

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the quarterly period ended March 31, 2004.

[] 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: 000-26966

ADVANCED ENERGY INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	84-0846841
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1625 Sharp Point Drive, Fort Collins, CO	80525
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (970) 221-4670

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 [X] No []

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes [X] No []

As of April 28, 2004, there were 32,639,254 shares of the Registrant's Common Stock, par value \$0.001 per share, outstanding.

ADVANCED ENERGY INDUSTRIES, INC.
FORM 10-Q
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PART I FINANCIAL INFORMATION
ITEM 1. UNAUDITED FINANCIAL STATEMENTS
ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)

	March 31, 2004 (Unaudited)	December 31, 2003 (Unaudited)
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 43,996	\$ 41,522
Marketable securities, available-for-sale	84,045	93,691
Accounts receivable, net	79,013	61,927
Income tax receivable	465	151
Inventories	72,148	65,703
Other current assets	3,827	5,486
	<hr/>	<hr/>
Total current assets	283,494	268,480
PROPERTY AND EQUIPMENT, net	45,273	44,725
OTHER ASSETS:		
Deposits and other	6,306	5,630
Goodwill and intangibles, net	86,529	88,943
Demonstration and customer service equipment, net	4,266	3,934
Deferred debt issuance costs, net	2,765	3,019
	<hr/>	<hr/>
Total assets	\$428,633	\$414,731
	<hr/>	<hr/>
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade accounts payable	\$ 33,072	\$ 23,066
Accrued payroll and employee benefits	9,385	7,953
Other accrued expenses	14,806	17,311
Customer deposits and deferred revenue	1,855	2,952
Capital lease obligations, current portion	433	554
Senior borrowings, current portion	7,806	8,028
Accrued interest payable on convertible subordinated notes	1,810	2,460
	<hr/>	<hr/>
Total current liabilities	69,167	62,324
LONG-TERM LIABILITIES:		
Capital leases, net of current portion	270	263
Senior borrowings, net of current portion	4,665	5,905
Deferred income tax liabilities, net	4,787	4,672
Convertible subordinated notes payable	187,718	187,718
Other long-term liabilities	2,095	2,015
	<hr/>	<hr/>
Total long-term liabilities	199,535	200,573
	<hr/>	<hr/>
Total liabilities	268,702	262,897
STOCKHOLDERS' EQUITY	159,931	151,834
	<hr/>	<hr/>
Total liabilities and stockholders' equity	\$428,633	\$414,731
	<hr/>	<hr/>

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Three Months Ended March 31,	
	2004	2003
	(Unaudited)	(Unaudited)
SALES	\$104,487	\$ 56,158
COST OF SALES	66,073	38,208
	<hr/>	<hr/>
Gross profit	38,414	17,950
OPERATING EXPENSES:		
Research and development	13,410	13,367
Sales and marketing	8,037	8,330
General and administrative	6,937	5,629
Restructuring charges	220	1,509
	<hr/>	<hr/>
Total operating expenses	28,604	28,835
	<hr/>	<hr/>
INCOME (LOSS) FROM OPERATIONS	9,810	(10,885)
OTHER INCOME (EXPENSE):		
Interest income	429	520
Interest expense	(2,788)	(2,866)
Foreign currency gain (loss)	101	(78)
Other income (expense), net	1,103	(326)
	<hr/>	<hr/>
	(1,155)	(2,750)
	<hr/>	<hr/>
Income (loss) before income taxes	8,655	(13,635)
(PROVISION) BENEFIT FOR INCOME TAXES	(1,731)	5,045
	<hr/>	<hr/>
NET INCOME (LOSS)	\$ 6,924	\$ (8,590)
	<hr/>	<hr/>
BASIC INCOME (LOSS) PER SHARE	\$ 0.21	\$ (0.27)
	<hr/>	<hr/>
DILUTED INCOME (LOSS) PER SHARE	\$ 0.21	\$ (0.27)
	<hr/>	<hr/>
BASIC WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,581	32,159
	<hr/>	<hr/>
DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	33,593	32,159
	<hr/>	<hr/>

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (In thousands)

