involved in litigation, both as a plaintiff and as a defendant, relating to its business and operations, including environmental, commercial, employment and federal and/or state Equal Employment Opportunity Commission administrative actions. Future expenditures for environmental, employment, intellectual property and other legal matters cannot be determined with any degree of certainty; however, based on the facts presently known, management does not believe that such costs will have a material effect on the Company's financial position, results of operations or cash flows.

The Company is currently, and has in the past been, subject to claims involving personal injuries allegedly relating to its products and processes. For example, the Company is presently involved in two actions involving welding rod-related injuries, which were filed in California state court against numerous manufacturers, including the Company, in May 2006 and February 2007, respectively, alleging that the welding-related products of the defendant manufacturers harmed the users of such products through the inhalation of welding fumes containing manganese. The Company (together with a number of other manufacturer defendants) is also involved in one action alleging that asbestos in its facilities harmed the plaintiff. The Company believes that it has defenses to these allegations and that, if the Company were to be found liable, the cases would not have a material effect on its financial position, results of operations or liquidity.

Environmental

The Company has received permits from the Indiana Department of Environmental Management and the North Carolina Department of Environment and Natural Resources to close and provide post closure environmental monitoring and care for certain areas of its Kokomo, Indiana and Mountain Home, North Carolina facilities, respectively.

The Company is required to, among other things, monitor groundwater and to continue post-closure maintenance of the former disposal areas at each site. As a result, the Company is aware of elevated levels of certain contaminants in the groundwater, and additional testing and corrective action by the Company could be required. The Company is unable to estimate the costs of any further corrective action at these sites, if required. Accordingly, the Company cannot assure that the costs of any future corrective action at these, or any other current or former sites, would not have a material effect on the Company's financial condition, results of operations or liquidity.

As of September 30, 2017 and March 31, 2018, the Company has accrued $633 for post-closure monitoring and maintenance activities, of which $531 was included in long-term obligations as it is not due within one year. Accruals for these costs are calculated by estimating the annual cost to monitor and maintain each post-closure site and multiplying that amount by the number of years remaining in the post-closure monitoring period.

Expected expenditures for post-closure monitoring and maintenance activities (discounted) were as follows at March 31, 2018.

2019	$ 54
2020	52
2021	60
2022	50
2023 and thereafter	315
	$ 531

On February 11, 2016, the Company voluntarily reported to the Louisiana Department of Environmental Quality a leak that it discovered in one of its chemical cleaning operations at its Arcadia, Louisiana facility. As a result of the discovery, the Company is working with that department to determine the extent of the issue and appropriate remediation.

Note 7. Deferred Revenue

On November 17, 2006, the Company entered into a twenty-year agreement to provide conversion services ("Conversion Services Agreement") to Titanium Metals Corporation ("TIMET") for up to ten million pounds of titanium metal annually. TIMET paid the Company a $50,000 up-front fee and will also pay the Company for its processing services during the term of the agreement (20 years) at prices established by the terms of the agreement. TIMET may exercise an option to have ten million additional pounds of titanium converted annually, provided that it offers to loan up to $12,000 to the Company for certain capital expenditures which may be required to expand capacity. In addition to the volume commitment, the Company has granted TIMET a first priority security interest in its four-high Steckel rolling mill, along with rights of access if the Company enters into bankruptcy or defaults on any financing arrangements.

The Company has agreed not to manufacture titanium products (other than cold reduced titanium tubing). The Company has also agreed not to provide titanium hot-rolling conversion services to any entity other than TIMET for the term of the Conversion Services Agreement. The agreement contains certain default provisions which could result in contract termination and damages, including liquidated damages of $25.0 million and the Company being required to return the unearned portion of the up-front fee. The Company considered each provision and the likelihood of the occurrence of a default that would result in liquidated damages. Based on the nature of the events that could trigger the liquidated damages clause, and the availability of the cure periods set forth in the agreement, the Company determined and continues to believe that none of these circumstances are reasonably likely to occur. Therefore, events resulting in liquidated damages have not been factored in as a reduction to the amount of revenue recognized over the life of the contract. The cash received of $50,000 is recognized in income on a straight-line basis over the 20-year term of the agreement. If an event of default occurred and was not cured within any applicable grace period, the Company would recognize the impact of the liquidated damages in the period of default and re-evaluate revenue recognition under the contract for future periods. The portion of the up-front fee not recognized in income is shown as deferred revenue on the consolidated balance sheet.

Note 8. Goodwill and Other Intangible Assets, Net

The Company has goodwill, patents, trademarks, customer relationships and other intangibles. As the patents and customer relationships have a definite life, they are amortized over lives ranging from two to sixteen years. The Company reviews patents and customer relationships for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of the assets is measured by a comparison of the carrying amount of the asset to the discounted cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount exceeds the fair value of the asset.

Goodwill and trademarks (indefinite lived) are tested for impairment at least annually as of January 31 for goodwill and August 31 for trademarks (the annual impairment testing dates), or more frequently if impairment indicators exist. If the carrying value of a trademark exceeds its fair value (determined using an income approach, based upon a discounted cash flow of an assumed royalty rate), impairment of the trademark may exist resulting in a charge to earnings to the extent of the impairment. The impairment test for goodwill is performed by comparing the fair value of a reporting unit with its carrying amount and recognizing an impairment loss in the event that the carrying amount is greater than the fair value. Any goodwill impairment loss recognized would not exceed the total carrying amount of goodwill allocated to that reporting unit. No impairment has been recognized as of March 31, 2018.

During the first six months of fiscal 2018, there were no changes in the carrying amount of goodwill.

Amortization of customer relationships, patents, non-competes and other intangibles was $122 and $131 for the three-month periods ended March 31, 2017 and 2018, respectively and $245 and $264 for the six-month periods ended March 31, 2017 and 2018, respectively. The following represents a summary of intangible assets at September 30, 2017 and March 31, 2018.

September 30, 2017	**Gross Amount**	**Accumulated Amortization**	**Carrying Amount**
Patents	$ 4,030	$ (3,656)	$ 374
Trademarks	3,800	—	3,800
Customer relationships	2,100	(426)	1,674
Other	291	(73)	218
	$ 10,221	$ (4,155)	$ 6,066

March 31, 2018	**Gross Amount**	**Accumulated Amortization**	**Carrying Amount**
Patents	$ 4,030	$ (3,816)	$ 214
Trademarks	3,800	—	3,800
Customer relationships	2,100	(501)	1,599
Other	291	(102)	189
	$ 10,221	$ (4,419)	$ 5,802

Estimated future Aggregate Amortization Expense: Year Ended September 30,		
2018	$	263
2019		256
2020		198
2021		180
2022		133
Thereafter		972

Note 9. Net Income (Loss) Per Share

The Company accounts for earnings per share using the two-class method. The two-class method is an earnings allocation that determines net income per share for each class of common stock and participating securities according to participation rights in undistributed earnings. Non-vested restricted stock awards that include non-forfeitable rights to dividends are considered participating securities. Per share amounts are computed by dividing net income attributable to common stockholders by the weighted average shares outstanding during each period. Basic earnings per share is computed by dividing net income available to common stockholders for the period by the weighted average number of common shares outstanding for the period. The computation of diluted earnings per share is similar to basic earnings per share, except the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued.

The following table sets forth the computation of basic and diluted earnings (losses) per share for the periods indicated:

	Three Months Ended March 31,		Six Months Ended March 31,	
(in thousands, except share and per share data)	2017	2018	2017	2018
Numerator: Basic and Diluted				
Net income (loss)	$ (1,890)	$ (2,068)	$ (2,562)	$ (24,594)
Dividends paid and accrued	(2,752)	(2,758)	(5,505)	(5,516)
Undistributed income (loss)	(4,642)	(4,826)	(8,067)	(30,110)
Percentage allocated to common shares [a]	100.0 %	100.0 %	100.0 %	100.0 %
Undistributed income (loss) allocated to common shares	(4,642)	(4,826)	(8,067)	(30,110)
Dividends paid on common shares outstanding	2,727	2,722	5,453	5,455
Net income (loss) available to common shares	(1,915)	(2,104)	(2,614)	(24,655)
Denominator: Basic and Diluted				
Weighted average common shares outstanding	12,400,522	12,422,485	12,391,264	12,416,627
Adjustment for dilutive potential common shares	—	—	—	—
Weighted average shares outstanding - Diluted	12,400,522	12,422,485	12,391,264	12,416,627
Basic net income (loss) per share	$ (0.15)	$ (0.17)	$ (0.20)	$ (1.99)
Diluted net income (loss) per share	$ (0.15)	$ (0.17)	$ (0.20)	$ (1.99)
Number of stock option shares excluded as their effect would be anti-dilutive	299,667	316,776	322,417	341,776
Number of restricted stock shares excluded as their effect would be anti-dilutive	107,210	97,535	108,498	97,685
Number of deferred restricted stock shares excluded as their effect would be anti-dilutive	—	16,550	—	16,550
Number of performance share awards excluded as their effect would be anti-dilutive	9,500	49,180	14,250	46,490
[a] Percentage allocated to common shares - Weighted average				
Common shares outstanding	12,400,522	12,422,485	12,391,264	12,416,627
Unvested participating shares	—	—	—	—
	12,400,522	12,422,485	12,391,264	12,416,627

Note 10. Stock-Based Compensation

Restricted Stock

On February 23, 2009, the Company adopted a restricted stock plan that reserved 400,000 shares of common stock for issuance. Additionally, on March 1, 2016, the Company adopted the 2016 Incentive Compensation Plan which provides for grants of restricted stock, restricted stock units and performance shares, among other awards. Up to 275,000 shares of restricted stock, restricted stock units and performance shares may be granted in the aggregate under this plan. Following the adoption of the 2016 Incentive Compensation Plan, the Company ceased granting awards from the 2009 restricted stock plan, although awards remain outstanding thereunder.

Grants of restricted stock are comprised of shares of the Company's common stock subject to transfer restrictions, which vest in accordance with the terms and conditions established by the Compensation Committee. The Compensation Committee may set vesting requirements based on the achievement of specific performance goals or the passage of time.

Restricted shares are subject to forfeiture if employment or service terminates prior to the vesting date or if any applicable performance goals are not met. The Company will assess, on an ongoing basis, the probability of whether the performance criteria will be achieved. The Company will recognize compensation expense over the performance period if it is deemed probable that the goals will be achieved. The fair value of the Company's restricted stock is determined based upon the closing price of the Company's common stock on the grant date, which is determined based upon the closing price of the Company's common stock on the trading date immediately preceding the grant date. The plan provides for the adjustment of the number of shares covered by an outstanding grant and the maximum number of shares for which restricted stock may be granted in the event of a stock split, extraordinary dividend or distribution or similar recapitalization event.

