

**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, 2009

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: 0-11412

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona	86-0411215
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
131 South Clark Drive, Tempe, Arizona	85281
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 480-967-5146

Indicate by a 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 Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller Reporting Company

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

Shares of Common Stock outstanding as of May 7, 2009: 8,959,994

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(in thousands except share data)

Assets	March 31, 2009 (Unaudited)	September 30, 2008
Current Assets		
Cash and cash equivalents	\$ 37,173	\$ 37,501
Restricted cash	37	970
Accounts receivable		
Trade (less allowance for doubtful accounts of \$597 and \$588 at March 31, 2009 and September 30, 2008, respectively)	8,414	17,639
Unbilled and other	6,593	5,376
Inventories	15,018	15,902
Deferred income taxes	4,689	4,500
Other	1,694	1,511
Total current assets	73,618	83,399
Property, Plant and Equipment - Net	8,103	8,409
Intangible Assets - Net	3,766	4,384
Goodwill	4,255	4,450
Restricted cash - non-current	463	1,713
Total Assets	\$ 90,205	\$ 102,355

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(in thousands except share data)

Liabilities and Stockholders' Equity	March 31, 2009 (Unaudited)	September 30, 2008
Current Liabilities		
Accounts payable	\$ 2,836	\$ 6,529
Bank loans and current maturities of long-term debt	113	148
Accrued compensation and related taxes	2,715	4,553
Accrued warranty expense	1,206	1,155
Deferred profit	5,256	5,352
Customer deposits	3,373	4,859
Other accrued liabilities	1,341	2,503
Income taxes payable	1,588	1,060
Total current liabilities	18,428	26,159
Income Taxes Payable Long-term	490	440

Deferred Income Taxes Long-term	534	940
Other Long-Term Obligations	215	283
Total liabilities	19,667	27,822

Commitments and Contingencies

Stockholders' Equity

Preferred stock; 100,000,000 shares authorized; none issued	-	-
Common stock; \$0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 8,959,994 and 9,096,048 at March 31, 2009 and September 30, 2008, respectively	90	91
Additional paid-in capital	70,021	70,135
Accumulated other comprehensive income (loss)	(2,661)	67
Retained Earnings	3,088	4,240
Total stockholders' equity	70,538	74,533
Total Liabilities and Stockholders' Equity	\$ 90,205	\$ 102,355

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES Condensed Consolidated Statements of Operations (Unaudited) (in thousands, except per share data)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2009	2008	2009	2008
Revenues, net of returns and allowances	\$ 10,904	\$ 17,591	\$ 28,776	\$ 29,332
Cost of sales	8,547	13,464	20,333	21,645
Gross profit	2,357	4,127	8,443	7,687
Selling, general and administrative	3,101	3,966	7,585	7,268
Impairment and restructuring charges	1,682	-	1,682	-
Research and development	152	243	376	476
Operating loss	(2,578)	(82)	(1,200)	(57)
Interest and other income (expense), net	(14)	348	47	501
Income (loss) before income taxes	(2,592)	266	(1,153)	444
Income tax expense (benefit)	(580)	105	-	175
Net income (loss)	\$ (2,012)	\$ 161	\$ (1,153)	\$ 269

Earnings (Loss) Per Share:

Basic earnings (loss) per share	\$ (0.22)	\$ 0.02	\$ (0.13)	\$ 0.03
Weighted average shares outstanding	9,057	9,072	9,078	8,350
Diluted earnings (loss) per share	\$ (0.22)	\$ 0.02	\$ (0.13)	\$ 0.03
Weighted average shares outstanding	9,057	9,185	9,078	8,501

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

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AMTECH SYSTEMS, INC. AND SUBSIDIARIES Condensed Consolidated Statements Of Cash Flows (Unaudited) (in thousands)

	Six Months Ended March 31,	
	2009	2008
Operating Activities		
Net income (loss)	\$ (1,153)	\$ 269
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	747	700
Write-down of inventory	257	82

Deferred income taxes	(711)	(653)
Impairment of long-lived assets	1,054	-
Non-cash share based compensation expense	333	229
Other	103	85
Changes in operating assets and liabilities:		
Restricted cash	1,756	463
Accounts receivable	6,082	(949)
Inventories	(448)	(6,639)
Accrued income taxes	420	107
Prepaid expenses and other assets	(277)	(759)
Accounts payable	(3,429)	2,821
Accrued liabilities and customer deposits	(3,556)	787
Deferred profit	349	(185)
Net cash provided by (used in) operating activities	1,527	(3,642)
Investing Activities		
Purchases of property, plant and equipment	(838)	(1,873)
Decrease in restricted cash long-term	164	-
Payment for licensing agreement	(600)	-
Investment in R2D	(164)	(8,047)
Net cash used in investing activities	(1,438)	(9,920)
Financing Activities		
Proceeds from issuance of common stock, net	-	33,869
Purchase of common stock under repurchase program	(448)	-
Payments on long-term obligations	(89)	(635)
Excess tax benefit of stock options	-	80
Net cash provided by (used in) financing activities	(537)	33,314
Effect of Exchange Rate Changes on Cash	120	(274)
Net Increase (Decrease) in Cash and Cash Equivalents	(328)	19,478
Cash and Cash Equivalents, Beginning of Period	37,501	18,370
Cash and Cash Equivalents, End of Period	\$ 37,173	\$ 37,848
Supplemental Cash Flow Information:		
Interest paid	\$ 189	\$ 178
Income tax refunds	\$ 379	\$ -
Income tax payments	\$ 530	\$ 747
Supplemental Non-cash Financing Activities:		
Transfer inventory to capital equipment	\$ 116	\$ -
Intangible assets funded with current liabilities	\$ 200	\$ -

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
THREE AND SIX MONTHS ENDED March 31, 2009 AND 2008
(UNAUDITED)

1. Basis of Presentation

Nature of Operations and Basis of Presentation – Amtech Systems, Inc. (the “Company”) designs, assembles, sells and installs capital equipment and related consumables used in the manufacture of solar cells, semiconductors and wafers of various materials, primarily for the solar and semiconductor industries. The Company sells these products worldwide, primarily in Asia, the United States and Europe. In addition, the Company provides semiconductor manufacturing support services.

The Company serves niche markets in industries that are experiencing rapid technological advances, and which historically have been very cyclical. Therefore, future profitability and growth depend on the Company’s ability to develop or acquire and market profitable new products, and on its ability to adapt to cyclical trends.

The accompanying unaudited condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the “SEC”), and consequently do not include all disclosures normally required by U.S. generally accepted accounting principles. In the opinion of management, the accompanying unaudited interim condensed consolidated financial statements contain all adjustments necessary, all of which are of a normal recurring nature, to present fairly our financial position, results of operations and cash flows. Certain information and note disclosures normally included in financial statements have been condensed or omitted pursuant to the rules and regulations of the SEC. These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended September 30, 2008.

The consolidated results of operations for the three and six month periods ended March 31, 2009, are not necessarily indicative of the results to be expected for the full year.

Reclassifications – Certain reclassifications have been made in the accompanying consolidated financial statements for fiscal 2008 to conform to the 2009 presentation. These reclassifications did not have a material effect on the Company’s financial statements.

Use of Estimates – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition – Revenue is recognized upon shipment of the Company’s proven technology equal to the sales price less the greater of (i) the fair value of undelivered services and (ii) the contingent portion of the sales price, which is generally 10-20% of the total contract price. The entire cost of the equipment relating to proven technology is recorded upon shipment. The remaining contractual revenue, deferred costs and installation costs are recorded upon successful installation of the product.

For purposes of revenue recognition, proven technology means the Company has a history of at least two successful installations. New technology systems are those systems with respect to which the Company cannot demonstrate that it can meet the provisions of customer acceptance at the time of shipment. The full amount of revenue and costs of new technology shipments is recognized upon the completion of installation at the customers' premises and acceptance of the product by the customer.

Revenue from services is recognized as the services are performed. Revenue from prepaid service contracts is recognized ratably over the life of the contract. Revenue from spare parts is recorded upon shipment.