	Three Months Ended March 31,	
	2004 (Unaudited)	2003 (Unaudited)
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	\$ 6,924	\$ (8,590)
Adjustments to reconcile net income (loss) to net cash used in operating activities —		
Depreciation and amortization	4,821	6,192
Amortization of deferred debt issuance costs	275	276
Amortization of deferred compensation	60	122
Provision (benefit) for deferred income taxes	856	(5,818)
Impairment of investment	—	175
Loss on disposal of property and equipment	187	631
Gain on sale of Noah chiller assets	(404)	—
Gain on sale of marketable security investment	(703)	—
Changes in operating assets and liabilities —		
Accounts receivable, net	(16,922)	2,892
Inventories	(7,106)	1,502
Other current assets	1,634	1,486
Deposits and other	412	199
Demonstration and customer service equipment	(863)	(2,412)
Trade accounts payable	9,679	(1,584)
Accrued payroll and employee benefits	1,394	(144)
Customer deposits and other accrued expenses	(6,524)	(526)
Income taxes payable/receivable, net	1,936	1,020
	<hr/>	<hr/>
Net changes in operating assets and liabilities	(16,360)	2,433
	<hr/>	<hr/>
Net cash used in operating activities	(4,344)	(4,579)
	<hr/>	<hr/>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Marketable securities transactions	9,746	(373)
Purchase of property and equipment	(3,831)	(3,412)
Cash proceeds from sale of Noah chiller assets	797	—
Proceeds from sale of marketable security investment	1,291	—
Settlement of acquisition related escrow	—	(1,675)
	<hr/>	<hr/>
Net cash provided by (used in) investing activities	8,003	(5,460)
	<hr/>	<hr/>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on notes payable and capital lease obligations	(1,962)	(2,332)
Proceeds from common stock transactions	374	351
	<hr/>	<hr/>
Net cash used in financing activities	(1,588)	(1,981)
	<hr/>	<hr/>
EFFECT OF CURRENCY TRANSLATION ON CASH	403	134
	<hr/>	<hr/>
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	2,474	(11,886)
CASH AND CASH EQUIVALENTS, beginning of period	41,522	70,188
	<hr/>	<hr/>
CASH AND CASH EQUIVALENTS, end of period	\$ 43,996	\$ 58,302
	<hr/>	<hr/>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	\$ 3,112	\$ 3,328
	<hr/>	<hr/>
Cash received from income taxes, net	\$ 1,169	\$ 319
	<hr/>	<hr/>

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

ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

(1) BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

In the opinion of management, the accompanying interim unaudited condensed consolidated balance sheets, statements of operations and cash flows contain all adjustments necessary to present fairly the financial position of Advanced Energy Industries, Inc., a Delaware corporation, and its wholly owned subsidiaries (the “Company”) at March 31, 2004 and December 31, 2003, and the results of their operations and cash flows for the three-month periods ended March 31, 2004 and 2003.

The unaudited financial statements presented herein have been prepared in accordance with the instructions to Form 10-Q and do not include all the information and note disclosures required by accounting principles generally accepted in the United States. The financial statements should be read in conjunction with the audited financial statements and notes thereto contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2003, filed February 24, 2004.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires the Company’s 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 revenue and expenses during the reporting period. Significant estimates are used when establishing allowances for doubtful accounts, determining useful lives for depreciation and amortization, assessing the need for impairment charges, establishing restructuring accruals and warranty reserves, allocating purchase price among the fair values of assets acquired and liabilities assumed, accounting for income taxes, and assessing excess and obsolete inventory and various other items. The Company evaluates these estimates and judgments on an ongoing basis and bases its estimates on historical experience, current conditions and various other assumptions that are believed to be reasonable under the circumstances. The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Actual results may differ from these estimates under different assumptions or conditions.

GOODWILL AND INTANGIBLES — Goodwill and certain other intangible assets with indefinite lives, if any, are not amortized. Instead, goodwill and other indefinite-lived intangible assets are subject to periodic (at least annual) tests for impairment. For the periods presented, the Company does not have any indefinite-lived intangible assets, other than goodwill. Impairment testing is performed in two steps: (i) the Company assesses goodwill for a potential impairment loss by comparing the fair value of its reporting unit with its carrying value, and (ii) if an impairment is indicated because the reporting unit’s fair value is less than its carrying amount, the Company measures the amount of impairment loss by comparing the implied fair value of goodwill with the carrying amount of that goodwill.