The shares of time-based restricted stock granted to employees vest on the third anniversary of their grant date if the recipient is still an employee of the Company on such date. The shares of restricted stock granted to non-employee directors will vest on the earlier of (a) the first anniversary of the date of grant or (b) the failure of such non-employee director to be re-elected at an annual meeting of the stockholders of the Company as a result of such non-employee director being excluded from the nominations for any reason other than cause.

The following table summarizes the activity under the 2009 restricted stock plan and the 2016 Incentive Compensation Plan with respect to restricted stock for the six months ended March 31 2018:

	Number of Shares	Weighted Average Fair Value At Grant Date
Unvested at September 30, 2017	107,210	$ 41.36
Granted	31,750	$ 31.76
Forfeited / Canceled	(14,550)	$ 46.57
Vested	(26,875)	$ 44.51
Unvested at March 31, 2018	97,535	$ 36.59
Expected to vest	84,868	$ 36.42

Compensation expense related to restricted stock for the three months ended March 31, 2017 and 2018 was $451 and $251, respectively and for the six months ended March 31, 2017 and 2018 was $866 and $565, respectively. The remaining unrecognized compensation expense related to restricted stock at March 31, 2018 was $1,695, to be recognized over a weighted average period of 1.18 years. During the first quarter of fiscal 2018, the Company repurchased 6,937 shares of stock from employees at an average purchase price of $32.23 to satisfy required withholding taxes upon vesting of restricted stock-based compensation.

Deferred Restricted Stock

On November 20, 2017, the Company adopted a deferred compensation plan that allows directors and officers the option to defer receipt of cash and stock compensation. On November 21, 2017, the Company granted shares of restricted stock out of the 2016 Incentive Compensation Plan in which elections were made by certain individuals to defer receipt to a future period. Those shares will vest in accordance with the parameters of the 2016 Incentive Compensation Plan, however, receipt of the shares and any corresponding dividends are deferred until the end of the deferral period. In the event the deferred shares are forfeited prior to the vesting date, deferred dividends pertaining to those shares are also forfeited. During the deferral period, the participants who elected to defer shares will not have voting rights with respect to those shares.

The following table summarizes the activity under the 2016 Incentive Compensation Plan with respect to deferred restricted stock for the six months ended March 31, 2018.

	Number of Shares		Weighted Average Fair Value At Grant Date
Unvested at September 30, 2017	—	$	—
Granted	16,550	$	31.76
Unvested at March 31, 2018	16,550	$	31.76
Expected to vest	16,550	$	31.76

Compensation expense related to deferred restricted stock for the three months ended March 31, 2017 and 2018 was $0 and $131, respectively and for the six months ended March 31, 2017 and 2018 was $0 and $175, respectively. The remaining unrecognized compensation expense related to restricted stock at March 31, 2018 was $350, to be recognized over a weighted average period of 0.67 years.

Performance Shares

On November 22, 2016 and November 21, 2017, the Company granted a target of 19,000 and 24,800, respectively, performance share awards to certain key employees. The number of performance shares that will ultimately be earned, as well as the number of shares that will be distributed in settling those earned performance shares, if any, will not be determined until the end of the performance period. Performance shares earned will depend on the calculated total shareholder return of the Company at the end of the three-year period ending September 30, 2019 and September 30, 2020, respectively, as compared to the total shareholder return of the Company's peer group, as defined by the Compensation Committee. The fair value of the performance shares granted on November 22, 2016 and November 21, 2017 is $60.09 and $38.43, per share, respectively, which is estimated as of the date of the grant using a Monte Carlo simulation model. Compensation expense related to the performance shares for the three months ended March 31, 2017 and 2018 was $111 and $185, respectively and for the six months ended March 31, 2017 and 2018 was $134 and $314, respectively. The remaining unrecognized compensation expense related to performance shares at March 31, 2018 was $1,445, to be recognized over a weighted average period of 1.95 years.

Stock Options

The Company's 2016 Incentive Compensation Plan and its two previous stock option plans authorize, or formerly authorized, the granting of non-qualified stock options to certain key employees and non-employee directors for the purchase of a maximum of 1,925,000 shares of the Company's common stock. The first option plan was adopted in August 2004 and provided for the grant of options to purchase up to 1,000,000 shares of the Company's common stock. In January 2007, the Company's Board of Directors adopted a second option plan that provides for the grant of options to purchase up to 500,000 shares of the Company's common stock. Following the adoption of the 2016 Incentive Compensation Plan, the Company ceased granting awards from these plans, although awards remain outstanding thereunder. On March 1, 2016, the Company adopted the 2016 Incentive Compensation Plan which provides for grants of up to 425,000 stock options and stock appreciation rights. Each plan provides for the adjustment of the maximum number of shares for which options may be granted in the event of a stock split, extraordinary dividend or distribution or similar recapitalization event. Unless the Compensation Committee determines otherwise, options are exercisable for a period of ten years from the date of grant and vest $33^1/_3$% per year over three years from the grant date. The amount of compensation cost recognized in the financial statements is measured based upon the grant date fair value.

The fair value of option grants is estimated as of the date of the grant. The Company has elected to use the Black-Scholes option pricing model, which incorporates various assumptions including volatility, expected life, risk-free interest rates and dividend yields. The volatility is based on historical volatility of the Company's common stock over the most recent period commensurate with the estimated expected term of the stock option granted. The Company uses historical volatility because management believes such volatility is representative of prospective trends. The expected term of an award is based on historical exercise data. The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of the awards. The dividend yield assumption is based on the Company's history and expectations regarding dividend payouts at the time of the grant. The following assumptions were used for grants during fiscal years 2017 and 2018:

Grant Date	Fair Value	Dividend Yield	Risk-free Interest Rate	Expected Volatility	Expected Life
November 21, 2017	$ 9.74	2.77 %	2.06 %	42 %	5 years
November 22, 2016	$ 11.50	2.15 %	1.79 %	37 %	5 years

The stock-based employee compensation expense for stock options for the three months ended March 31, 2017 and 2018 was $105 and $144, respectively and for the six months ended March 31, 2017 and 2018 was $224 and $262, respectively. The remaining unrecognized compensation expense at March 31, 2018 was $1,098, to be recognized over a weighted average vesting period of 1.99 years.

The following table summarizes the activity under the stock option plans and the 2016 Incentive Compensation Plan with respect to stock options for the six months ended March 31, 2018 and provides information regarding outstanding stock options:

	Number of Shares	Aggregate Intrinsic Value (000s)	Weighted Average Exercise Prices	Weighted Average Remaining Contractual Life
Outstanding at September 30, 2017	425,326		$ 44.93	
Granted	57,550		$ 31.76	
Exercised	—		$ 0.00	
Canceled	(50,000)		$ 54.00	
Outstanding at March 31, 2018	432,876	$ 580	$ 43.47	6.29 yrs.
Vested or expected to vest	396,141	$ 564	$ 41.98	6.26 yrs.
Exercisable at March 31, 2018	316,776	$ 272	$ 44.51	5.32 yrs.

Note 11. Dividend

In the second quarter of fiscal 2018, the Company declared and paid a quarterly cash dividend. The dividend of $0.22 per outstanding share of the Company's common stock was paid March 15, 2018 to stockholders of record at the close of business on March 1, 2018. The dividend cash pay-out was $2,754 for the quarter based on the number of shares outstanding and $4 of dividends were recorded as deferred in accordance with the Deferred Compensation Plan. In the first six months of fiscal 2018, dividends paid were $5,509 and dividends recorded as deferred were $7.

On May 3, 2018, the Company announced that the Board of Directors declared a regular quarterly cash dividend of $0.22 per outstanding share of the Company's common stock. The dividend is payable June 15, 2018 to stockholders of record at the close of business on June 1, 2018.

Note 12. Fair Value Measurements

The fair value hierarchy has three levels based on the inputs used to determine fair value.

- Level 1 — Quoted prices in active markets that are unadjusted and accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2 — Quoted prices for identical assets and liabilities in markets that are not active, quoted prices for similar assets and liabilities in active markets or financial instruments for which significant inputs are observable, either directly or indirectly; and
- Level 3 — Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

When available, the Company uses unadjusted quoted market prices to measure fair value and classifies such items within Level 1. If quoted market prices are not available, fair value is based upon internally-developed models that use, where possible, current market-based or independently-sourced market parameters such as interest rates and currency rates. Items valued using internally-generated models are classified according to the lowest level input or value driver that is significant to the valuation. If quoted market prices are not available, the valuation model used depends on the specific asset or liability being valued. The fair value of cash and cash equivalents is determined using Level 1 information. The Company had no Level 2 or Level 3 assets or liabilities as of September 30, 2017 or March 31, 2018.

U.S. and international equities, fixed income, and other investments held in the Company's pension plan are held in mutual funds and common / collective funds which are valued using net asset value (NAV) provided by the administrator of the fund. The NAV is based on the value of the underlying assets owned by the fund, minus its liabilities, and then divided by the number of shares outstanding. These investments are not classified in the fair value hierarchy in accordance with guidance included in ASU 2015-07, *Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent).*

Note 13. Changes in Accumulated Other Comprehensive Income (Loss) by Component

Comprehensive income (loss) includes changes in equity that result from transactions and economic events from non-owner sources. Comprehensive income (loss) consists of net income (loss) and other comprehensive income (loss) items, including pension, post-retirement and foreign currency translation adjustments, primarily caused by the strengthening of the US dollar against the British pound sterling, net of tax when applicable.