Deferred Profit – Revenue deferred pursuant to the Company's revenue recognition policy, net of the related deferred costs, if any, is recorded as deferred profit in current liabilities. The components of deferred profit are as follows:

	March 31, 2009	September 30, 2008
	(dollars in thousands)	
Deferred revenues	\$ 7,085	\$ 6,934
Deferred costs	1,829	1,582
Deferred profit	<u>\$ 5,256</u>	<u>\$ 5,352</u>

Concentrations of Credit Risk – Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of trade accounts receivable. The Company's customers, located throughout the world, consist of manufacturers of solar cells, semiconductors, semiconductor wafers, and MEMS. Credit risk is managed by performing ongoing credit evaluations of the customers' financial condition, by requiring significant deposits where appropriate, and by actively monitoring collections. Letters of credit are required of certain customers depending on the size of the order, type of customer or its creditworthiness, and its country of domicile. Reserves for potentially uncollectible receivables are maintained based on an assessment of collectibility.

As of March 31, 2009, three customers accounted for 19%, 15% and 10% of accounts receivable, individually.

Restricted Cash – Current restricted cash of less than \$0.1 million as of March 31, 2009 consists of bank guarantees. The bank guarantees are required by certain customers from whom deposits have been received in advance of shipment. Current restricted cash of \$1.0 million as of September 30, 2008 consisted of bank guarantees in excess of our European overdraft facility that was terminated in the first quarter of fiscal 2009.

Accounts Receivable - Unbilled and Other – Unbilled and other accounts receivable consist mainly of the contingent portion of the sales price that is not collectible until successful installation of the product. These amounts are generally billed upon final customer acceptance. The majority of these amounts are offset by balances included in deferred profit.

Inventories – Inventories are stated at the lower of cost or net realizable value. Costs for approximately 80% of inventory are determined on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. The components of inventories are as follows:

	March 31, 2009	September 30, 2008
	(dollars in thousands)	
Purchased parts and raw materials	\$ 8,702	\$ 9,776
Work-in-process	4,738	5,057
Finished goods	1,578	1,069
	<u>\$ 15,018</u>	<u>\$ 15,902</u>

Property, Plant and Equipment – Property, plant and equipment are recorded at cost. Maintenance and repairs are charged to expense as incurred. The cost of property retired or sold and the related accumulated depreciation are removed from the applicable accounts when disposition occurs and any gain or loss is recognized. Depreciation is computed using the straight-line method. Useful lives for equipment, machinery and leasehold improvements range from three to seven years; for furniture and fixtures from five to 10 years; and for buildings 20 years.

The following is a summary of property, plant and equipment:

	March 31, 2009	September 30, 2008
	(dollars in thousands)	
Land, building and leasehold improvements	\$ 6,525	\$ 6,916
Equipment and machinery	4,040	3,654
Furniture and fixtures	3,200	3,306
	<u>13,765</u>	<u>13,876</u>
Accumulated depreciation and amortization	(5,662)	(5,467)
	<u>\$ 8,103</u>	<u>\$ 8,409</u>

Goodwill – Goodwill and intangible assets with indefinite lives are not subject to amortization, but are tested for impairment at least annually. The Company accounts for goodwill under the provisions of Statement of Financial Accounting Standards ("SFAS") No. 142. Accordingly, goodwill is reviewed for impairment on an annual basis, typically at the end of the fiscal year, or more frequently if circumstances dictate. Circumstances in the quarter ended March 31, 2009 required the Company to test long-lived

assets for recoverability and impairment. See Note 9, "Impairment and Restructuring Charge" for a description of the facts and circumstances leading to the interim impairment test and the amount and method of calculating the impairment charge.

In October, 2007, the Company acquired the R2D Automation business ("R2D"), a solar cell and semiconductor automation equipment manufacturing company located near Montpellier, France. Cash contingent payments of approximately \$1.6 million were deposited in an escrow account with the agreement to pay the sellers upon fulfillment of certain requirements. As of March 31, 2009, approximately \$1.1 million of the \$1.6 million has been paid to the sellers in recognition of fulfilling certain requirements.

Intangibles – Intangible assets are capitalized and amortized over 2 to 15 years if the life is determinable. If the life is not determinable, amortization is not recorded.

As required by SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Circumstances in the quarter ended March 31, 2009 required the Company to test long-lived assets for recoverability and impairment. See Note 9, "Impairment and Restructuring Charge" for a description of the facts and circumstances leading to the interim impairment test and the amount and method of calculating the impairment charge.

In November 2008 the Company entered into a license agreement with PST Co., LTD ("PST"), based in Korea, to market PST's existing and future proprietary PSG (phosphorus silicate glass) dry etch systems. The royalty-free, 10-year license agreement grants Amtech exclusive marketing rights throughout the world, with the exception of Korea and one Japanese customer with respect to which PST retains marketing rights. In consideration for the licensed rights, the Company was required to pay \$0.5 million. In the second quarter of fiscal 2009, the Company paid \$0.3 million to PST under this agreement with the remaining \$0.2 million due upon achievement of certain performance criteria.

The following is a summary of intangibles:

	Useful Life	March 31,	September 30,
		2009	2008
(dollars in thousands)			
Trademarks	Indefinite	\$ -	\$ 592
Non-compete agreements	8-10 years	161	524
Customer lists	10-15 years	851	1,195
Technology	4-10 years	1,686	1,924
Licenses	10 years	1,500	700
Other	2-10 years	87	94
		4,285	5,029
Accumulated amortization		(519)	(645)
		\$ 3,766	\$ 4,384

Restricted Cash – Non-current – Restricted cash – non-current consists of cash in an escrow account related to contingent payments to be paid to the sellers of R2D upon fulfillment of certain requirements. The amount of future contingent payments earned will be allocated to goodwill.

Warranty – A limited warranty is provided free of charge, generally for periods of 12 to 24 months to all purchasers of the Company's new products and systems. Accruals are recorded for estimated warranty costs at the time revenue is recognized.

The following is a summary of activity in accrued warranty expense:

	Six Months Ended March 31,	
	2009	2008
(dollars in thousands)		
Beginning balance	\$ 1,155	\$ 256
Warranty expenditures	(323)	(262)
Provision	374	350
Acquired through business acquisitions	-	247
Ending balance	\$ 1,206	\$ 591

Stock-Based Compensation – The Company measures compensation costs relating to share-based payment transactions based upon the grant-date fair value of the award. Those costs are recognized as expense over the requisite service period, which is generally the vesting period. The benefits of tax deductions in excess of recognized compensation cost are reported as cash flow from financing activities rather than as cash flow from operating activities. Our stock-based compensation plans are summarized in the table below:

Name of Plan	Shares	Shares	Options	Plan
	Authorized	Available	Outstanding	Expiration
2007 Employee Stock Incentive Plan	500,000	119,187	250,313	Apr. 2017
1998 Employee Stock Option Plan	500,000	-	334,490	Jan. 2008
Non-Employee Directors Stock Option Plan	200,000	38,600	84,000	Jul. 2015
		157,787	668,803	

Share-based compensation expense reduced the Company's results of operations by the following amounts:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2009	2008	2009	2008
(dollars in thousands, except per share amounts)				
Effect on income (loss) before income taxes (1)	\$ (167)	\$ (128)	\$ (333)	\$ (229)

Effect on net income (loss) \$ (128) \$ (104) \$ (263) \$ (193)

(1) Stock option expense is included in selling, general and administrative expenses.

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Stock options issued under the terms of the plans have, or will have, an exercise price equal to or greater than the fair market value of the common stock at the date of the option grant and expire no later than 10 years from the date of grant, with the most recent grant expiring in 2019. Options issued by the Company vest over 1 to 5 years.