During 2003, the Company began integrating the operations of its prior stand-alone entities by consolidating certain manufacturing facilities and product groups, thereby transitioning the manufacturing of a portion of its products from previously recognized reporting units to common facilities. As the Company’s products possess similar economic characteristics, production processes, customer types and methods to distribute products and provide services, the Company’s management reviews financial information at the consolidated level. As a result, the Company reorganized into a single reporting unit during 2003.

In the fourth quarter of 2003, the Company performed its annual goodwill impairment test, and concluded that the estimated fair value of the Company’s reporting unit exceeded its carrying amount and

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no impairment of goodwill was indicated. As the Company is required to perform the test for impairment at least annually and economic and industry conditions remain uncertain, it is possible that a future test may indicate impairment, and the amount of the impairment may be material to the Company.

Goodwill and identifiable intangible assets consisted of the following as of December 31, 2003:

	Gross Carrying Amount	Accumulated Amortization	Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted- average Useful Life
(In thousands, except weighted-average useful life)					
Amortizable intangibles:					
Technology-based	\$ 7,304	\$ (3,906)	\$ 1,544	\$ 4,942	6
Contract-based	9,210	(5,882)	1,709	5,037	4
Other	8,500	(1,409)	2,363	9,454	17
Total amortizable intangibles	25,014	(11,197)	5,616	19,433	11
Goodwill	58,629	—	10,881	69,510	
Total goodwill and intangibles	\$83,643	\$(11,197)	\$16,497	\$88,943	

Goodwill and identifiable intangible assets consisted of the following as of March 31, 2004:

	Gross Carrying Amount	Accumulated Amortization	Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted- average Useful Life
(In thousands, except weighted-average useful life)					
Amortizable intangibles:					
Technology-based	\$ 7,304	\$ (4,256)	\$ 1,564	\$ 4,612	6
Contract-based	7,446	(5,373)	1,658	3,731	4
Other	8,500	(1,646)	2,553	9,407	18
Total amortizable intangibles	23,250	(11,275)	5,775	17,750	12
Goodwill	57,285	—	11,494	68,779	
Total goodwill and intangibles	\$80,535	\$(11,275)	\$17,269	\$86,529	

Aggregate amortization expense related to other intangibles for the three-month periods ended March 31, 2004 and 2003 was \$1.2 million and \$1.1 million, respectively. Estimated amortization expense related to the Company's acquired intangibles fluctuates with changes in foreign currency exchange rates between the U.S. dollar and the Japanese yen and the euro. Estimated amortization expense related to acquired intangibles for each of the five years 2004 through 2008 is as follows:

	(In thousands)
2004	\$4,534
2005	4,452
2006	2,212
2007	1,018
2008	825

REVENUE RECOGNITION — The Company generally recognizes revenue upon shipment of its products and spare parts, at which time title passes to the customer, as the Company's shipping terms are FOB shipping point, the price is fixed or determinable and collectability is reasonably assured. Generally, the Company does not have obligations to its customers after its products are shipped other than pursuant to warranty obligations. In limited instances the Company provides installation of its products. In such circumstances in accordance with Emerging Issues Task Force Issue 00-21 "Accounting for Revenue Arrangements With Multiple Deliverables", the Company allocates revenue based on the fair value of the delivered item, generally the product, and the undelivered item, installation, based on their respective fair values. Revenue related to the undelivered item is deferred until the services have been completed. In certain limited instances, some of the Company's customers have negotiated product acceptance provisions relative to specific orders. Under these circumstances the Company defers revenue recognition until the related acceptance provisions have been satisfied. Revenue deferrals are reported as customer deposits and deferred

revenue.

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In certain instances, the Company requires its customers to pay for a portion or all of their purchases prior to the Company building or shipping these products. Cash payments received prior to shipment are recorded as customer deposits and deferred revenue in the accompanying balance sheets, and then recognized as revenue upon shipment of the products. The Company does not offer price protections to its customers or allow returns, unless covered by its normal policy for repair of defective products.