Accumulated Other Comprehensive Income (Loss)

	Three Months Ended March 31, 2017			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of December 31, 2016	$ (72,838)	$ (28,909)	$ (13,222)	$ (114,969)
Other comprehensive income (loss) before reclassifications	—	—	835	835
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(a)]	202	—	—	202
Actuarial losses [(a)]	2,810	1,069	—	3,879
Tax benefit	(1,109)	(393)	—	(1,502)
Net current-period other comprehensive income (loss)	1,903	676	835	3,414
Accumulated other comprehensive income (loss) as of March 31, 2017	$ (70,935)	$ (28,233)	$ (12,387)	$ (111,555)

	Three Months Ended March 31, 2018			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of December 31, 2017	$ (42,180)	$ (21,217)	$ (7,474)	$ (70,871)
Other comprehensive income (loss) before reclassifications	—	—	2,316	2,316
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(a)]	94	—	—	94
Actuarial losses [(a)]	1,221	750	—	1,971
Tax benefit	(477)	(278)	—	(755)
Net current-period other comprehensive income (loss)	838	472	2,316	3,626
Accumulated other comprehensive income (loss) as of March 31, 2018	$ (41,342)	$ (20,745)	$ (5,158)	$ (67,245)

	Six Months Ended March 31, 2017			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of September 30, 2016	$ (74,742)	$ (29,585)	$ (10,196)	$ (114,523)
Other comprehensive income (loss) before reclassifications	—	—	(2,191)	(2,191)
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(a)]	404	—	—	404
Actuarial losses [(a)]	5,620	2,139	—	7,759
Tax benefit	(2,217)	(787)	—	(3,004)
Net current-period other comprehensive income (loss)	3,807	1,352	(2,191)	2,968
Accumulated other comprehensive income (loss) as of March 31, 2017	$ (70,935)	$ (28,233)	$ (12,387)	$ (111,555)

	Six Months Ended March 31, 2018			
	Pension Plan	Postretirement Plan	Foreign Exchange	Total
Accumulated other comprehensive income (loss) as of September 30, 2017	$ (43,012)	$ (21,691)	$ (7,991)	$ (72,694)
Other comprehensive income (loss) before reclassifications	—	—	2,833	2,833
Amounts reclassified from accumulated other comprehensive income (loss)				
Amortization of Pension and Postretirement Plan items [(a)]	187	—	—	187
Actuarial losses [(a)]	2,444	1,500	—	3,944
Tax benefit	(961)	(554)	—	(1,515)
Net current-period other comprehensive income (loss)	1,670	946	2,833	5,449
Accumulated other comprehensive loss as of March 31, 2018	$ (41,342)	$ (20,745)	$ (5,158)	$ (67,245)

(a) These accumulated other comprehensive income components are included in the computation of net periodic pension cost.

Note 14. Long-term Obligations

On January 1, 2015, the Company entered into a capital lease agreement for the building that houses the assets and operations of LaPorte Custom Metal Processing (LCMP). The capital asset and obligation are recorded at the present value of the minimum lease payments. The asset is included in Property, plant and equipment, net on the Consolidated Balance Sheet and is depreciated over the 20-year lease term. The long-term component of the capital lease obligation is included in Long-term obligations.

The Company entered into a twenty-year "build-to-suit" lease for a building that houses the assets and operations of the service center located in LaPorte, Indiana that was relocated from Lebanon, Indiana. During the first quarter of fiscal 2017, the Company took occupancy of the building. The Company retained substantially all of the construction risk and was deemed to be the owner of the facility for accounting purposes, even though it is not the legal owner. Construction costs incurred relative to the buildout of the facility of approximately $4,100 are included in Property, plant and equipment, net on the Consolidated Balance Sheet and are depreciated over the 20-year lease term. The Company accounts for the related build-to-suit liability as a financing obligation.

As of March 31, 2018, future minimum lease rental payments during each fiscal year applicable to the lease obligations were as follows.

2018	$	410
2019		989
2020		994
2021		1,001
2022		1,012
Thereafter		13,678
Total minimum lease payments		18,084
Less amounts representing interest		(9,891)
Present value of net minimum lease payments		8,193
Less current obligation		(137)
Total long-term lease obligation	$	8,056

The lease obligations are included in Long-term obligations (less current portion) on the Consolidated Balance Sheet.

	September 30, 2017		March 31, 2018	
Capital lease rental payments	$	4,275	$	4,242
Finance lease rental payments		4,017		3,951
Environmental post-closure monitoring and maintenance activities		633		633
Less amounts due within one year		(1,029)		(234)
Long-term obligations (less current portion)	$	7,896	$	8,592

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

References to years or portions of years in Management's Discussion and Analysis of Financial Condition and Results of Operations refer to the Company's fiscal years ended September 30, unless otherwise indicated.

This Quarterly Report on Form 10-Q (this "Form 10-Q") contains statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, each as amended. All statements other than statements of historical fact, including statements regarding market and industry prospects and future results of operations or financial position, made in this Form 10-Q are forward-looking. In many cases, you can identify forward-looking statements by terminology, such as "may", "should", "expects", "intends", "plans", "anticipates", "believes", "estimates", "predicts", "potential" or "continue" or the negative of such terms and other comparable terminology. The forward-looking information may include, among other information, statements concerning the Company's outlook for fiscal 2018 and beyond, overall volume and pricing trends, cost reduction strategies and their anticipated results, capital expenditures and dividends. There may also be other statements of expectations, beliefs, future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts. Readers are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from those in the forward-looking statements as a result of various factors, many of which are beyond the Company's control.

The Company has based these forward-looking statements on its current expectations and projections about future events. Although the Company believes that the assumptions on which the forward-looking statements contained herein are based are reasonable, any of those assumptions could prove to be inaccurate. As a result, the forward-looking statements based upon those assumptions also could be incorrect. Risks and uncertainties may affect the accuracy of forward-looking statements. Some, but not all, of these risks are described in Item 1A. of Part 1 of the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.

The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Business Overview

Haynes International, Inc. ("Haynes" or "the Company") is one of the world's largest producers of high-performance nickel and cobalt based alloys in sheet, coil and plate forms. The Company is focused on developing, manufacturing, marketing and distributing technologically advanced, high-performance alloys, which are sold primarily in the aerospace, chemical processing and industrial gas turbine industries. The Company's products consist of high-temperature resistant alloys, or HTA products, and corrosion-resistant alloys, or CRA products. HTA products are used by manufacturers of equipment that is subjected to extremely high temperatures, such as jet engines, gas turbine engines, and industrial heating and heat treatment equipment. CRA products are used in applications that require resistance to very corrosive media found in chemical processing, power plant emissions control and hazardous waste treatment. Management believes Haynes is one of the principal producers of high-performance alloy flat products in sheet, coil and plate forms, and sales of these forms, in the aggregate, represented approximately 59% of net product revenues in fiscal 2017. The Company also produces its products as seamless and welded tubulars, and in slab, bar, billet and wire forms.

The Company has manufacturing facilities in Kokomo, Indiana; Arcadia, Louisiana; and Mountain Home, North Carolina. The Kokomo facility specializes in flat products, the Arcadia facility specializes in tubular products, and the Mountain Home facility specializes in wire products. The Company's products are sold primarily through its direct sales organization, which includes 12 service and/or sales centers in the United States, Europe and Asia. All of these centers are Company operated.

Dividends Paid and Declared

In the second quarter of fiscal 2018, the Company declared and paid a regular quarterly cash dividend of $0.22 per outstanding share of the Company's common stock. The dividend was paid on March 15, 2018 to stockholders of record at the close of business on March 1, 2018. The dividend cash pay-out in the second quarter was approximately $2.8 million based on the number of shares outstanding and equal to approximately $11.0 million on an annualized basis.

On May 3, 2018, the Company announced that the Board of Directors declared a regular quarterly cash dividend of $0.22 per outstanding share of the Company's common stock. The dividend is payable June 15, 2018 to stockholders of record at the close of business on June 1, 2018.

Capital Spending

During the first six months of fiscal 2018, capital investment was $6.3 million, and total planned capital expenditures for fiscal 2018 are expected to be $12.0 million.

Impact of the Tax Cuts and Jobs Act on Deferred Tax Assets

On December 22, 2017, the Tax Cuts and Jobs Act (the "Act") was signed into law. Among other changes is a permanent reduction in the federal corporate income tax rate from 35% to 21%, which the Company expects will positively impact the Company's future effective tax rate and after-tax earnings in the United States. As a result of the Act, the Company's blended rate for fiscal 2018 is 24.5%. The Company may also be affected by certain other aspects of the Act, including, without limitation, provisions regarding repatriation of accumulated foreign earnings and deductibility of capital expenditures. The Company is in the process of determining the effect, if any, those provisions will have on the Company's financial results, and there can be no assurance of whether such additional effects will be positive or negative.

As a result of the reduction in the corporate income tax rate, the Company was required to revalue its net deferred tax asset to account for the future impact of lower corporate tax rates on this deferred amount and record any change in the value of such asset as a one-time non-cash charge on its income statement. The Company has performed an analysis of its first six months of fiscal 2018 tax provision based on the new tax rate as compared to the previous year's effective tax rate of 40% (which includes state and foreign taxes), and determined the amount of such expense to be $19.7 million, which reduced the Company's reported net income for the first six months of fiscal 2018.

Expansion of LaPorte, Indiana Operations

The Company announced on May 2, 2016 its decision to expand and streamline its distribution footprint by investing in new plant and equipment at its processing facility located in LaPorte, Indiana. In connection with the expansion, the Company has relocated its service center operations in Lebanon, Indiana to LaPorte. The project began in the first quarter of fiscal 2016 and was substantially completed by the end of the first quarter of fiscal 2018. During the first six months of fiscal 2018, the Company expensed $1.1 million for costs related to the relocation, including but not limited to, physical relocation costs, employee retention costs and duplicate lease costs.

Volumes, Competition and Pricing

The Company is increasing utilization of its new cold-finished sheet and coil capability. The production rate for cold-finishing over the first six months of fiscal 2018 was 17.3% higher than the same period last year. Volume shipped to the aerospace industry was 2.6 million pounds, which is an 11.0% increase over last fiscal year's second quarter and a 27.4% increase sequentially over the first quarter of fiscal 2018. In addition, volume shipped into the chemical processing market continues to improve, showing positive signs of a market recovery, with 1.0 million pounds shipped, a 29.7% increase over last fiscal year's second quarter and a 45.6% increase sequentially over the first quarter of fiscal 2018. Specialty application projects shipped into the CPI market were at a moderately better level in the second quarter of fiscal 2018. In addition, volume shipped into other markets was 0.5 million pounds, which is a 36.9% increase over last fiscal year's second quarter and a 44.3% increase sequentially over the first quarter of fiscal 2018 primarily due to strength in the flue-gas desulfurization market. Conversely, volume shipped in the industrial gas turbine market declined to 0.6 million pounds, which is 54.4% lower than last fiscal year's second quarter, and 26.9% lower sequentially than the first quarter of fiscal 2018 as this market continues to suffer from weak demand particularly from the large industrial OEM customers. Overall volume in the second quarter of fiscal 2018 was 4.7 million pounds, which is 3.1% lower than last fiscal year's second quarter, but 19.9% higher sequentially than the first quarter of fiscal 2018. The product average selling price per pound in the second quarter of fiscal 2018 was $22.28, which is a 13.2% increase over last fiscal year's second quarter and a 5.3% increase sequentially over the first quarter of fiscal 2018. The year-over-year increase was driven by moderately higher shipments of high-value specialty application projects, the effect of announced price increases and increases under many of the Company's long-term agreements with customers according to periodic adjustment clauses relating to the market price of certain raw materials, primarily nickel.

Set forth below are selected data relating to the Company's net revenues, gross profit, backlog, the 30-day average nickel price per pound as reported by the London Metals Exchange and a breakdown of net revenues, shipments and average selling prices to the markets served by the Company for the periods shown. The data should be read in conjunction with the consolidated financial statements and related notes thereto and the remainder of "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this Form 10-Q.