Stock option transactions and the options outstanding are summarized as follows:

	Six Months Ended March 31,			
	2009		2008	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of period	486,803	\$ 8.39	450,303	\$ 6.44
Granted	183,000	3.75	105,000	14.08
Exercised	-	-	(56,375)	5.22
Forfeited	(1,000)	7.00	(1,000)	7.00
Outstanding at end of period	668,803	\$ 7.12	497,928	\$ 8.19
Exercisable at end of period	317,226	\$ 7.23	265,726	\$ 6.48
Weighted average fair value of options granted during the period	\$ 2.25		\$ 8.23	

The fair value of options was estimated at the grant date using the Black-Scholes option pricing model with the following assumptions:

	Six Months Ended March 31,	
	2009	2008
Risk free interest rate	1.84%	3.27%
Expected life	6 years	6 years
Dividend rate	0%	0%
Volatility	66%	61%
Forfeiture rate	7%	9%

To estimate expected lives for this valuation, it was assumed that options will be exercised at varying schedules after becoming fully vested. Forfeitures have been estimated at the time of grant and will be revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures were estimated based upon historical experience. Fair value computations are highly sensitive to the volatility factor assumed; the greater the volatility, the higher the computed fair value of the options granted.

There were 20,000 and 183,000 options granted during the three and six months ended March 31, 2009, respectively; and 20,000 and 105,000 options granted for the comparable periods of fiscal 2008. Total fair value of options granted was approximately \$38,000 and \$411,000 for the three and six months ended March 31, 2009, respectively; and \$124,000 and \$864,000 for the comparable periods of fiscal 2008.

In December 2007, we began awarding restricted shares under the existing share-based compensation plans. Our restricted share-awards vest in equal annual installments over a four-year period. The total value of these awards is expensed on a ratable basis over the service period of the employees receiving the grants. The "service period" is the time during which the employees receiving grants must remain employees for the shares granted to fully vest.

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Restricted stock transactions and outstanding are summarized as follows:

	Six Months Ended March 31,			
	2009		2008	
	Awards	Weighted Average Grant Date Fair Value	Awards	Weighted Average Grant Date Fair Value
Beginning Outstanding	30,500	\$ 14.79	-	\$ -
Awarded	100,000	3.80	31,500	14.79
Released	(7,625)	14.79	-	-
Forfeited	-	-	-	-
Ending Outstanding	122,875	\$ 5.85	31,500	\$ 14.79

Impact of Recently Issued Accounting Pronouncements

In April 2008, the Financial Accounting Standards Board (FASB) Staff Position ("FSP") No. 142-3 "Determination of the Useful Life of Intangible Assets ("FSP No. 142-3"). FSP No. 142-3 amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under SFAS No. 142 "Goodwill and Other Intangible Assets". FSP No. 142-3 is effective for the Company's quarter beginning October 1, 2009. The Company is currently

evaluating the impact that FSP No. 142-3 will have on its consolidated financial statements.

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements". SFAS No. 157 defines fair value, establishes a formal framework for measuring fair value and expands disclosures about fair value measurements. The Company has not yet determined the impact, if any, that SFAS No. 157 will have on its consolidated financial statements. SFAS No. 157 is effective for the Company's fiscal year beginning October 1, 2009.

In December 2007, the FASB issued SFAS No. 141(R), "Business Combinations". This Statement replaces SFAS No. 141, Business Combinations. SFAS No. 141(R) retains the fundamental requirements in Statement 141 that the acquisition method of accounting (which Statement 141 called the purchase method) be used for all business combinations and for an acquirer to be identified for each business combination. SFAS No. 141(R) also establishes principles and requirements for how the acquirer: a) recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree; b) recognizes and measures the goodwill acquired in the business combination or a gain from a bargain purchase and c) determines what information to disclose to enable users of the financial statements to evaluate the nature and financial effects of the business combination. SFAS No. 141(R) will apply prospectively to business combinations of the Company for which the acquisition date is on or after October 1, 2009. While the Company has not yet evaluated this statement for the impact, if any, that SFAS No. 141(R) will have on its consolidated financial statements, the Company will be required to expense costs related to any acquisitions after September 30, 2009.

2. Income Taxes

The quarterly income tax provision is calculated using an estimated annual effective tax rate, based upon expected annual income, permanent items, statutory tax rates and planned tax strategies in the various jurisdictions in which the Company operates.

Deferred tax assets and liabilities reflect the tax effects of temporary differences between the carrying value of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Statement of Financial Accounting Standards ("SFAS") No. 109 "Accounting for Income Taxes" requires a valuation allowance to be recognized if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax asset will not be realized. The Company maintains a valuation allowance with respect to certain state and foreign net operating losses that may not be recovered. Each quarter the valuation allowance is reevaluated. During the six months ended March 31, 2009, the valuation allowance was increased by approximately \$155,000 for net operating losses in certain states that may not be recovered.

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Upon the adoption of FIN 48, the Company classified uncertain tax positions as non-current income taxes payable unless expected to be paid within one year. At March 31, 2009 and September 30, 2008, the total amount of unrecognized tax benefits was \$490,000 and \$440,000, respectively. If recognized, these amounts would favorably impact the effective tax rate.

The Company recognizes interest accrued related to unrecognized tax benefits and penalties in the provision for income taxes. The accrual for potential interest and penalties as of March 31, 2009 and September 30, 2008 was \$119,000 and \$70,000, respectively.

The Company and one or more of its subsidiaries file income tax returns in The Netherlands, Germany, the U.S., France and other foreign jurisdictions, as well as various states in the U.S. The Company and its subsidiaries have open tax years primarily from fiscal 2004 to fiscal 2008 with foreign taxing jurisdictions and the U.S. These open years contain certain matters that could be subject to differing interpretations of applicable tax laws and regulations as they relate to the amount, timing, or inclusion of revenues and expenses, or the sustainability of income tax positions of the Company and its subsidiaries.

3. Earnings Per Share

Basic earnings per share (EPS) is computed by dividing net income (loss) by the weighted average number of common shares outstanding for the period. Diluted EPS is computed similarly to basic EPS except that the denominator is increased to include the number of additional common shares that would have been outstanding if potentially dilutive common shares had been issued. In the case of a net loss, diluted earnings per share is calculated in the same manner as basic EPS.

Common shares relating to stock options where the exercise prices exceeded the average market price of our common shares during the period were excluded from the diluted earnings per share calculation as the related impact was antidilutive. For the three and six months ended March 31, 2009, options for 664,000 and 655,000 shares, respectively, and 40,000 and 30,500 restricted stock award shares, respectively, are excluded from the diluted EPS calculations because they are antidilutive. For the three and six months ended March 31, 2008, options for 115,000 and 132,000 shares, respectively, and 31,500 restricted stock award shares are excluded from the diluted EPS calculations because they are anti-dilutive.

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	Three Months Ended March 31,		Six Months Ended March 31,	
	2009	2008	2009	2008
	(in thousands, except per share amounts)		(in thousands, except per share amounts)	
Basic Earnings Per Share Computation				
Net income (loss) available to common stockholders	\$ (2,012)	\$ 161	\$ (1,153)	\$ 269
Weighted Average Shares Outstanding:				
Common stock	9,057	9,072	9,078	8,350
Basic earnings (loss) per share	\$ (0.22)	\$ 0.02	\$ (0.13)	\$ 0.03
Diluted Earnings Per Share Computation				
Net income (loss)	\$ (2,012)	\$ 161	\$ (1,153)	\$ 269
Weighted Average Shares Outstanding:				
Common stock	9,057	9,072	9,078	8,350
Common stock equivalents (1)	-	113	-	151
Diluted shares	9,057	9,185	9,078	8,501

Diluted earnings (loss) per share	\$ (0.22)	\$ 0.02	\$ (0.13)	\$ 0.03
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(1) The number of common stock equivalents is calculated using the treasury stock method and the average market price during the period.