The Company may also deliver products to customers for evaluation purposes. In these arrangements, the customer retains the products for specified periods of time without commitment to purchase. On or before the expiration of the evaluation period, the customer either rejects the product and returns it to the Company, or accepts the product. Upon acceptance, title passes to the customer, the Company invoices the customer for the product, and revenue is recognized. Pending acceptance by the customer, such products are reported on the Company's balance sheet at an estimated value based on the lower of cost or market, and are included in the amount for demonstration and customer service equipment, net of accumulated amortization.

INCOME TAXES — The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." SFAS No. 109 requires deferred tax assets and liabilities to be recognized for temporary differences between the tax basis and financial reporting basis of assets and liabilities, computed at current tax rates, as well as for the expected tax benefit of net operating loss and tax credit carryforwards. During the third quarter of 2003, the Company recorded valuation allowances against certain of its United States and foreign net deferred tax assets in jurisdictions where the Company has incurred significant losses. Given such experience, the Company's management could not conclude that it was more likely than not that these net deferred tax assets would be realized. Accordingly, the Company's management, in accordance with SFAS No. 109, in evaluating the recoverability of these net deferred tax assets, was required to place greater weight on the Company's historical results as compared to projections regarding future taxable income. In the first quarter of 2004, the Company generated income before taxes of approximately \$8.7 million and reversed approximately \$1.3 million of its valuation allowance in the appropriate tax jurisdictions. The Company will continue to evaluate its valuation allowance on a quarterly basis, and may in the future reverse some portion or all of its valuation allowance and recognize a reduction in income tax expense. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity.

When recording acquisitions, the Company has recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. During the first quarter of 2004, approximately \$1.1 million of valuation allowance established in purchase accounting was reversed, with a corresponding reduction in goodwill.

The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income change. Reversals of valuation allowances recorded in purchase accounting are reflected as a reduction of goodwill in the period of reversal.

STOCK-BASED COMPENSATION — At March 31, 2004, the Company had five active stock-based compensation plans, which are more fully described in Note 15 of the Company's Form 10-K for the year ended December 31, 2003. The Company accounts for employee stock-based compensation using the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations. With the exception of certain options granted in 1999 and 2000 by a shareholder of Sekidenko prior to its acquisition by the Company (which was accounted for as a pooling of interests), all options granted under these plans have an exercise price equal to the market value of the underlying common stock on the date of grant, therefore no stock-based compensation cost is reflected in the Company's net income (loss).

Had compensation cost for the Company's plans been determined consistent with the fair value-based method prescribed by SFAS No. 123, "Accounting for Stock-Based Compensation," the Company's net income (loss) would have changed as indicated below:

	Three Months Ended March 31, 2004	Three Months Ended March 31, 2003
	(In thousands, except per share data)	
Net income (loss):		
As reported	\$ 6,924	\$ (8,590)
Adjustment for stock-based compensation determined under fair value-based method for all awards	(2,786)	(3,257)
Less: Compensation expense recognized in net income (loss)	60	122
As adjusted	\$ 4,198	\$(11,725)
Basic income (loss) per share:		
As reported	\$ 0.21	\$ (0.27)
As adjusted	0.13	(0.36)
Diluted income (loss) per share:		
As reported	\$ 0.21	\$ (0.27)
As adjusted	0.12	(0.36)

Compensation expense for the three-month periods ended March 31, 2004 and 2003 is presented prior to income tax effects due to the Company recording valuation allowances against certain deferred tax assets in 2003 (see Income Taxes). Cumulative compensation cost recognized with respect to options that are forfeited prior to vesting is reflected as a reduction of compensation expense in the period of forfeiture. Compensation expense related to awards granted under the Company's employee stock purchase plan is estimated until the period in which settlement occurs, as the number of shares of common stock awarded and the purchase price are not known until settlement.