Net Revenue and Gross Profit Margin Performance:

Comparison by Quarter of Net Revenues, Gross Profit Margin and Gross Profit Margin Percentage for Fiscal 2017 and 2018

	Quarter Ended					
(dollars in thousands)	**December 31, 2016**	**March 31, 2017**	**June 30, 2017**	**September 30, 2017**	**December 31, 2017**	**March 31, 2018**
Net Revenues	$ 93,355	$ 103,112	$ 97,977	$ 100,765	$ 89,693	$ 110,206
Gross Profit Margin	$ 10,487	$ 9,788	$ 3,662	$ 5,773	$ 7,010	$ 11,452
Gross Profit Margin %	11.2 %	9.5 %	3.7 %	5.7 %	7.8 %	10.4 %

The favorable trend of recovering gross profit margins and gross profit margin percentage continued in the second quarter of fiscal 2018 with gross margin dollars at $11.5 million and gross margin percentage at 10.4%, both higher than the previous four quarters. Improvement was largely attributable to better product mix, higher volumes and stronger pricing levels. Continued improvement is expected over the second half of fiscal 2018 with strengthening volumes and rising raw material prices partly offset by the continued shipments of lower-value orders from the backlog that were taken in prior quarters.

Backlog

	Quarter Ended					
	December 31, 2016	**March 31, 2017**	**June 30, 2017**	**September 30, 2017**	**December 31, 2017**	**March 31, 2018**
***Backlog*[1]**						
Dollars (in thousands)	$ 167,286	$ 170,848	$ 180,922	$ 177,300	$ 205,718	$ 212,312
Pounds (in thousands)	6,795	6,960	7,496	6,453	8,073	7,764
Average selling price per pound	$ 24.62	$ 24.55	$ 24.14	$ 27.48	$ 25.48	$ 27.35
Average nickel price per pound						
London Metals Exchange[2]	$ 5.00	$ 4.64	$ 4.05	$ 5.10	$ 5.18	$ 6.08

(1) The Company defines backlog to include firm commitments from customers for delivery of product at established prices. There are orders in the backlog at any given time which include prices that are subject to adjustment based on changes in raw material costs, which can vary from approximately 30% - 50% of the orders. Historically, approximately 75% of the backlog orders have shipped within nine months and approximately 90% have shipped within 12 months. The backlog figures do not reflect that portion of the business conducted at service and sales centers on a spot or "just-in-time" basis.

(2) Represents the average price for a cash buyer as reported by the London Metals Exchange for the 30 days ending on the last day of the period presented.

Backlog was $212.3 million at March 31, 2018, an increase of $6.6 million, or 3.2%, from $205.7 million at December 31, 2017. Backlog pounds decreased during the second quarter of fiscal 2018 by 3.8%, primarily due the shipment of certain special projects. The increase in average selling price of $27.35 per pound at March 31, 2018 compared to $25.48 per pound at December 31, 2017 reflects the widespread price increases that took effect in the second quarter of fiscal 2018 and a higher-value mix of products. Aerospace and other markets had higher order entry and improving backlog levels, as compared to the prior quarter. The average market price for nickel increased during the second quarter by 17.4%.

Quarterly Market Information

	Quarter Ended					
	December 31, 2016	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	March 31, 2018
Net revenues (in thousands)						
Aerospace	$ 45,784	$ 49,536	$ 46,895	$ 50,300	$ 46,839	$ 59,033
Chemical processing	19,128	18,081	15,017	18,241	13,356	21,148
Industrial gas turbines	14,593	17,827	14,731	14,372	13,421	11,755
Other markets	8,429	9,923	14,379	10,472	9,238	12,724
Total product revenue	87,934	95,367	91,022	93,385	82,854	104,660
Other revenue	5,421	7,745	6,955	7,380	6,839	5,546
Net revenues	$ 93,355	$ 103,112	$ 97,977	$ 100,765	$ 89,693	$ 110,206
Shipments by markets (in thousands of pounds)						
Aerospace	2,017	2,322	2,207	2,301	2,023	2,578
Chemical processing	605	771	858	929	687	1,000
Industrial gas turbines	1,039	1,403	1,011	1,015	876	640
Other markets	316	350	501	472	332	479
Total shipments	3,977	4,846	4,577	4,717	3,918	4,697
Average selling price per pound						
Aerospace	$ 22.70	$ 21.33	$ 21.25	$ 21.86	$ 23.15	$ 22.90
Chemical processing	31.62	23.45	17.50	19.64	19.44	21.15
Industrial gas turbines	14.05	12.71	14.57	14.16	15.32	18.37
Other markets	26.67	28.35	28.70	22.19	27.83	26.56
Total product (product only; excluding other revenue)	22.11	19.68	19.89	19.80	21.15	22.28
Total average selling price (including other revenue)	23.47	21.28	21.41	21.36	22.89	23.46

Results of Operations for the Three Months Ended March 31, 2017 Compared to the Three Months Ended March 31, 2018

The following table sets forth certain financial information as a percentage of net revenues for the periods indicated and compares such information between periods.

	Three Months Ended March 31,				Change	
	2017		2018		Amount	%
Net revenues	$ 103,112	100.0 %	$ 110,206	100.0 %	$ 7,094	6.9 %
Cost of sales	93,324	90.5 %	98,754	89.6 %	5,430	5.8 %
Gross profit	9,788	9.5 %	11,452	10.4 %	1,664	17.0 %
Selling, general and administrative expense	10,541	10.2 %	12,284	11.1 %	1,743	16.5 %
Research and technical expense	991	1.0 %	965	0.9 %	(26)	(2.6)%
Operating income (loss)	(1,744)	(1.7)%	(1,797)	(1.6)%	(53)	3.0 %
Interest income	(44)	(0.0)%	(17)	(0.0)%	27	(61.4)%
Interest expense	236	0.2 %	229	0.2 %	(7)	(3.0)%
Income (loss) before income taxes	(1,936)	(1.9)%	(2,009)	(1.8)%	(73)	3.8 %
Provision for (benefit from) income taxes	(46)	(0.0)%	59	0.1 %	105	(228.3)%
Net income (loss)	$ (1,890)	(1.8)%	$ (2,068)	(1.9)%	$ (178)	9.4 %

The following table includes a breakdown of net revenues, shipments and average selling prices to the markets served by the Company for the periods shown.

By market	Three Months Ended March 31, 2017	Three Months Ended March 31, 2018	Change Amount	Change %
Net revenues (in thousands)				
Aerospace	$ 49,536	$ 59,033	$ 9,497	19.2 %
Chemical processing	18,081	21,148	3,067	17.0 %
Industrial gas turbine	17,827	11,755	(6,072)	(34.1)%
Other markets	9,923	12,724	2,801	28.2 %
Total product revenue	95,367	104,660	9,293	9.7 %
Other revenue	7,745	5,546	(2,199)	(28.4)%
Net revenues	$ 103,112	$ 110,206	$ 7,094	6.9 %
Pounds by market (in thousands)				
Aerospace	2,322	2,578	256	11.0 %
Chemical processing	771	1,000	229	29.7 %
Industrial gas turbine	1,403	640	(763)	(54.4)%
Other markets	350	479	129	36.9 %
Total shipments	4,846	4,697	(149)	(3.1)%
Average selling price per pound				
Aerospace	$ 21.33	$ 22.90	$ 1.57	7.4 %
Chemical processing	23.45	21.15	(2.30)	(9.8)%
Industrial gas turbine	12.71	18.37	5.66	44.5 %
Other markets	28.35	26.56	(1.79)	(6.3)%
Total product (excluding other revenue)	19.68	22.28	2.60	13.2 %
Total average selling price (including other revenue)	$ 21.28	$ 23.46	$ 2.18	10.2 %

Net Revenues. Net revenues were $110.2 million in the second quarter of fiscal 2018, an increase of 6.9% from $103.1 million in the same period of fiscal 2017. Volume was 4.7 million pounds in the second quarter of fiscal 2018, a decrease of 3.1% from 4.8 million pounds in the same period of fiscal 2017. The decrease in volume was primarily due to a decline in shipments into the industrial gas turbine market during the second quarter of fiscal 2018 due to continued weak demand. The product-sales average selling price was $22.28 per pound in the second quarter of fiscal 2018, an increase of 13.2% from $19.68 per pound in the same period of fiscal 2017. The average selling price increased primarily due to a higher-value product mix and higher raw material market prices, which increased average selling prices per pound by approximately $1.63 and $1.47, respectively, partially offset by pricing competition and other factors, which decreased average selling price per pound by approximately $0.50.

Sales to the aerospace market were $59.0 million in the second quarter of fiscal 2018, an increase of 19.2% from $49.5 million in the same period of fiscal 2017, due to a 7.4% increase in average selling price per pound, combined with a 11.0% increase in volume. The increase in volume is primarily driven by an increase in the new engine platform sales combined with our enhanced capacity from the cold-finishing capital investment. The average selling price per pound increase reflects an increase in market prices of raw materials and a higher-value product mix, which increased average selling price per pound by approximately $1.53 and $0.41, respectively, partially offset by other pricing factors, which decreased average selling price per pound by approximately $0.37.

Sales to the chemical processing market were $21.1 million in the second quarter of fiscal 2018, an increase of 17.0% from $18.1 million in the same period of fiscal 2017, due to a 29.7% increase in volume, partially offset by a 9.8% decrease in average selling price per pound. The increase in volume reflects a moderate strengthening of project shipments combined with higher volumes of base business. The base-business market improvement put downward pressure on average selling prices, which contributed to increased pricing competition and other factors and a lower-value product mix, which decreased average selling price per pound by approximately $1.90 and $1.58, respectively, partially offset by a change in market prices of certain raw materials, which increased average selling price per pound by approximately $1.18.

Sales to the industrial gas turbine market were $11.8 million in the second quarter of fiscal 2018, a decrease of 34.1% from $17.8 million for the same period of fiscal 2017, due to a decrease of 54.4% in volume, partially offset by an increase in average selling price per pound of 44.5%, or $5.66. The decrease in volume is primarily due to a decreased level of ingot transactional business in this market. The increase in average selling price per pound largely reflects a higher-value product form mix largely due to less ingot product shipped and a change in market prices of raw materials, which increased average selling price per pound by approximately $3.21 and $1.57, respectively, and a decrease in pricing competition and other factors, which increased average selling price per pound by approximately $0.88.

Sales to other markets were $12.7 million in the second quarter of fiscal 2018, an increase of 28.2% from $9.9 million in the same period of fiscal 2017, due to a 36.9% increase in volume, partially offset by a 6.3%, or $1.79, decrease in average selling price per pound. The increase in volume was primarily due to strength in the flue-gas desulfurization market. The decrease in average selling price per-pound reflects a lower-value product mix and increased pricing competition and other factors, which decreased average selling price per pound by $3.33 and $0.07, respectively, which was partially offset by higher raw material market prices which increased average selling price per pound by approximately $1.61.