4. Comprehensive Income (Loss)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2009	2008	2009	2008
	(dollars in thousands)		(dollars in thousands)	
Net income (loss), as reported	\$ (2,012)	\$ 161	\$ (1,153)	\$ 269
Foreign currency translation adjustment	(2,337)	1,352	(2,728)	1,498
Comprehensive income (loss)	\$ (4,349)	\$ 1,513	\$ (3,881)	\$ 1,767

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5. Business Segment Information

The Company's products are classified into two core business segments; the solar and semiconductor equipment segment and the polishing supplies segment. The solar and semiconductor equipment segment designs, manufactures and markets semiconductor wafer processing and handling equipment used in the fabrication of solar cells, integrated circuits, and MEMS. Also included in the solar and semiconductor equipment segment are the manufacturing support service operations and corporate expenses, except for a small portion that is allocated to the polishing supplies segment. The polishing supplies segment designs, manufactures and markets carriers, templates and equipment used in the lapping and polishing of wafer-thin materials, including silicon wafers used in the production of semiconductors.

Information concerning our business segments is as follows:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2009	2008	2009	2008
	(dollars in thousands)		(dollars in thousands)	
Net Revenues:				
Solar and semiconductor equipment	\$ 9,341	\$ 15,608	\$ 25,474	\$ 25,605
Polishing supplies	1,563	1,983	3,302	3,727
	\$ 10,904	\$ 17,591	\$ 28,776	\$ 29,332
Operating income (loss):				
Solar and semiconductor equipment (1)	\$ (2,536)	\$ (392)	\$ (1,130)	\$ (510)
Polishing supplies	(42)	310	(70)	453
	(2,578)	(82)	(1,200)	(57)
Interest and other income (expense), net	(14)	348	47	501
Income (loss) before income taxes	\$ (2,592)	\$ 266	\$ (1,153)	\$ 444

(1) Includes the impairment losses related to the Bruce Technologies intangible assets and goodwill.

Identifiable Assets:	March 31,	September 30,
	2009	2008
(dollars in thousands)		
Solar and semiconductor equipment	\$ 85,864	\$ 97,545
Polishing supplies	4,341	4,810
	\$ 90,205	\$ 102,355

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6. Major Customers and Foreign Sales

During the three months ended March 31, 2009, two customers represented 25% and 12% of net revenues, individually. During the six months ended March 31, 2009, two customers represented 24% and 12% of net revenues, individually. During the three months ended March 31, 2008, two customers represented 20% and 18% of net revenues, individually. During the six months ended March 31, 2008, two customers represented 18% and 13% of net revenues, individually.

Our net revenues were to customers in the following geographic regions:

	Six Months Ended March 31,	
	2009	2008
North America (1)	24%	17%
Asia (2) (3)	55%	59%
Europe	21%	24%
	100%	100%

- (1) Includes 24% and 17% to the United States in 2009 and 2008, respectively
- (2) Includes 15% and 34% to China in 2009 and 2008, respectively.
- (3) Includes 34% and 12% to Taiwan in 2009 and 2008, respectively.

7. Commitments and Contingencies

Purchase Obligations – As of March 31, 2009, we had purchase obligations in the amount of \$4.6 million. These purchase obligations consist of outstanding purchase orders for goods and services. While the amount represents purchase agreements, the actual amounts to be paid may be less in the event that any agreements are renegotiated, cancelled or terminated.

Litigation – The Company is a party to various claims arising in the normal course of business. Management believes the resolution of these matters will not have a material impact on the Company's results of operations or financial condition.

8. Stockholders Equity

Shareholder Rights Plan – On December 15, 2008, the Company and Computershare Trust Company, N.A., as Rights Agent (the "Rights Agent"), entered into an Amended and Restated Rights Agreement (the "Restated Rights Agreement") which amends and restates the terms governing the previously authorized shareholder rights (each a "Right") to purchase fractional shares of the Company's Series A Participating Preferred Stock ("Series A Preferred") currently attached to each of the Company's outstanding Common Shares, par value \$0.01 per share ("Common Shares"). As amended, each Right entitles the registered holder to purchase from the Company one one-thousandth of a share of Series A Preferred at an exercise price of \$51.60 (the "Exercise Price"), subject to adjustment. The Final Expiration Date (as defined in the Restated Rights Agreement) is now December 14, 2018.

Other than extending the Final Expiration Date (as defined in the Restated Rights Agreement) of the Rights to December 14, 2018 and adjusting the Exercise Price, there were no material changes to the principal terms of the Rights. The Restated Rights Agreement also contains certain other changes in order to address current law and practice with respect to shareholder rights plans.

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Stock Repurchase Program – In December 2008, the Board of Directors approved a stock repurchase program authorizing the repurchase of up to \$4 million of its common stock. Under the program, shares may be repurchased from time to time in open market transactions at prevailing market prices or in privately negotiated purchases. The timing and actual number of shares purchased will depend on a variety of factors, such as price, corporate and regulatory requirements, alternative investment opportunities, and other market and economic conditions. The program may be commenced, suspended or terminated at any time, or from time-to-time at management's discretion without prior notice. During the three months ended March 31, 2009, the Company repurchased 144,000 shares for \$0.4 million in cash at an average cost of \$3.09 per share. The repurchased shares were retired immediately after the repurchases were complete. Retirement of the repurchased shares is recorded as a reduction of common stock and additional paid-in-capital.

9. Impairment and Restructuring Charge

The Bruce operations are primarily dependent upon a mature segment of the semiconductor industry which is experiencing a significant downturn. The industry downturn resulted in recent operating losses and deterioration in forecasted revenue and earnings at Bruce. It is uncertain when, and to what extent, the markets served by Bruce will recover. Therefore, the Bruce operations were restructured in the second quarter of fiscal 2009 to focus primarily on a parts supply business versus furnace systems sales. The restructuring included a reduction in the number of employees and a reduction in the amount of space required to operate the business. The restructuring resulted in a charge of \$620,000, which includes a \$350,000 charge for unutilized leased space, a \$160,000 write-off of furnace-related inventory parts that are not expected to be utilized in the future and \$110,000 of severance and outplacement costs.

Due to the circumstances related to the Bruce operations discussed above, the Company determined it was necessary to conduct an assessment of the ability to recover the carrying amount of long-lived assets of the Bruce operations. Recoverability is based upon the Company's judgments and estimates of undiscounted cash flows during the estimated remaining useful life of the assets. It was determined that the carrying value of the net assets was not fully recoverable; therefore, an impairment charge of \$373,000 was recorded for the excess of carrying value over the fair value of the customer list and non-compete agreement.

As a result of the impairment of long-lived assets described above, it was necessary to conduct an interim review of the goodwill and Bruce trademark for impairment. The fair value of the assets group was determined through estimates of the present value of future cash flows based upon the anticipated future use of the assets. As the carrying value of the Bruce assets exceeded their estimated fair value, the carrying values of goodwill (\$89,000) and the Bruce trademark (\$592,000) were also recorded as an impairment charge in the second quarter of fiscal 2009.

The total amount of the impairment charge was \$1.1 million. Details of the impairment charge are as follows:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
(dollars in thousands)			
Goodwill	\$ 89	\$ -	\$ 89
Trademark	592	-	592
Customer list	276	87	189
Non-compete agreement	350	166	184
Impairment Charge			<u>\$ 1,054</u>

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and the related notes included in Item 1, "Condensed Financial Statement" in this quarterly report on Form 10-Q and our consolidated financial statements and related notes included in Item 8, "Financial Statements and Supplementary Data" in our Annual Report on Form 10-K for the fiscal year ended September 30, 2008.

Cautionary Statement Regarding Forward-Looking Statements

The statements in this report include forward-looking statements. These forward-looking statements are based on our management's current expectations and beliefs and

involve numerous risks and uncertainties that could cause actual results to differ materially from expectations. You should not rely upon these forward-looking statements as predictions of future events because we cannot assure you that the events or circumstances reflected in these statements will be achieved or will occur. You can identify forward-looking statements by the use of forward-looking terminology, including the words “believes,” “expects,” “may,” “will,” “should,” “seeks,” “intends,” “plans,” “estimates” or “anticipates” or the negative of these words and phrases or other variations of these words and phrases or comparable terminology. These forward-looking statements relate to, among other things: our sales, results of operations and anticipated cash flows; capital expenditures; depreciation and amortization expenses; research and development expenses; selling, general and administrative expenses; the development and timing of the introduction of new products and technologies; our ability to maintain and develop relationships with our existing and potential future customers and our ability to maintain the level of investment in research and development and capacity that is required to remain competitive. Many factors could cause our actual results to differ materially from those projected in these forward-looking statements, including, but not limited to: whether we will be able to complete acquisitions and integrate such businesses successfully and achieve anticipated synergies; variability of our revenues and financial performance; risks associated with product development and technological changes; the acceptance of our products in the marketplace by existing and potential future customers; disruption of operations or increases in expenses caused by civil or political unrest or other catastrophic events; general economic conditions and conditions in the solar and semiconductor industries in particular; the continued employment of our key personnel and risks associated with competition.