For SFAS No. 123 purposes, the fair value of each option grant and purchase right granted under the Employee Stock Purchase Plan ("ESPP") are estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Three Months Ended March 31, 2004	Three Months Ended March 31, 2003
OPTIONS:		
Risk-free interest rates	3.07%	2.90%
Expected dividend yield rates	0.0%	0.0%
Expected lives	2.9 years	2.8 years
Expected volatility	76.47%	90.77%
ESPP:		
Risk-free interest rates	1.01%	1.59%
Expected dividend yield rates	0.0%	0.0%
Expected lives	0.5 years	0.5 years
Expected volatility	61.57%	96.59%

Based on the Black-Scholes option pricing model, the weighted-average estimated fair value of employee stock option grants was \$11.32 and \$5.23 for the three-month periods ended March 31, 2004 and 2003, respectively. The weighted-average estimated fair value of purchase rights granted under the ESPP was \$9.10 and \$4.94 for the three-month periods ended March 31, 2004 and 2003, respectively.

WARRANTY POLICY— The Company offers warranty coverage for its products for periods ranging from 12 to 60 months after shipment, with the majority of its products ranging from 18 to 24 months. The Company estimates the anticipated costs of repairing products under warranty based on the historical cost of the repairs and expected failure rates. The assumptions used to estimate warranty accruals are reevaluated periodically in light of actual experience and, when appropriate, the accruals are adjusted. The Company's determination of the appropriate level of warranty accrual is subjective and based on estimates. The industries in which the Company operates are subject to rapid technological change and, as a result, the Company periodically introduces newer, more complex products, which tend to result in increased warranty

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costs. Estimated warranty costs are recorded at the time of sale of the related product, and are considered a cost of sales. The Company recorded warranty charges of \$2.3 million and \$2.1 million for the quarters ended March 31, 2004 and 2003, respectively. The following summarizes the activity in the Company's warranty reserves:

	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
	(In thousands)			
2004	\$6,612	\$2,320	\$(2,421)	\$6,511
2003	\$9,402	\$2,069	\$(3,128)	\$8,343

RESTRUCTURING COSTS — Restructuring charges include the costs associated with actions taken by the Company in response to the downturn in the semiconductor capital equipment industry and as a result of the ongoing execution of the Company's strategy. These charges consist of costs that are incurred to exit an activity or cancel an existing contractual obligation, including the closure of facilities and employee termination related charges.

At the end of 2002, the Company announced major changes in its operations to occur through the end of 2003. These included establishing a new manufacturing facility in China, consolidating worldwide sales forces, a move to Tier 1 suppliers, primarily in Asia, and the intention to close or sell certain facilities. Associated with the above plan, the Company recorded charges totaling approximately \$1.5 million in the first quarter of 2003 primarily associated with manufacturing and administrative personnel headcount reductions in the Company's Japanese operations. In accordance with Japanese labor regulations the Company offered voluntary termination benefits to all of its Japanese employees. The voluntary termination benefits were accepted by 36 employees, with termination dates in the second quarter of 2003.

In the first quarter of 2004, the Company recorded restructuring charges of \$220,000 primarily consisting of the recognition of expense for involuntary employee termination benefits associated with the headcount reduction of approximately 34 employees in the Company's U.S. operations. All effected employees were terminated prior to March 31, 2004.

At March 31, 2004, and December 31, 2003, outstanding restructuring liabilities were approximately \$1.7 million and \$3.2 million, respectively.

The following table summarizes the components of the restructuring charges, the payments and non-cash charges, and the remaining accrual as of March 31, 2004:

	Employee Severance and Termination Costs	Facility Closure Costs	Total Restructuring Charges
	(In thousands)		
Accrual balance December 31, 2002	\$ 1,607	\$ 4,382	\$ 5,989
First quarter 2003 restructuring charge	1,509	—	1,509
Second quarter 2003 restructuring charge	670	98	768
Third quarter 2003 restructuring charge	704	307	1,011
Fourth quarter 2003 restructuring charge	994	24	1,018
Total restructuring charges 2003	3,877	429	4,306
Payments in 2003	(4,924)	(2,196)	(7,120)
Accrual balance December 31, 2003	560	2,615	3,175
First quarter 2004 restructuring charge	220	—	220
Payments in 2004	(600)	(1,092)	(1,692)
Accrual balance March 31, 2004	\$ 180	\$ 1,523	\$ 1,703

FOREIGN CURRENCY TRANSLATION — The functional currency of the Company's foreign subsidiaries is their local currency. Assets and liabilities of international subsidiaries are translated to United States dollars at period-end exchange rates, and statement of operations activity and cash flows are

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translated at average exchange rates during the period. Resulting translation adjustments are recorded as a separate component of stockholders' equity.