Other Revenue. Other revenue was $5.5 million in the second quarter of fiscal 2018, a decrease of 28.4% from $7.7 million in the same period of fiscal 2017. The decrease is due primarily to decreased toll conversion.

Cost of Sales. Cost of sales was $98.8 million, or 89.6% of net revenues, in the second quarter of fiscal 2018 compared to $93.3 million, or 90.5% of net revenues, in the same period of fiscal 2017. Cost of sales in the second quarter of fiscal 2018 increased by $5.4 million as compared to the same period of fiscal 2017 due to sales of higher-value products and higher raw material costs.

Gross Profit. As a result of the above factors, gross profit was $11.5 million for the second quarter of fiscal 2018, an increase of $1.7 million from the same period of fiscal 2017. Gross margin as a percentage of net revenue increased to 10.4% in the second quarter of fiscal 2018 as compared to 9.5% in the same period of fiscal 2017.

Selling, General and Administrative Expense. Selling, general and administrative expense was $12.3 million for the second quarter of fiscal 2018, an increase of $1.7 million from the same period of fiscal 2017. This increase is primarily attributable to higher management incentive compensation accruals of $0.9 million, higher bad-debt expense of $0.6 million due to the bankruptcy of one customer and higher expense due to foreign exchange losses of $0.3 million. Selling, general and administrative expense as a percentage of net revenues increased to 11.1% for the second quarter of fiscal 2018 compared to 10.2% for the same period of fiscal 2017.

Research and Technical Expense. Research and technical expense was $1.0 million, or 0.9% of revenue, for the second quarter of fiscal 2018, similar to the expense in the same period of fiscal 2017.

Operating Income/(Loss). As a result of the above factors, operating loss in the second quarter of fiscal 2018 was $(1.8) million compared to operating loss of $(1.7) million in the same period of fiscal 2017.

Income Taxes. Income tax benefit was $(0.1) million in the second quarter of fiscal 2018, a difference of $(0.1) million from the second quarter of fiscal 2017. The effective tax rate for the second quarter of fiscal 2018 was (2.9)%, compared to 2.4% in the same period of fiscal 2017. The change in effective tax rate for the second quarter of fiscal 2018 as compared to the same period of fiscal 2017 is primarily attributable to a difference in tax jurisdictions and amounts with which pre-tax losses were incurred.

Net Income/(Loss). As a result of the above factors, net loss in the second quarter of fiscal 2018 was $(2.1) million, a difference of $0.2 million from net loss of $(1.9) million in the same period of fiscal 2017.

Results of Operations for the Six Months Ended March 31, 2017 Compared to the Six Months Ended March 31, 2018

	Six Months Ended March 31,				Change	
	2017		2018		Amount	%
Net revenues	$ 196,467	100.0 %	$ 199,899	100.0 %	$ 3,432	1.7 %
Cost of sales	176,192	89.7 %	181,437	90.8 %	5,245	3.0 %
Gross profit	20,275	10.3 %	18,462	9.2 %	(1,813)	(8.9)%
Selling, general and administrative expense	20,853	10.6 %	23,054	11.5 %	2,201	10.6 %
Research and technical expense	1,934	1.0 %	1,853	0.9 %	(81)	(4.2)%
Operating income (loss)	(2,512)	(1.3)%	(6,445)	(3.2)%	(3,933)	156.6 %
Interest income	(101)	(0.1)%	(35)	(0.0)%	66	(65.3)%
Interest expense	405	0.2 %	459	0.2 %	54	13.3 %
Income (loss) before income taxes	(2,816)	(1.4)%	(6,869)	(3.4)%	(4,053)	143.9 %
Provision for (benefit from) income taxes	(254)	(0.1)%	17,725	8.9 %	17,979	(7,078.3)%
Net income (loss)	$ (2,562)	(1.3)%	$ (24,594)	(12.3)%	$ (22,032)	860.0 %

The following table includes a breakdown of net revenues, shipments and average selling prices to the markets served by the Company for the periods shown.

	Six Months Ended March 31,		Change	
	2017	2018	Amount	%
Net revenues (dollars in thousands)				
Aerospace	$ 95,320	$ 105,872	$ 10,552	11.1 %
Chemical processing	37,209	34,504	(2,705)	(7.3)%
Industrial gas turbine	32,420	25,176	(7,244)	(22.3)%
Other markets	18,352	21,962	3,610	19.7 %
Total product revenue	183,301	187,514	4,213	2.3 %
Other revenue	13,166	12,385	(781)	(5.9)%
Net revenues	$ 196,467	$ 199,899	$ 3,432	1.7 %
Pounds by market (in thousands)				
Aerospace	4,339	4,601	262	6.0 %
Chemical processing	1,376	1,687	311	22.6 %
Industrial gas turbine	2,442	1,516	(926)	(37.9)%
Other markets	666	811	145	21.8 %
Total shipments	8,823	8,615	(208)	(2.4)%
Average selling price per pound				
Aerospace	$ 21.97	$ 23.01	$ 1.04	4.7 %
Chemical processing	27.04	20.45	(6.59)	(24.4)%
Industrial gas turbine	13.28	16.61	3.33	25.1 %
Other markets	27.56	27.08	(0.48)	(1.7)%
Total product (excluding other revenue)	20.78	21.77	0.99	4.8 %
Total average selling price (including other revenue)	$ 22.27	$ 23.20	$ 0.93	4.2 %

Net Revenues. Net revenues were $199.9 million in the first six months of fiscal 2018, an increase of 1.7% from $196.5 million in the same period of fiscal 2017. Volume was 8.6 million pounds in the first six months of fiscal 2018, a decrease of 2.4% from 8.8 million pounds in the same period of fiscal 2017. The decrease in volume was primarily due to a decline in industrial gas turbine shipments due to weak demand. The product-sales average selling price was $21.77 per pound in first six months of fiscal 2018, an increase of 4.8% from $20.78 per pound in the same period of fiscal 2017. The average selling price increased as a result of higher market raw material prices, and a higher-value product mix by approximately $1.23 and $0.51, respectively, partially offset by increased pricing competition and other factors, which decreased average selling price per pound by approximately $0.75.

Sales to the aerospace market were $105.9 million in the first six months of fiscal 2018, an increase of 11.1% from $95.3 million in the same period of fiscal 2017, due to a 4.7%, or $1.04, increase in average selling price per pound combined with a 6.0% increase in volume. The increase in volume reflects the increase in new engine platform sales combined with our enhanced capacity from the cold-finishing capital investment. The average selling price per pound increase reflects a change in market prices of raw materials and higher-value product mix, which increased average selling price per pound by approximately $1.27 and $0.40, respectively, partially offset by an increase in pricing competition and other factors which decreased average selling price per pound by approximately $0.63.

Sales to the chemical processing market were $34.5 million in the first six months of fiscal 2018, a decrease of 7.3% from $37.2 million in the same period of fiscal 2017, due to a 22.6% increase in volume, partially offset by a 24.4%, or $6.59, decrease in average selling price per pound. Base volumes have increased in the first six months of fiscal 2018 from the same period of fiscal 2017. However, specialty application project revenue was lower in the first six months of fiscal 2018 compared to the same period last year due to a relatively large project shipment in the first quarter of fiscal 2017. The average selling price per pound decrease reflects a lower-value product mix driven by the lower special projects and increased pricing competition and other factors, which decreased average selling price per pound by approximately $5.35 and $2.12, respectively, partially offset by a change in market prices of raw materials, which increased average selling price per pound by approximately $0.88.

Sales to the industrial gas turbine market were $25.2 million in the first six months of fiscal 2018, a decrease of 22.3% from $32.4 million for the same period of fiscal 2017, due to a decrease of 37.9% in volume, partially offset by a 25.1%, or $3.33, increase in average selling price per pound. The decrease in volume was primarily due to weak demand, along with a lower level of ingot orders shipped in the first six months of fiscal 2018 compared to the same period of fiscal 2017. The increase in average selling price per pound primarily reflects a change to a higher-value product mix and higher raw material market prices, which increased average selling price per pound by approximately $1.82 and $1.31, respectively, combined with other factors, which increased the average selling price per pound by approximately $0.20.

Sales to other markets were $22.0 million in the first six months of fiscal 2018, an increase of 19.7% from $18.4 million in the same period of fiscal 2017, due to a 21.8% increase in volume partially offset by a decrease of 1.7%, or $0.48, in average selling price per pound. The increase in volume was primarily due to increases in sales to the oil and gas and flue-gas desulfurization markets. The decrease in average selling price reflects a lower-value product mix and increased pricing competition which decreased average selling price per pound by approximately $1.77 and $0.38, respectively, partially offset by higher raw material market prices, which increased average selling price per pound by approximately $1.67.

Other Revenue. Other revenue was $12.4 million in the first six months of fiscal 2018, a decrease of 5.9% from $13.2 million in the same period of fiscal 2017. The decrease was due primarily to decreased toll conversion.

Cost of Sales. Cost of sales was $181.4 million, or 90.8% of net revenues, in the first six months of fiscal 2018 compared to $176.2 million, or 89.7% of net revenues, in the same period of fiscal 2017. This $5.2 million increase was primarily due to a higher-value product mix, lower manufacturing cost absorption and costs associated with relocating the Lebanon service center to LaPorte as previously announced.

Gross Profit. As a result of the above factors, gross profit was $18.5 million for the first six months of fiscal 2018, a decrease of $1.8 million from the same period of fiscal 2017. Gross profit as a percentage of net revenue decreased to 9.2% in the first six months of fiscal 2018 as compared to 10.3% in the same period of fiscal 2017.

Selling, General and Administrative Expense. Selling, general and administrative expense was $23.1 million for the first six months of fiscal 2018, an increase of $2.2 million from the same period of fiscal 2017. The increase in the first six months of fiscal 2018 is primarily attributable to higher expense due to foreign exchange losses of $1.2 million, higher management incentive compensation accruals of $1.2 million and higher bad-debt expense of $0.6 million due to the bankruptcy of one customer partially offset by $0.5 million in lower expense due to cost reductions. Selling, general and administrative expense as a percentage of net revenues increased to 11.5% for the first six months of fiscal 2018 compared to 10.6% for the same period of fiscal 2017.

Research and Technical Expense. Research and technical expense was $1.9 million, or 0.9% of revenue, for the first six months of fiscal 2018, compared to a similar amount in the same period of fiscal 2017.

Operating Income/(Loss). As a result of the above factors, operating loss in the first six months of fiscal 2018 was $(6.4) million compared to an operating loss of $(2.5) million in the same period of fiscal 2017.