For a discussion of the factors that could cause actual results to differ materially from the forward-looking statements, see the “Risk Factors” set forth in Item 1A of Part I of Amtech Systems, Inc.’s Annual Report on Form 10-K for the fiscal year ended September 30, 2008, the “Liquidity and Capital Resources” section under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this item of this report and the other risks and uncertainties that are set forth elsewhere in this report or detailed in our other Securities and Exchange Commission reports and filings. We assume no obligation to update these forward-looking statements.

Introduction

Management’s Discussion and Analysis (“MD&A”) is intended to facilitate an understanding of our business and results of operations. MD&A consists of the following sections:

- Overview
- Results of Operations
- Liquidity and Capital Resources
- Off – Balance Sheet Arrangements
- Contractual Obligations
- Critical Accounting Policies
- Impact of Recently Issued Accounting Pronouncements

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Overview

We operate in two segments: the solar and semiconductor equipment segment and the polishing supplies segment. Our solar and semiconductor equipment segment is a leading supplier of thermal processing systems, including related automation, parts and services, to the solar/photovoltaic, semiconductor, silicon wafer and MEMS industries.

Our polishing supplies and equipment segment is a leading supplier of wafer carriers to manufacturers of silicon wafers. The polishing segment also manufactures polishing templates, steel carriers and double-sided polishing and lapping machines for fabricators of optics, quartz, ceramics and metal parts, and for manufacturers of medical equipment components.

Our customers are primarily manufacturers of solar cells and integrated circuits. The solar cell and semiconductor industries are cyclical and historically have experienced significant fluctuations. Our revenue is impacted by these broad industry trends.

Due to the nature of the capital equipment markets that we serve, our revenues, gross margins and operating results have historically fluctuated on a quarterly basis. Our contracts typically include holdbacks of 10-20% of revenue, which are recognized at the time of customer acceptance.

Results of Operations

The following table sets forth certain operational data as a percentage of net revenue for the periods indicated:

	Three Months Ended		Six Months Ended	
	March 31, 2009	March 31, 2008	March 31, 2009	March 31, 2008
Net revenue	100%	100%	100%	100%
Cost of goods sold	78%	77%	71%	74%
Gross margin	22%	23%	29%	26%
Operating expenses:				
Selling, general and administrative	28%	22%	26%	24%
Restructuring Charge	16%	0%	6%	0%
Research and Development	2%	1%	1%	2%
Total operating expenses	46%	23%	33%	26%
Income from operations	(24%)	0%	(4%)	0%
Interest and other income (expense), net	0%	2%	0%	1%
Income before income taxes	(24%)	2%	(4%)	1%
Income taxes	(6%)	1%	0%	0%
Net Income	(18%)	1%	(4%)	1%

Net Revenue

Net revenue consists of revenue recognized upon shipment or installation of products using proven technology and upon acceptance of products using new technology. In addition, spare parts sales are recognized upon shipment. Service revenue is recognized upon completion of the service activity or ratably over the term of the service contract. The majority of our revenue is generated from large furnace system sales which, depending on the timing of shipment and installation, can have a significant impact on our revenue and earnings in any given period. See Critical Accounting Policies – Revenue Recognition.

	Three Months Ended				Six Months Ended			
	March 31, 2009	March 31, 2008	Inc. (Dec)	%	March 31, 2009	March 31, 2008	Inc. (Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Solar and Semiconductor								
Equipment Segment	\$ 9,341	\$ 15,608	\$ (6,267)	(40%)	\$ 25,474	\$ 25,605	\$ (131)	(1%)
Polishing Supplies Segment	1,563	1,983	(420)	(21%)	3,302	3,727	(425)	(11%)
Total Net Revenue	\$ 10,904	\$ 17,591	\$ (6,687)	(38%)	\$ 28,776	\$ 29,332	\$ (556)	(2%)

Net revenue for the quarter ended March 31, 2009 decreased \$6.7 million, or 38%, compared to the quarter ended March 31, 2008. Revenue from the Solar and Semiconductor Equipment Segment decreased \$6.3 million, or 40%, due to significantly lower shipments to the solar industry, partially offset by increased shipments to the semiconductor industry. The decrease in net revenue from the solar industry was driven by the global economic downturn and credit crisis resulting in delays in many of our customers' capacity expansion plans. The increase in net revenue from the semiconductor industry was due primarily to a multi-system order shipped to a university. The decrease of \$0.4 million, or 21%, in net revenue from the Polishing Supplies Segment was due primarily to 43% lower sales volume of insert carriers and templates caused mainly by the downturn in the semiconductor industry. This decrease was partially offset by increased sales of polishing machines during the quarter ended March 31, 2009.

Net revenue for the six months ended March 31, 2009 decreased by \$0.6 million, or 2%, compared to the six months ended March 31, 2008. Revenue from the Solar and Semiconductor Equipment Segment decreased \$0.1 million, or 1%, due to strong first quarter volumes offset by lower second quarter revenues. The decrease of \$0.4 million, or 11%, in net revenue from the Polishing Supplies Segment is due to the second quarter slowdown as described above.

The ongoing global credit crisis and related downturn in the global economy has caused many of our customers to delay or suspend their capacity expansion plans, which has resulted in lower orders. In addition, some of our customers have and others may request delays in the shipment of their orders. As a result, future revenues from both the solar and semiconductor markets are likely to be negatively impacted.

Backlog and Orders

Our order backlog as of March 31, 2009 and 2008 was \$34.7 million and \$64.2 million, respectively. Our backlog as of March 31, 2009 includes approximately \$32.6 million of orders from our solar industry customers compared to \$52.6 million at March 31, 2008. New orders booked in our most recent quarter ended March 31, 2009 were \$3.2 million compared to \$31.8 million in the second quarter of fiscal 2008. New orders booked in the six-month periods ended March 31, 2009 and 2008 were \$12.6 million and \$68.8 million, respectively. The effects of changes in the foreign exchange rate (U.S. dollar vs. Euro) are netted against new orders. As the majority of the backlog is denominated in euros, the strengthening of the dollar during the first half of fiscal 2009 resulted in a reduction in backlog of approximately \$4.0 million. The decrease in new orders and backlog is due primarily to the ongoing global credit crisis and related economic downturn. This has caused many of our customers to delay or suspend their capacity expansion plans. Total bookings for the next several quarters are expected to remain noticeably lower than prior year quarters as a result of the lingering global economic downturn.

The orders included in our backlog are generally credit approved customer purchase orders expected to ship within the next twelve months. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for succeeding periods, nor is backlog any assurance that we will realize profit from completing these orders. Our backlog also includes revenue deferred pursuant to our revenue recognition policy, derived from orders that have already been shipped, but which have not met the criteria for revenue recognition. Our backlog as of March 31, 2009 includes \$1.2 million of deferred revenue for which there is an equal amount of deferred costs, i.e. with no gross profit to be realized.

Gross Profit and Gross Margin

Gross profit is the difference between net revenue and cost of goods sold. Cost of goods sold consists of purchased material, labor and overhead to manufacture equipment and spare parts and the cost of service and support to customers for warranty, installation and paid service calls. Gross margin is gross profit as a percent of net revenue.