Transactions denominated in currencies other than the local currency are recorded based on exchange rates in effect at the time such transactions arise. Subsequent changes in exchange rates result in foreign currency transaction gains and losses which are reflected in income as unrealized (based on period-end translation) or realized (upon settlement of the transactions). Unrealized transaction gains and losses applicable to permanent investments by the Company in its foreign subsidiaries are included as cumulative translation adjustments, and unrealized translation gains or losses applicable to non-permanent intercompany receivables from or payables to the Company and its foreign subsidiaries are included in income.

The Company recognized a foreign currency gain of approximately \$101,000 for the three-month period ended March 31, 2004 and a loss of approximately \$78,000 for the three-month period ended March 31, 2003.

EARNINGS PER SHARE — Basic Earnings Per Share ("EPS") is computed by dividing income (loss) available to common stockholders by the weighted-average number of common shares outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS except that the numerator is increased to exclude certain charges which would not have been incurred, and the denominator is increased to include the number of additional common shares that would have been outstanding (using the if-converted and treasury stock methods), if securities containing potentially dilutive common shares (convertible notes payable and stock options) had been converted to such common shares, and if such assumed conversion is dilutive. For the quarter ended March 31, 2004, certain stock options outstanding and the conversion of the Company's convertible subordinated notes payable were not included in this calculation because to do so would be anti-dilutive. Due to the Company's net loss for the quarter ended March 31, 2003, basic and diluted EPS are the same, as the assumed conversion of all potentially dilutive securities would be anti-dilutive. Potential shares of common stock issuable under options and warrants for common stock at March 31, 2004 and 2003 were approximately 4.2 million and 3.7 million, respectively. Potential shares of common stock issuable upon conversion of the Company's convertible subordinated notes payable were 5.4 million at March 31, 2004 and 2003.

The following is a reconciliation of the numerators and denominators used in the calculation of basic and diluted EPS for the quarters ended March 31, 2004 and 2003:

	March 31, 2004			March 31, 2003		
	Net Income	Shares	Per share Amount	Net Loss	Shares	Per share Amount
	(In thousands, except per share data)					
Basic EPS:						
Net income (loss) attributable to common stock and share amounts	\$6,924	32,581	\$0.21	\$(8,590)	32,159	\$(0.27)
Dilutive securities:						
Stock options	—	1,012	—	—	—	—
Convertible subordinated debt	—	—	—	—	—	—
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Diluted EPS:						
Net income (loss) attributable to common stock and assumed share amounts	\$6,924	33,593	\$0.21	\$(8,590)	32,159	\$(0.27)
	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

RECLASSIFICATIONS — Certain prior period amounts have been reclassified to conform to the current period presentation.

(2) MARKETABLE SECURITIES

MARKETABLE SECURITIES consisted of the following:

	March 31, 2004	December 31, 2003
	(In thousands)	
Commercial paper	\$54,143	\$41,113
Municipal bonds and notes	26,850	46,762
Institutional money markets	3,052	5,816
Total marketable securities	<u>\$84,045</u>	<u>\$93,691</u>

These marketable securities are stated at period-end market value. The commercial paper consists of high credit quality, short-term money market common and preferreds, with maturities or reset dates of 120 days or less.