Income Taxes. Income tax expense was $17.7 million in the first six months fiscal 2018, a difference of $18.0 million from a benefit of $0.3 million in the same period of fiscal 2017. The higher tax expense for the first six months of fiscal 2018 as compared to the same period of fiscal 2017 is primarily attributable to the passage of the Tax Reform and Jobs Act during fiscal 2018, which required the Company to revalue its deferred tax assets based on the lowering of the statutory tax rate of 35% to 21% (24.5% in fiscal 2018). See "Impact of the Tax Cuts and Jobs Act on Deferred Tax Assets" and Note 4 to the condensed consolidated financial statements in the Form 10-Q for the second quarter of fiscal 2018 for additional discussion of the expected impact of the Tax Cuts and Jobs Act.

Net Income/(Loss). As a result of the above factors, net loss for the first six months of fiscal 2018 was $(24.6) million, an increase in loss of $22.0 million from net loss of $(2.6) million in the same period of fiscal 2017.

Working Capital

Working capital increased in conjunction with backlog increasing and corresponding increased production and sales levels. Backlog increased $35.0 million or 19.8% in the first six months of fiscal 2018 and sales revenue increased sequentially from the first quarter to the second quarter of fiscal 2018 by $20.5 million or 22.9%. Controllable working capital, which includes accounts receivable, inventory, accounts payable and accrued expenses, was $284.4 million at March 31, 2018, an increase of $25.2 million or 9.7%, from $259.1 million at September 30, 2017. This increase resulted primarily from inventory increasing $23.4 million and accounts receivable increasing $4.1 million, partially offset by accounts payable and accrued expenses increasing by $2.3 million during the first six months of fiscal 2018. This resulted in a decrease in cash of $28.8 million over the first six months of fiscal 2018. As cash collections increase with the higher second quarter sales, cash balances are expected to improve over the second half of fiscal 2018.

Liquidity and Capital Resources

Comparative cash flow analysis

During the first six months of fiscal 2018, the Company's primary source of cash was cash on-hand. At March 31, 2018, the Company had cash and cash equivalents of $17.5 million compared to $46.3 million at September 30, 2017. Of that amount, the Company had cash and cash equivalents of $10.2 million held by foreign subsidiaries in various currencies.

Net cash used in operating activities in the first six months of fiscal 2018 was $(17.0) million compared to net cash provided by operating activities of $11.2 million in the first six months of fiscal 2017. The lower cash provided by (used in) operating activities during the first six months of fiscal 2018 was driven by increases in controllable working capital (inventory, accounts receivable, accounts payable, and accrued expenses) of $22.1 million in the first six months of fiscal 2018 compared to cash generated from controllable working capital of $0.1 million during the same period of fiscal 2017. Also contributing to the difference was lower earnings, excluding non-cash expenses, of $5.2 million during the first six months of fiscal 2018 compared to earnings, excluding non-cash expenses, of $8.7 million during the same period of fiscal 2017. These factors were partially offset by lower cash tax payments of $0.9 million during the first six months of fiscal 2018 compared to $2.8 million during the same period of fiscal 2017.

Net cash used in investing activities was $6.3 million in the first six months of fiscal 2018, which was lower than cash used in investing activities during the same period of fiscal 2017 of $9.8 million as a result of decreased additions to property, plant and equipment, as the Company completed its capacity expansion in sheet manufacturing.

Net cash used in financing activities in the first six months of fiscal 2018 of $5.8 million included $5.5 million of dividend payments and approximately $0.2 million of stock re-purchases made to satisfy taxes in relation to the vesting of restricted stock, which is comparable to the prior year.

Future sources of liquidity

The Company's sources of liquidity for the remainder of fiscal 2018 are expected to consist primarily of cash generated from operations, cash on-hand and, if needed, borrowings under the U.S. revolving credit facility. At March 31, 2018, the Company had cash of $17.5 million, an outstanding balance of zero on the U.S. revolving credit facility and access to a total of approximately $120.0 million under the U.S. revolving credit facility, subject to a borrowing base formula and certain reserves. Management believes that the resources described above will be sufficient to fund planned capital expenditures and working capital requirements over the next twelve months.

U.S. Revolving Credit Facility

The Company and Wells Fargo Capital Finance, LLC ("Wells Fargo") entered into a Third Amended and Restated Loan and Security Agreement (the "Amended Agreement") with certain other lenders with an effective date of July 14, 2011. On July 7, 2016, the Company amended the agreement to, among other things, extend the term through July 7, 2021 and reduce unused line fees and certain administrative fees. The maximum revolving loan amount under the Amended Agreement is $120.0 million, subject to a borrowing base formula and certain reserves. The Amended Agreement permits an increase in the maximum revolving loan amount from $120.0 million up to an aggregate amount of $170.0 million at the request of the borrowers. Borrowings under the U.S. revolving credit facility bear interest, at the Company's option, at either Wells Fargo's "prime rate", plus up to 0.75% per annum, or the adjusted Eurodollar rate used by the lender, plus up to 2.0% per annum. As of March 31, 2018, the U.S. revolving credit facility had a zero balance.

The Company must pay monthly, in arrears, a commitment fee of 0.20% per annum on the unused amount of the U.S. revolving credit facility total commitment. For letters of credit, the Company must pay 1.5% per annum on the daily outstanding balance of all issued letters of credit, plus customary fees for issuance, amendments and processing.

The Company is subject to certain covenants as to fixed charge coverage ratios and other customary covenants, including covenants restricting the incurrence of indebtedness, the granting of liens and the sale of assets. The covenant pertaining to fixed charge coverage ratios is only effective in the event the amount of excess availability under the revolver is less than 10.0% of the maximum credit revolving loan amount. The Company is permitted to pay dividends and repurchase common stock if certain financial metrics are met (most of which do not apply in the case of regular quarterly dividends less than $20.0 million in the aggregate in a year and repurchases in connection with the vesting of shares of restricted stock). As of March 31, 2018, the most recent required measurement date under the Amended Agreement, management believes the Company was in compliance with all applicable financial covenants under the Amended Agreement. Borrowings under the U.S. revolving credit facility are collateralized by a pledge of substantially all of the U.S.

assets of the Company, including the equity interests in its U.S. subsidiaries, but excluding the four-high Steckel rolling mill and related assets, which are pledged to Titanium Metals Corporation ("TIMET") to secure the performance of the Company's obligations under a Conversion Services Agreement with TIMET (see discussion of TIMET at Note 7 in the Company's Notes to Consolidated Financial Statements in this Quarterly Report on Form 10-Q). The U.S. revolving credit facility is also secured by a pledge of a 65% equity interest in each of the Company's direct foreign subsidiaries.

Future uses of liquidity

The Company's primary uses of cash over the next twelve months are expected to consist of expenditures related to:

- Funding operations;
- Capital spending;
- Dividends to stockholders; and
- Pension and postretirement plan contributions.

Capital investment in the first six months of fiscal 2018 was $6.3 million, and the forecast for capital spending in fiscal 2018 is $12.0 million.

Contractual Obligations

The following table sets forth the Company's contractual obligations for the periods indicated, as of March 31, 2018:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 Years**	**3-5 Years**	**More than 5 years**
			(in thousands)		
Credit facility fees[1]	$ 930	$ 280	$ 560	$ 90	$ —
Operating lease obligations	6,839	2,782	3,853	204	—
Capital and finance lease obligations	18,204	1,017	1,995	2,024	13,168
Raw material contracts (primarily nickel)	19,751	19,751	—	—	—
Capital projects and other commitments	10,177	10,177	—	—	—
Pension plan[2]	90,568	6,000	20,050	22,962	41,556
Non-qualified pension plans	729	95	190	190	254
Other postretirement benefits[3]	50,000	5,000	10,000	10,000	25,000
Environmental post-closure monitoring	633	104	112	121	296
Total	$ 197,831	$ 45,206	$ 36,760	$ 35,591	$ 80,274

(1) As of March 31, 2018, the revolver balance was zero, therefore no interest is due. However, the Company is obligated to the Bank for unused line fees and quarterly management fees.

(2) The Company has a funding obligation to contribute $90,568 to the domestic pension plan. These payments will be tax deductible. All benefit payments under the domestic pension plan are provided by the plan and not the Company.

(3) Represents expected post-retirement benefits only based upon anticipated timing of payments.

New Accounting Pronouncements

See Note 2. New Accounting Pronouncements in the Notes to Consolidated Financial Statements.

Critical Accounting Policies and Estimates

The Company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Assumptions and estimates were based on the facts and circumstances known at March 31, 2018. However, future events rarely develop exactly as forecasted and the best estimates routinely require adjustment. The accounting policies discussed in Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017 are considered by management to be the most important to an understanding of the financial statements because their application places the most significant demands on management's judgment and estimates about the effect of matters that are inherently uncertain. These policies are also discussed in Note 2 of the consolidated financial statements included in Item 8 of that report. There have been no material changes to that information since the end of fiscal 2017.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

As of March 31, 2018, there were no material changes in the market risks described in "Quantitative and Qualitative Disclosures about Market Risk" in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2017.

Item 4. Controls and Procedures

The Company has performed, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, an evaluation of the effectiveness and the design and operation of the Company's disclosure controls and procedures (as defined by Exchange Act rules 13a-15(e) and 15d-15(e)) pursuant to Rule 13a-15(b) of the Exchange Act as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of March 31, 2018.

There were no changes in the Company's internal control over financial reporting during the quarter to which this report relates that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II OTHER INFORMATION

Item 6. Exhibits

<u>Exhibits</u>. See Index to Exhibits.

INDEX TO EXHIBITS

Exhibit Number	Description
3.1	Second Restated Certificate of Incorporation of Haynes International, Inc. (incorporated by reference to Exhibit 3.1 to the Haynes International, Inc. Registration Statement on Form S-1, Registration No. 333-140194).
3.2**	Amended and Restated By-Laws of Haynes International, Inc., as amended through February 28, 2018
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.01 to the Haynes International, Inc. Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2009).
31.1**	Rule 13a-14(a)/15d-4(a) Certification of Chief Executive Officer
31.2**	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer
32.1*	Section 1350 Certifications
101	The following materials from the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2016 formatted in Extensible Business Reporting Language (XBRL): (i) the Consolidated Balance Sheets; (ii) the Consolidated Statements of Operations; (iii) the Consolidated Statements of Comprehensive Income (Loss); (iv) the Consolidated Statements of Cash Flows; and (v) related notes.

*Furnished not filed.
** Filed herewith.

SIGNATURES

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.

HAYNES INTERNATIONAL, INC.