	Three Months Ended				Six Months Ended			
	March 31, 2009	March 31, 2008	Inc. (Dec)	%	March 31, 2009	March 31, 2008	Inc. (Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Solar and Semiconductor								
Equipment Segment	\$ 2,067	\$ 3,455	\$ (1,388)	(40%)	\$ 7,845	\$ 6,514	\$ 1,331	20%
Polishing Supplies Segment	290	672	(382)	(57%)	598	1,173	(575)	(49%)
Total Gross Profit	\$ 2,357	\$ 4,127	\$ (1,770)	(43%)	\$ 8,443	\$ 7,687	\$ 756	10%
Gross margin	22%	23%			29%	26%		

Gross profit for the quarter ended March 31, 2009 decreased \$1.8 million or 43% from \$4.1 million in the second quarter of fiscal 2008 to \$2.4 million in the second quarter of fiscal 2009. Gross margin in the three months ended March 31, 2009 and 2008 was 22% and 23%, respectively. Gross margin in the Solar and Semiconductor Equipment Segment was 22% in each of the three month periods. Excluding the impact of deferred revenue and profit activity, gross margin in the Solar and Semiconductor Equipment Segment decreased to 19% in the second fiscal quarter of fiscal 2009 versus 27% in the second quarter of fiscal 2008 due primarily to lower shipment volumes and the related reduction in efficiencies and plant utilization. Gross profit and margins in the Polishing Supplies Segment decreased due to lower volumes of carriers and templates along with higher volumes of machines which generally realize a lower profit margin than carriers and templates. We recognized \$0.5 million of previously deferred profit for the quarter ended March 31, 2009, net of deferrals, compared to a net deferral of \$0.7 million of profit for the quarter ended March 31, 2008.

Gross profit for the six months ended March 31, 2009 increased \$0.8 million or 10% from \$7.7 million in the first six months of fiscal 2008 to \$8.4 million in the first six months of fiscal 2009. Gross margin increased to 29% in the first six months of fiscal 2009 from 26% in the first six months of fiscal 2008. Excluding the impact of deferred revenue and profit activity, gross margin in the Solar and Semiconductor Equipment Segment increased to 32% in the first half of fiscal 2009 from 27% in the first half of fiscal 2008 due primarily to high efficiencies and plant utilization experienced in the first quarter of fiscal 2009. We deferred \$0.3 million of profit for the six months ended March 31, 2009, net of acceptances, compared to a net recognition of \$0.2 million of profit for the six months ended March 31, 2008. In the first half of fiscal 2009, deferred revenue included \$1.1 million with an equal amount of deferred cost.

Selling, General and Administrative

Selling, general and administrative expenses consist of the cost of employees, consultants and contractors, facility costs, sales commissions, promotional marketing expenses, legal and accounting expenses.

	Three Months Ended				Six Months Ended			
	March 31, 2009	March 31, 2008	Inc. (Dec)	%	March 31, 2009	March 31, 2008	Inc. (Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Solar and Semiconductor								
Equipment Segment	\$ 2,769	\$ 3,604	\$ (835)	(23%)	\$ 6,916	\$ 6,547	\$ 369	6%
Polishing Supplies Segment	332	362	(30)	(8%)	669	721	(52)	(7%)
Total SG&A	\$ 3,101	\$ 3,966	\$ (865)	(22%)	\$ 7,585	\$ 7,268	\$ 317	4%
Percent of net revenue	28%	23%			24%	24%		

Selling, general and administrative (SG&A) expenses for the three months ended March 31, 2009 decreased \$0.9 million, or 22%, from \$4.0 million to \$3.1 million compared to the three months ended March 31, 2008. SG&A expenses include \$0.2 million and \$0.1 million of stock-based compensation expense in the three months ended March 31, 2009 and 2008, respectively. The decrease in SG&A expenses was due primarily to a \$0.6 million of decrease in selling expense, primarily commissions, related to lower revenues generated in regions where third party sales agents are utilized.

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For the six months ended March 31, 2009, SG&A increased \$0.3 million or 4% compared to the six month period ended March 31, 2008. SG&A expenses include \$0.3 million and \$0.2 million of stock-based compensation expense for the six months ended March 31, 2009 and 2008, respectively. SG&A expenses for the six months ended March 31, 2009 and 2008 include \$0.1 million and \$0.2 million, respectively, of costs related to compliance with the Sarbanes-Oxley Act. Selling expenses increased \$0.2 million due to increased commissions.

Impairment and Restructuring Charge

The Bruce operations are primarily dependent upon a mature segment of the semiconductor industry which is experiencing a significant downturn. The industry downturn resulted in recent operating losses and deterioration in forecasted revenue and earnings at Bruce. It is uncertain when, and to what extent, the markets served by Bruce will recover. Therefore, the Bruce operations were restructured in the second quarter of fiscal 2009 to focus primarily on a parts supply business versus furnace systems sales. The restructuring included a reduction in the number of employees and a reduction in the amount of space required to operate the business. The restructuring resulted in a charge of \$620,000, which includes a \$350,000 charge for unutilized leased space, a \$160,000 write-off of furnace-related inventory parts that are not expected to be utilized in the future and \$110,000 of severance and outplacement costs.

Due to the circumstances related to the Bruce operations discussed above, the Company determined it was necessary to conduct an assessment of the ability to recover the carrying amount of long-lived assets of the Bruce operations. Recoverability is based upon the Company's judgments and estimates of undiscounted cash flows during the estimated remaining useful life of the assets. It was determined that the carrying value of the net assets was not fully recoverable; therefore, an impairment charge of \$373,000 was recorded for the excess of carrying value over the fair value of the customer list and non-compete agreement.

As a result of the impairment of long-lived assets described above, it was necessary to conduct an interim review of the goodwill and Bruce trademark for impairment. The fair value of the assets group was determined through estimates of the present value of future cash flows based upon the anticipated future use of the assets. As the carrying value of the Bruce assets exceeded their estimated fair value, the carrying values of goodwill (\$89,000) and the Bruce trademark (\$592,000) were also recorded as an impairment charge in the second quarter of fiscal 2009.

The total amount of the impairment charge was \$1.1 million. Details of the impairment charge are as follows:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(dollars in thousands)		
Goodwill	\$ 89	\$ -	\$ 89
Trademark	592	-	592
Customer list	276	87	189
Non-compete agreement	350	166	184
Impairment Charge			\$ 1,054

Research and Development

Research and development expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes; materials and supplies used in those activities; and product prototyping.

	Three Months Ended				Six Months Ended			
	March 31, 2009	March 31, 2008	Inc. (Dec)	%	March 31, 2009	March 31, 2008	Inc. (Dec)	%
	(dollars in thousands)				(dollars in thousands)			
Solar and Semiconductor								
Equipment Segment	\$ 152	\$ 243	\$ (91)	(37%)	\$ 376	\$ 476	\$ (100)	(21%)
Polishing Supplies Segment	-	-	-	0%	-	-	-	0%
Total R&D	\$ 152	\$ 243	\$ (91)	(37%)	\$ 376	\$ 476	\$ (100)	(21%)

Research and development costs for the three and six months ended March 31, 2009 decreased \$0.1 million compared to the three and six-month periods ended March 31, 2008. The decrease is due primarily to increased reimbursements through governmental research and development grants which are netted against these expenses.

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Interest and other income (expense), net

Interest and other income (expense), net includes mainly interest income, interest expense and gains and losses on foreign currency transactions.

	Three Months Ended			Six Months Ended		
	March 31, 2009	March 31, 2008	Inc. (Dec)	March 31, 2009	March 31, 2008	Inc. (Dec)
Interest and other income (expense), net	(dollars in thousands)			(dollars in thousands)		
Interest and other income (expense), net	\$ 8	\$ 298	\$ (290)	\$ 58	\$ 504	\$ (446)
Foreign currency gains (losses)	(22)	50	(72)	(11)	(3)	(8)
Total	\$ (14)	\$ 348	\$ (362)	\$ 47	\$ 501	\$ (454)

Interest income represents earnings on invested funds. Interest expense primarily consists of interest incurred on equipment financing. Interest income on invested funds decreased due to lower interest rates during fiscal 2009. Foreign currency gains or losses were less than \$0.1 million in each reporting period.