/s/ Mark Comerford
Mark Comerford
President and Chief Executive Officer
Date: May 3, 2018

/s/ Daniel Maudlin
Daniel Maudlin
Vice President — Finance and Chief Financial Officer
Date: May 3, 2018

Exhibit 31.1

CERTIFICATIONS

I, Mark M. Comerford, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Haynes International, 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 statement 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 period presented in this report;

4. The registrant's other certifying officer(s) 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 controls over financial reporting (as defined in Exchange Act Rules 13a-159f) and 15(d)-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 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(s) 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 3, 2018

/s/ MARK M. COMERFORD

Mark M. Comerford
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Daniel W. Maudlin, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Haynes International, 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 statement 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 period presented in this report;

4. The registrant's other certifying officer(s) 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 controls over financial reporting (as defined in Exchange Act Rules 13a-159f) and 15(d)-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 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(s) 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 3, 2018

/s/ DANIEL W. MAUDLIN

Daniel W. Maudlin
Vice President of Finance and
Chief Financial Officer

Exhibit 32.1

**Certifications Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to Section 906 of the
Sarbanes—Oxley Act of 2002**

I, Daniel W. Maudlin, the Vice President Finance and Chief Financial Officer of Haynes International, Inc., certify that (i) the Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Haynes International, Inc. as of the dates and for the periods set forth therein.

/s/ DANIEL W. MAUDLIN
Daniel W. Maudlin
Vice President Finance and
Chief Financial Officer

May 3, 2018
Date

I, Mark M. Comerford, the President and Chief Executive Officer of Haynes International, Inc., certify that (i) the Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and (ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Haynes International, Inc. as of the dates and for the periods set forth therein.

/s/ MARK M. COMERFORD
Mark M. Comerford
President and Chief Executive Officer

May 3, 2018
Date

Amendment No. 1 to
Amended and Restated By-Laws
Of Haynes International, Inc.

Article III, Section 14 of the Amended and Restated By-Laws of Haynes International, Inc. (the "By-Laws") is hereby amended and restated in its entirety as follows:

"*Removal*. Except as otherwise required by applicable law, any director or the entire Board of Directors may be removed from office at any time, with or without cause, by the affirmative vote of the holders of a majority of the voting power of the Corporation's then outstanding capital stock entitled to vote generally in the election of directors."

All other provisions of the By-Laws shall remain in full force and effect.

AMENDED AND RESTATED BY-LAWS

OF

HAYNES INTERNATIONAL, INC.

ARTICLE I

Offices

SECTION 1. Registered Office. The registered office of Haynes International, Inc. (the "Corporation") in the State of Delaware shall be in the City of Wilmington, County of New Castle, and the registered agent in charge thereof shall be The Corporation Trust Company.

SECTION 2. Other Offices. The Corporation may also have offices at such other places, both within or without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II

Meetings of the Stockholders

SECTION 1. Time and Place of Meetings. All meetings of the stockholders shall be held at such place, either within or without the State of Delaware, on such date and at such time as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that a meeting of the stockholders shall not be held at any place, but may instead be held by means of remote communication in the manner authorized by the General Corporation Law of the State of Delaware (the "DGCL").

SECTION 2. Annual Meetings. Annual meetings of the stockholders shall be held to elect the directors and transact such other business as may properly be brought before the meeting.

SECTION 3. Special Meetings. Unless otherwise required by law or by the Second Restated Certificate of Incorporation of the Corporation, as amended and/or restated from time to time (the "Certificate of Incorporation"), special meetings of the stockholders, for any purpose or purposes, may be called by either (a) a resolution adopted by a majority of the Board of Directors, (b) the Chairman of the Board of Directors, if there be one, or (c) the President of the Corporation. The ability of the stockholders to call a special meeting of the stockholders is specifically denied.

SECTION 4. Nature of Business at Meetings of Stockholders. No business may be transacted at an annual meeting of stockholders, other than business that is either (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors (or any duly authorized committee thereof), (b) otherwise properly brought before the annual meeting by or at the direction of the Board of Directors (or any duly authorized committee thereof), or (c) otherwise properly brought before the annual meeting by any stockholder of the Corporation (i) who is a stockholder of record on the date of the giving of the notice provided for in this Section 4 and on the record date for the determination of stockholders entitled to notice of and to vote at such annual meeting and (ii) who complies with the notice procedures set forth in this Section 4.

In addition to any other applicable requirements, for business to be properly brought before an annual meeting by a stockholder, such stockholder must have given timely notice thereof in proper written form to the Secretary of the Corporation.

To be timely, a stockholder's notice to the Secretary must be delivered to or mailed and received at the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to the anniversary date of the immediately preceding annual meeting; provided, however, that in the event that the annual meeting is called for a date that is not within twenty five (25) days before or after such anniversary date, notice by the stockholder in order to be timely must be so received not later than the close of business on the tenth (10th) day following the day on which such notice of the date of the annual meeting was mailed or such public disclosure of the date of the annual meeting was made, whichever first occurs.

To be in proper written form, a stockholder's notice to the Secretary must set forth as to each matter such stockholder proposes to bring before the annual meeting (a) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (b) the name and record address of such stockholder, (c) the class or series and number of shares of capital stock of the Corporation which are owned beneficially or of record by such stockholder, (d) a description of all arrangements or understandings between such stockholder and any other person or persons (including their names) in connection with the proposal of such business by such stockholder and any material interest of such stockholder in such business and (e) a representation that such stockholder intends to appear in person or by proxy at the annual meeting to bring such business before the meeting.

No business shall be conducted at an annual meeting except business brought before the annual meeting in accordance with the procedures set forth in this Section 4; provided, however, that, once business has been properly brought before the annual meeting in accordance with such procedures, nothing in this Section 4 shall be deemed to preclude discussion by any stockholder of any such business. If the chairman of an annual meeting determines that business was not properly brought before the annual meeting in accordance with the foregoing procedures, the chairman shall declare to the meeting that the business was not properly brought before the meeting and such business shall not be transacted.

SECTION 5. Notice of Meetings. Whenever the stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise provided by the DGCL, written notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. If mailed, such notice is given when deposited in the United States mail, with postage thereon prepaid, directed to the stockholder at his address as it appears on the record of stockholders. In the event of a change of address, such stockholder shall file with the Secretary of the Corporation a written request that such stockholder's address be changed in the records of the Corporation, in which event notices to such stockholder shall be directed to such stockholder at such other address. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place, if any, thereof and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or after the adjournment a new record date is fixed by the Board of Directors for the adjourned meeting, a notice, pursuant to this Section 5, of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

SECTION 6. Quorum, Adjournments. Unless otherwise required by law or the Certificate of Incorporation, the holders of a majority of the issued and outstanding capital stock entitled to vote, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. When a specified item of business is required to be voted on by a class or classes, a majority of the shares of such class or classes in person or represented by proxy shall constitute a quorum entitled to take action with respect to the transaction of such specified item of business. If a quorum is not present, the Chairman of the Board of Directors, the President or the holders of a majority of the shares present in person or represented by proxy at the meeting, and entitled to vote at the meeting, may adjourn the meeting to another time or place, in the manner provided in Section 5 hereof, until a quorum shall be present or represented.

SECTION 7. Voting. Unless otherwise required by law, the Certificate of Incorporation, these By-Laws or a Certificate of Designation governing the rights and preferences of a series of Preferred Stock, each stockholder at every meeting of the stockholders shall be entitled to one (1) vote for each outstanding share of capital stock of the Corporation held by such stockholder. Unless otherwise required by law, the Certificate of Incorporation, these By-Laws, or a Certificate of Designation governing the rights and preferences of a series of Preferred Stock, so long as a quorum is present at a meeting of the stockholders, the affirmative vote of a majority of the shares of capital stock of the Corporation present, in person or by proxy, at a meeting of the stockholders and entitled to vote on the subject matter shall be the act of the respective stockholders.

SECTION 8. Proxies. Each stockholder entitled to vote at a meeting of the stockholders may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(a) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, partner, member, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(b) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a facsimile, telegram or cablegram to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such transmission, provided that any such facsimile, telegram or cablegram must either set forth or be submitted with information from which it can be determined that the facsimile, telegram or cablegram was authorized by the stockholder. If it is determined that such facsimiles, telegrams or cablegrams or other transmissions are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable production of the writing or transmission authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used; provided, however, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission.

SECTION 9. <u>List of the Stockholders Entitled to Vote</u>. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Corporation. In the event that the Corporation determines to make the list available on an electronic network, the Corporation shall take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

SECTION 10. <u>Record Date</u>. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of

Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of the stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

SECTION 11. Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 9 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

SECTION 12. Organization. At each meeting of the stockholders, the Chairman of the Board of Directors, if one shall have been elected, or in his or her absence or if one shall not have been elected, the President) shall act as chairperson of the meeting. The Secretary (or in his or her absence or inability to act, the person whom the chairperson of the meeting shall appoint as secretary of the meeting) shall act as secretary of the meeting.

SECTION 13. Inspectors of Election. In advance of any meeting of the stockholders, the Board of Directors shall appoint one or more inspectors to act at the meeting and make a written report thereof. One or more other persons may be designated as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of the stockholders, the chairman of the meeting shall appoint one or more inspectors to act at the meeting. Unless otherwise required by applicable law, inspectors may be officers, employees or agents of the Corporation. Each inspector, before entering upon the discharge of the duties of inspector, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability. The inspector shall have the duties prescribed by law and shall take charge of the polls and, when the vote is completed, shall make a certificate of the result of the vote taken and of such other facts as may be required by applicable law. Inspectors need not be stockholders.

ARTICLE III

Directors

SECTION 1. General Powers. Except as otherwise provided in the Certificate of Incorporation, the business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not reserved to the stockholders by applicable Law, the Certificate of Incorporation or these By-Laws.

SECTION 2. Number, Election and Term of Office. The number of directors which shall constitute the whole board shall be fixed from time to time by resolution of the Board of Directors but shall not be less than three (3) nor more than nine (9). The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 13 of this

Article III, and each director so elected shall hold office until such director’s successor is elected and qualified or until his earlier death, resignation or removal. Directors need not be stockholders. Election of directors need not be by ballot.

SECTION 3. Nomination of Directors. Only persons who are nominated in accordance with the following procedures shall be eligible for election as directors of the Corporation. Nominations of persons for election to the Board of Directors may be made at any annual meeting of stockholders, or at any special meeting of stockholders called for the purpose of electing directors, (a) by or at the direction of the Board of Directors (or any duly authorized committee thereof) or (b) by any stockholder of the Corporation (i) who is a stockholder of record on the date of the giving of the notice provided for in this Section 3 and on the record date for the determination of stockholders entitled to notice of and to vote at such meeting and (ii) who complies with the notice procedures set forth in this Section 3.

In addition to any other applicable requirements, for a nomination to be made by a stockholder, such stockholder must have given timely notice thereof in proper written form to the Secretary of the Corporation.