Income Taxes

During the three months ended March 31, 2009 and 2008, we recorded income tax expense (benefit) of (\$0.6) million and \$0.1 million, for an effective tax rate of 22% and 39%, respectively. During the six months ended March 31, 2009 and 2008, we recorded income tax provisions of \$0.0 million and \$0.2 million respectively. The effective tax rates used for calculating the income tax provisions for the six months ended March 31, 2009 and March 31, 2008 were approximately 0% and 39%, respectively based upon estimates of annual income, annual permanent differences, changes in the valuation allowance and statutory tax rates for fiscal 2009 and 2008 for the various jurisdictions in which we operate. The effective tax rate for the six months ended March 31, 2009 was negatively impacted by an increase to the valuation allowance and permanent differences between financial income and taxable income, which were higher in relation to the pre-tax loss. Without these adjustments a tax benefit would have been recorded for the period.

Liquidity and Capital Resources

At March 31, 2009 and September 30, 2008, cash and cash equivalents and current restricted cash were \$37.2 million and \$38.5 million, respectively. The decrease in cash and cash equivalents resulted primarily from cash used in investing activities such as purchases of property, plant and equipment as well as payments for our licensing agreements with PST. Cash was also used to repurchase approximately 144,000 shares for \$0.4 million. In the first quarter of fiscal 2009 we terminated our line of credit in the amount of Euro 1.0 million (approximately \$1.3 million). Our working capital as of March 31, 2009 and September 30, 2008 was \$55.2 million and \$57.2 million, respectively. We believe that our principal sources of liquidity discussed above are sufficient to meet our anticipated needs for current operations for at least the next 12 months.

The success of our growth strategy is dependent upon the availability of additional capital resources on terms satisfactory to management. Our sources of capital in the past have included capital leases, long-term debt and the sale of equity securities, which include common and preferred stock sold in private transactions and public offerings. There can be no assurance that we can raise such additional capital resources on satisfactory terms.

In December, the Board of Directors approved a stock repurchase program authorizing the repurchase of up to \$4 million of common stock. Under the program, shares may be repurchased from time to time in open market transactions at prevailing market prices or in privately negotiated purchases. The timing and actual number of future purchases of shares will depend on a variety of factors, such as price, corporate and regulatory requirements, alternative investment opportunities, and other market and economic conditions. Repurchases under the program are funded from available working capital. The program may be suspended or terminated at any time, or from time-to-time at management's discretion without prior notice.

Cash Flows from Operating Activities

Cash provided by our operating activities was \$1.5 million for the six months ended March 31, 2009, compared to \$3.6 million used in such activities for the six months ended March 31, 2008. In the first six months of fiscal 2009, cash was generated by decreases in accounts receivable and current restricted cash as well as earnings from operations, adjusted for non-cash charges, partially offset by decreases in accounts payable, accrued liabilities and customer deposits, and increases in inventories. During the six months ended March 31, 2008 cash was primarily used to finance increases in inventory, accounts receivable, prepaid and other assets. This use of cash was partially offset by increases in accounts payable, accrued liabilities and customer deposits.

Cash Flows from Investing Activities

Our investing activities for the six months ended March 31, 2009 and 2008 used \$1.4 million and \$9.9 million respectively. For the six months ended March 31, 2009, capital expenditures amounted to \$0.8 million primarily for machinery and equipment and we made \$0.6 million of payments for our licensing agreements with PST. For six months ended March 31, 2008, we used cash of \$8.0 million related to the acquisition of R2D. Capital expenditures in the same period were \$1.9 million, primarily related to the improvements of our facilities in The Netherlands.

Cash Flows from Financing Activities

For the six months ended March 31, 2009, \$0.5 million of cash was used in financing activities for the repurchase of shares (\$0.4 million) and for the payment of long-term debt of \$0.1 million. This compares to cash of \$33.9 million provided by the sale of 2,500,000 shares of common stock in an underwritten public offering at a price to the public of \$14.41 per share in the first half of fiscal 2008. Payments of long-term debt amounted to \$0.6 million in the first half of fiscal 2008.

Off-Balance Sheet Arrangements

As of March 31, 2009, Amtech had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K promulgated by the Securities and Exchange Commission.

Contractual Obligations

The only significant changes in contractual obligations since September 30, 2008 have been changes in purchase obligations (See Note 7 of the Condensed Consolidated Financial Statements). Refer to Amtech's annual report on Form 10-K for the year ended September 30, 2008, for information on the Company's other contractual obligations.

Critical Accounting Policies

Management's Discussion and Analysis of Financial Condition and Results of Operations discusses our consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the financial statements, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period.

On an on-going basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventory valuation, accounts receivable collectibility, warranty and impairment of long-lived assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances. The results of these estimates and judgments form the basis for making conclusions about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in "Item 1A. Risk Factors" of the Annual Report on Form 10-K for the year ended September 30, 2008. We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements.

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Revenue Recognition. We review product and service sales contracts with multiple deliverables to determine if separate units of accounting are present in the arrangements. Where separate units of accounting exist, revenue is allocated to delivered items equal to the total sales price less the greater of the relative fair value of the undelivered items, and all contingent portions of the sales arrangement.

We recognize revenue when persuasive evidence of an arrangement exists; the product has been delivered and title has transferred, or services have been rendered; the seller's price to the buyer is fixed or determinable; and collectibility is reasonably assured. For us, this policy generally results in revenue recognition at the following points:

- For the solar and semiconductor equipment segment, transactions where legal title passes to the customer upon shipment, we recognize revenue upon shipment for those products where the customer's defined specifications have been met with at least two similarly configured systems and processes for a comparably situated customer. However, a portion of the revenue associated with certain installation-related tasks, equal to the greater of the relative fair value of those tasks or the portion of the contract price contingent upon their completion, generally 10%-20% of the system's selling price (the "holdback"), and directly related costs, if any, are deferred and recognized into income when the tasks are completed. Since we defer only those costs directly related to installation or other unit of accounting not yet delivered and that portion of the contract price is often considerably greater than the fair market value of those items, our policy at times will result in deferral of profit that is disproportionately greater than the deferred revenue. When this is the case, the gross profit recognized in one period will be lower and the gross profit reported in a subsequent period will improve.
- For products where the customer's defined specifications have not been met with at least two similarly configured systems and processes, the revenue and directly related costs are deferred at the time of shipment and recognized into income at the time of customer acceptance or when this criterion has been met. We have, on occasion, experienced longer than expected delays in receiving cash from certain customers pending final installation or system acceptance. If some of our customers refuse to pay the final payment, or otherwise delay final acceptance or installation, the deferred revenue would not be recognized, adversely affecting our future operating results.
- Equipment sold by the polishing supplies segment does not include process guarantees, acceptance criteria or holdbacks; therefore, the related revenue is recorded upon transfer of title which is generally at time of shipment. Our shipping terms for both segments are customarily FOB our shipping point or equivalent terms.
- For all segments, sales of spare parts and consumables are recognized upon shipment, as there are no post shipment obligations other than standard warranties.
- Service revenue is recognized upon performance of the services requested by the customer. Revenue related to service contracts is recognized ratably over the period of the contract or in accordance with the terms of the contract, which generally coincides with the performance of the services requested by the customer.

Income Taxes. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our operations and financial condition.

We currently have significant deferred tax assets resulting from expenses not currently deductible for tax purposes, revenue recognized for tax purposes but deferred for financial statement purposes and state net operating loss carryforwards in certain state and foreign jurisdictions available to reduce taxable income in future periods. During fiscal 2004, we recorded a valuation allowance for the total of our deferred tax assets. SFAS No. 109 requires a valuation allowance be established when it is "more likely than not" that all or a portion of deferred tax assets will not be realized. During the period from 2005 through 2008, we achieved increasing profitability and utilized all of our federal net operating loss carry forwards. Each quarter, we analyze each deferred tax asset to determine the amount that is more likely than not to be realized, based upon the weight of available evidence, and adjust the valuation allowance to the amount of deferred taxes that do not meet the criteria for recognition under SFAS No. 109. Currently, we only maintain a valuation allowance with respect to certain state and foreign net operating losses that may not be recovered.

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In fiscal 2008, we adopted the provisions of FIN 48, "Accounting for Uncertainty in Income Taxes – an Interpretation of FASB Statement No. 109," (FIN 48) as of the beginning of fiscal 2008. FIN 48 requires application of a more likely than not threshold to the recognition and derecognition of uncertain tax positions. FIN 48 requires us to recognize the amount of tax benefit that has a greater than 50 percent likelihood of being ultimately realized upon settlement. It further requires that a change in judgment related to the expected ultimate resolution of uncertain tax positions be recognized in earnings in the quarter of such change. Prior to adoption, our policy was to establish reserves that reflected the probable outcome of known tax contingencies.

Inventory Valuation. We value our inventory at the lower of cost or net realizable value. Costs for approximately 80% of inventory is determined on an average cost basis with the remainder determined on a first-in, first-out (FIFO) basis. The write-down is primarily based on historical inventory usage adjusted for expected changes in product demand and production requirements. However, our industry is characterized by customers in highly cyclical industries, rapid technological changes, frequent new product developments and rapid product obsolescence. Changes in demand for our products and product mix could result in further write-downs.

Allowance for Doubtful Accounts. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. This allowance is based on historical experience, credit evaluations, specific customer collection history and any customer-specific issues we have identified. Since a significant portion of our revenue is derived from the sale of high-value systems, our accounts receivable are often concentrated in a relatively few number of customers. A significant change in the liquidity or financial position of any one of these customers could have a material adverse impact on the collectibility of our accounts receivable and our future operating results.

Warranty. We provide a limited warranty, generally for 12 to 24 months, to our customers. A provision for the estimated cost of providing warranty coverage is recorded upon shipment of all systems. On occasion, we have been required and may be required in the future to provide additional warranty coverage to ensure that the systems are ultimately accepted or to maintain customer goodwill. While our warranty costs have historically been within our expectations and we believe that the amounts accrued for warranty expenditures are sufficient for all systems sold through March 31, 2009, we cannot guarantee that we will continue to experience a similar level of predictability with regard to warranty costs. In addition, technological changes or previously unknown defects in raw materials or components may result in more extensive and frequent warranty service than anticipated, which could result in an increase in our warranty expense.

Impairment of Long-lived Assets. We periodically evaluate whether events and circumstances have occurred that indicate the estimated useful lives of long-lived assets or intangible assets may warrant revision or that the remaining balance may not be recoverable. Goodwill is also tested for impairment at least annually. When factors indicate that

an asset should be evaluated for possible impairment, we use an estimate of the related undiscounted net cash flows generated by the asset over the remaining estimated life of the asset in measuring whether the asset is recoverable. We make judgments and estimates used in establishing the carrying value of long-lived or intangible assets. Those judgments and estimates could be modified if adverse changes occurred in the future resulting in an inability to recover the carrying value of these assets. For the quarter ended March 31, 2009, we recorded impairment in our Bruce operations due to the existing and projected downturn of the semiconductor industry resulting in recent operating losses and deterioration in forecasted revenue and earnings in the Bruce operation. We did not experience any impairment to long-lived assets during fiscal 2008. Future adverse changes could be caused by, among other factors, a downturn in the industries served, a general economic slowdown, reduced demand for our products in the marketplace, poor operating results, the inability to protect intellectual property or changing technologies and product obsolescence.

Impact of Recently Issued Accounting Pronouncements

For discussion of the impact of recently issued accounting pronouncements, see “Item 1: Financial Information” under “Impact of Recently Issued Accounting Pronouncements”.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks, including changes in foreign currency exchange rates and interest rates. Our operations in the United States are conducted in U.S. dollars. Our operations in Europe, a component of the Solar and Semiconductor Equipment Segment, conduct business primarily in the Euro, but also sell products in Asia in the U.S. dollar. The functional currency of our European operations is the Euro. Nearly all of the transactions, assets and liabilities of all other operating units are denominated in the U.S. dollar, their functional currency. The following disclosures about market risk should be read in conjunction with the more in depth discussion in Item 7A, “Quantitative and Qualitative Disclosures About Market Risk” in our Annual Report on Form 10-K for the fiscal year ended September 30, 2008.

As of March 31, 2009, we did not hold any stand-alone or separate derivative instruments. We incurred net foreign currency transaction gains or losses of less than \$0.1 million during the three and six month periods ended March 31, 2009 and 2008. As of March 31, 2009, our foreign subsidiaries had \$1.3 million of net assets (cash, receivables and amounts due to our foreign subsidiaries by our U.S. companies offset by minor amounts of accounts payable) denominated in currencies other than the functional currency. A 10% change in the value of the functional currency relative to the other currencies would result in gains or losses of approximately \$0.1 million.

During the six months ended March 31, 2009 we incurred foreign currency translation losses, a component of comprehensive income (loss) which was a direct adjustment to stockholders’ equity, of \$2.7 million due to the strengthening of the U.S. dollar relative to the Euro. Our net investment in and long-term advances to our foreign operations totaled \$40.6 million as of March 31, 2009. A 10% change in the value of the Euro relative to the U.S. dollar would cause a foreign currency translation adjustment of approximately \$4.1 million.

During the six months ended March 31, 2009, our European operations transacted U.S. dollar denominated sales and purchases of \$4.0 million and \$2.1 million, respectively. As of March 31, 2009, sales commitments denominated in a currency other than the function currency of our transacting operation totaled less than \$0.1 million. A 10% change in the relevant exchange rates between the time the order was taken and the time of shipment would cause our gross profit on such orders to be no more than \$0.1 million greater than or less than expected on the date the order was taken.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, including the Chief Executive Officer (“CEO”) and the Chief Financial Officer (“CFO”), has carried out an evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2009, pursuant to Exchange Act Rules 13a-15(e) and 15(d)-15(e). Based upon that evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures in place are effective.

Changes in Internal Control Over Financial Reporting

There has been no change in Amtech’s internal control over financial reporting during the first three months ended March 31, 2009 that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

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PART II. OTHER INFORMATION

Item 4. Submission of Matters to a Vote of Security Holders

Election of Directors

At our annual shareholders’ meeting, which was held on March 12, 2009, all nominees standing for election as directors were elected to serve for one year terms or until their successors are elected and qualified. The following chart indicates the number of votes cast for and the number of votes withheld with respect to each nominee for director:

Nominee(1)	For	Withheld
Jong S. Whang	4,591,067	2,491,522
Michael Garnreiter	4,590,510	2,492,079
Alfred W. Giese	4,614,738	2,467,851
Brian L. Hoekstra	4,623,834	2,458,755
Robert F. King	4,658,065	2,459,524

(1) Abstentions were not counted in the election of the directors.

Item 6. Exhibits

31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended	*

32.1 Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 *

32.2 Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 *

* Filed herewith.

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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.

AMTECH SYSTEMS, INC.

By /s/ Robert T. Hass

Dated: May 11, 2009

Robert T. Hass
Chief Accounting Officer
(Principal Accounting Officer)

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EXHIBIT INDEX

Exhibit Number	Description	Page or Method of Filing
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32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	*

* Filed herewith.

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AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Jong S. Whang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the "registrant"),
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By /s/ Jong S. Whang
Jong S. Whang
President and Chief Executive Officer
Amtech Systems, Inc.
Date: May 11, 2009

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Bradley C. Anderson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the "registrant"),
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By /s/ Bradley C. Anderson

Bradley C. Anderson
Chief Financial Officer
Amtech Systems, Inc.
Date: May 11, 2009

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

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

In connection with the Quarterly Report of Amtech Systems, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jong S. Whang, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

By /s/ Jong S. Whang
Jong S. Whang
President and Chief Executive Officer
Date: May 11, 2009

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

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

In connection with the Quarterly Report of Amtech Systems, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Bradley C. Anderson, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

By /s/ Bradley C. Anderson

Bradley C. Anderson
Chief Financial Officer

Date: May 11, 2009