To be timely, a stockholder's notice to the Secretary must be delivered to or mailed and received at the principal executive offices of the Corporation (a) in the case of an annual meeting, not less than ninety (90) days nor more than one hundred twenty (120) days prior to the anniversary date of the immediately preceding annual meeting; provided, however, that in the event that the annual meeting is called for a date that is not within twenty five (25) days before or after such anniversary date, notice by the stockholder in order to be timely must be so received not later than the close of business on the tenth (10th) day following the day on which such notice of the date of the annual meeting was mailed or such public disclosure of the date of the annual meeting was made, whichever first occurs; and (b) in the case of a special meeting of stockholders called for the purpose of electing directors, not later than the close of business on the tenth (10th) day following the day on which notice of the date of the special meeting was mailed or public disclosure of the date of the special meeting was made, whichever first occurs.

If mailed, such notice is given when deposited in the United States mail, with postage thereon prepaid, directed to the stockholder at his address as it appears on the record of stockholders. In the event of a change of address, such stockholder shall file with the Secretary of the Corporation a written request that such stockholder’s address be changed in the records of the Corporation, in which event notices to such stockholder shall be directed to such stockholder at such other address.

To be in proper written form, a stockholder's notice to the Secretary must set forth (a) as to each person whom the stockholder proposes to nominate for election as a director (i) the name, age, business address and residence address of the person, (ii) the principal occupation or employment of the person, (iii) the class or series and number of shares of capital stock of the Corporation which are owned beneficially or of record by the person, and (iv) any other information relating to the person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors pursuant to Section 14 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations promulgated thereunder; and (b) as to the stockholder giving the notice (i) the name and record address of such stockholder, (ii) the class or series and number of shares of capital stock of the Corporation which are owned beneficially or of record by such stockholder, (iii) a description of all arrangements or understandings between such stockholder and each proposed nominee and any other person or persons (including their names) pursuant to which the nomination(s) are to be made by such stockholder, (iv) a representation that such stockholder intends to appear in person or by proxy at the meeting to nominate the persons named in its notice, and (v) any other information relating to such stockholder that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder. Such notice must be accompanied by a written consent of each proposed nominee to being named as a nominee and to serve as a director if elected.

No person shall be eligible for election as a director of the Corporation unless nominated in accordance with the procedures set forth in this Section 3. If the chairman of the meeting determines that a nomination was not made in accordance with the foregoing procedures, the chairman shall declare to the meeting that the nomination was defective and such defective nomination shall be disregarded.

SECTION 4. Quorum, Manner of Acting, Adjournment. Unless the Certificate of Incorporation or these By-Laws require a greater number, a majority of the total number of directors shall constitute a quorum for the transaction of business, and the affirmative vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors. If a quorum shall not be present at any meeting of the Board of Directors the directors present thereat may adjourn the meeting, from time to time, without notice other than announcement at the meeting, until a quorum shall be present. When a meeting is adjourned to another time or place (whether or not a quorum is present), notice need not be given of the adjourned meeting if the time and place thereof are announced at the original meeting at which the adjournment is taken. At the adjourned meeting, the Board of Directors may transact any business which might have been transacted at the original meeting.

SECTION 5. Time and Place of Meetings. The Board of Directors shall hold its meetings at such place, either within or without the State of Delaware, and at such time as may be determined from time to time by the Board of Directors (or the Chairman in the absence of a determination by the Board of Directors).

SECTION 6. Annual Meeting. The Board of Directors shall meet for the purpose of organization, the election of officers and the transaction of other business, as soon as practicable after each annual meeting of the stockholders, on the same day and at the same place where such annual meeting shall be held. Notice of such meeting need not be given. In the event such annual meeting is not so held, the annual meeting of the Board of Directors may be held at such place either within or without the State of Delaware, on such date and at such time as shall be specified in a notice thereof given as hereinafter provided in Section 8 of this Article III or in a waiver of notice thereof signed by any director who chooses to waive the requirement of notice.

SECTION 7. Regular Meetings. After the place and time of regular meetings of the Board of Directors shall have been determined and notice thereof shall have been once given to each member of the Board of Directors, regular meetings may be held without further notice being given.

SECTION 8. Special Meetings. Special meetings of the Board of Directors may be called by the Chairman of the Board or the President and shall be called by the Chairman of the Board, President, or Secretary on the written request of three directors. Notice of special meetings of the Board of Directors shall be given to each director in such manner as is determined by the Board of Directors at least three (3) days before the date of the meeting.

SECTION 9. Committees. The Board of Directors may, by resolution passed by a majority of the whole board, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to amending the Certificate of Incorporation, adopting an agreement of merger or consolidation, recommending to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and assets, recommending to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or amending the by-laws of the Corporation; and unless the resolution of the Board of Directors or the Certificate of Incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend or to authorize the issuance of stock. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

SECTION 10. Action by Consent. Unless otherwise restricted by the Certificate of Incorporation or these By-Laws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof maybe taken without a meeting, if all members of the board or committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board or committee.

SECTION 11. Telephonic Meetings. Unless otherwise restricted by the Certificate of Incorporation or these By-Laws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or such committee, as the case may be, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

SECTION 12. Resignation. Any director may resign at any time by giving written notice to the Board of Directors or to the secretary of the Corporation. The resignation of any director shall take effect upon receipt of notice thereof or at such later time as shall be specified in such notice; and unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

SECTION 13. Vacancies. Unless otherwise provided in the Certificate of Incorporation, vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. Each director so elected shall hold office until his successor is elected and qualified, or until his earlier death, resignation or removal. If there are no directors in office, then an election of directors may be held in accordance with the DGCL. Unless otherwise provided in the Certificate of Incorporation, when one or more directors shall resign from the board, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have the power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in the filling of other vacancies.

SECTION 14. Removal. Except as otherwise required by applicable law, any director or the entire Board of Directors may be removed from office at any time, but only for cause, and only by the affirmative vote of the holders of majority of the voting power of the Corporation's then outstanding capital stock entitled to vote generally in the election of directors.

SECTION 15. Compensation. Unless otherwise restricted by the Certificate of Incorporation or these By-Laws, the Board of Directors (or a duly authorized committee thereof) shall have authority to fix the compensation of directors, including fees and reimbursement of expenses.

SECTION 16. Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director's or officer's vote is counted for such purpose if: (a) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (b) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as determined on a good faith basis by the Board of Directors as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV

Officers

SECTION 1. General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these By-Laws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

SECTION 2. Election. The Board of Directors, at its first meeting held after each annual meeting of stockholders, shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors may be removed with or without cause at any time by the Board of Directors. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The compensation of all officers of the Corporation shall be fixed by the Board of Directors or a duly authorized committee thereof.

SECTION 3. Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation or other entity in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

SECTION 4. Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these By-Laws or by the Board of Directors.

SECTION 5. President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation, shall see that all orders and resolutions of the Board of Directors are carried into effect and shall be the Chief Executive Officer of the Corporation. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these By-Laws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these By-Laws or by the Board of Directors.

SECTION 6. Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there are more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

SECTION 7. Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

SECTION 8. Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the Corporation.

SECTION 9. Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

SECTION 10. Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer.

SECTION 11. Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V

General Provisions

SECTION 1. Certificates of Stock. Each stockholder is entitled to a certificate signed (manually or in facsimile) by the President or a Vice President and the Secretary or an Assistant Secretary, setting forth (a) the name of the Corporation and that it was organized under Delaware law, (b) the name of the person to whom issued, and (c) the number, class, and, if applicable, series of shares represented. The Board of Directors shall prescribe the form of certificate.

SECTION 2. Lost or Destroyed Certificates. Any person claiming a certificate to be lost or destroyed shall make an affidavit or affirmation of that fact and shall give the Corporation, if the Board of Directors or the President shall so require, and/or the transfer agents and registrars, if they shall so require, a bond of indemnity, in form and with one or more sureties satisfactory to the Board of Directors or the President and/or the transfer agents and registrars, in such amount as the Board of Directors or the President may direct and/or the transfer agents and registrars may require, whereupon a new certificate may be issued of the same tenor and for the same number of shares as the one alleged to be lost or destroyed.

SECTION 3. Dividends. Subject to limitations contained in the DGCL and the Certificate of Incorporation, the Board of Directors may declare and pay dividends upon the shares of capital stock of the Corporation, which dividends may be paid either in cash, in property, or in shares of the capital stock of the Corporation.

SECTION 4. Fiscal Year. The fiscal year of the Corporation shall commence on October 1 and end on September 30 of each year.

SECTION 5. Corporate Seal. The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware". The seal may be used by causing it or a facsimile thereof to be impressed, affixed or otherwise reproduced.

SECTION 6. Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these By-Laws. Transfers of stock shall be made on the books of the Corporation only by the person named in the certificate or by such person's attorney lawfully constituted in writing and upon the surrender of the certificate therefore, properly endorsed for transfer and payment of all necessary transfer taxes; provided, however, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

SECTION 7. Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

SECTION 8. Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI

Indemnification

SECTION 1. Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VI, the Corporation shall indemnify and hold harmless any person who was or is made or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person or a person for whom such person is the legal representative, is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, nonprofit entity or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

SECTION 2. Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VI, the Corporation shall indemnify and hold harmless any person who was or is made or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Corporation, or a person for whom such person is the legal representative, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against all judgments, penalties (including excise and similar taxes), fines, settlements, expenses and liability suffered or incurred (including attorneys' fees and court costs, each of which are actually and reasonably incurred) by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

SECTION 3. Authorization of Indemnification. Any indemnification under this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iv) by the stockholders. Such determination shall be made, with respect to former directors and officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

SECTION 4. Good Faith Defined. For purposes of any determination under Section 3 of this Article VI, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be.

SECTION 5. Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3 of this Article VI, and notwithstanding the absence of any determination thereunder, any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VI. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VI nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

SECTION 6. Expenses Payable in Advance. Expenses incurred (including attorneys' fees and court costs, each of which are actually and reasonably incurred) by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VI. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

SECTION 7. Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and

Section 2 of this Article VI shall be made to the fullest extent permitted by law. The provisions of this Article VI shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VI but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

SECTION 8. Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VI.

SECTION 9. Certain Definitions. For purposes of this Article VI, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VI shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VI, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VI.

SECTION 10. Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

SECTION 11. Limitation on Indemnification. Notwithstanding anything contained in this Article VI to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VI), the Corporation shall not be obligated to indemnify any director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

SECTION 12. Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VI to directors and officers of the Corporation.

ARTICLE VII

Amendments

SECTION 1. By the Board of Directors. These By-Laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of a majority of the entire Board of Directors.

SECTION 2. By the Stockholders. These By-Laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of the holders of at least a majority of the voting power of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote in the election of directors at any regular meeting of the stockholders, or at any special meeting of the stockholders, provided notice of such alteration, amendment, repeal or adoption of new by-laws shall have been stated in the notice of such special meeting.