(3) ACCOUNTS RECEIVABLE – TRADE

ACCOUNTS RECEIVABLE consisted of the following:

	March 31, 2004	December 31, 2003
	(In thousands)	
Domestic	\$30,851	\$17,100
Foreign	45,751	41,359
Allowance for doubtful accounts	<u>(1,541)</u>	<u>(1,303)</u>
Trade accounts receivable	75,061	57,156
Other	<u>3,952</u>	<u>4,771</u>
Total accounts receivable	<u>\$79,013</u>	<u>\$61,927</u>

(4) INVENTORIES

Inventories include costs of materials, direct labor and manufacturing overhead. Inventories are stated at the lower of cost or market, computed on a first-in, first-out basis and are presented net of reserves for obsolete and excess inventory. Inventory is written down or written off when it becomes obsolete, generally because of engineering changes to a product or discontinuance of a product line, or when it is deemed excess. These determinations involve the exercise of significant judgment by management, and as demonstrated in recent periods, demand for the Company's products is volatile and changes in expectations regarding the level of future sales can result in substantial charges against earnings for obsolete and excess inventory. Inventories consisted of the following:

	March 31, 2004	December 31, 2003
	(In thousands)	
Parts and raw materials	\$51,346	\$47,120
Work in process	6,593	4,385
Finished goods	<u>14,209</u>	<u>14,198</u>
Total inventories	<u>\$72,148</u>	<u>\$65,703</u>

(5) STOCKHOLDERS' EQUITY

COMPREHENSIVE INCOME (LOSS) — Comprehensive income (loss) for the Company consists of net income (loss), foreign currency translation adjustments and net unrealized holding gains (losses) on available-for-sale marketable investment securities as presented below:

	Three Months Ended March 31, 2004	Three Months Ended March 31, 2003
	(In thousands)	
Net income (loss), as reported	\$6,924	\$(8,590)
Adjustment to arrive at comprehensive net income (loss), net of taxes:		
Unrealized holding gain (loss) on available-for-sale marketable securities	98	(89)
Cumulative translation adjustments	935	692
Reclassification adjustment for amounts included in net income related to sales of securities	(294)	—
Comprehensive income (loss)	<u>\$7,663</u>	<u>\$(7,987)</u>

STOCKHOLDERS' EQUITY consisted of the following (in thousands, except par value):

	March 31, 2004	December 31, 2003
Common stock, \$0.001 par value, 70,000 shares authorized; 32,598 and 32,573 shares issued and outstanding, respectively	\$ 33	\$ 33
Additional paid-in capital	143,041	142,667
Retained earnings (deficit)	6,876	(48)
Deferred compensation	—	(60)
Unrealized holding gains on available-for-sale securities	1,295	1,491
Cumulative translation adjustments	8,686	7,751
Total stockholders' equity	<u>\$159,931</u>	<u>\$151,834</u>

(6) CONVERTIBLE SUBORDINATED NOTES PAYABLE

The Company has approximately \$121.5 million of 5.0% convertible subordinated notes outstanding ("5.0% Notes"). These notes mature September 1, 2006, with interest payable on March 1st and September 1st of each year. At March 31, 2004, approximately \$500,000 of interest expense related to the 5.0% Notes was accrued as a current liability.

The Company has approximately \$66.2 million of 5.25% convertible subordinated notes outstanding ("5.25% Notes"). These notes mature November 15, 2006, with interest payable on May 15th and November 15th each year. At March 31, 2004, approximately \$1.3 million of interest expense related to the 5.25% Notes was accrued as a current liability.

(7) COMMITMENTS AND CONTINGENCIES

GUARANTEES

The Company has committed to purchase approximately \$13.3 million of parts, components and subassemblies from various suppliers during 2004. These inventory purchase obligations consist of minimum purchase commitments to ensure the Company has an adequate supply of critical components to meet the demand of its customers. The Company believes that these purchase commitments will be consumed in its on-going operations during 2004.

DISPUTES AND LEGAL ACTIONS

The Company is involved in disputes and legal actions arising in the normal course of its business. Historically, the Company's most significant legal actions have involved the application of patent law to complex technologies and intellectual property. The determination of whether such technologies infringe upon the Company's or other's patents is highly subjective. This high level of subjectivity introduces substantial additional risk with regard to the outcome of the Company's disputes and legal actions related to

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intellectual property. While the Company currently believes that the amount of any ultimate potential loss would not be material to the Company's financial position, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on the Company's financial position or reported results of operations in a particular period. An unfavorable decision, particularly in patent litigation, could require material changes in production processes and products or result in the Company's inability to ship products or components found to have violated third-party patent rights. The Company accrues loss contingencies in connection with its litigation when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

In April 2003, the Company filed a claim in the United States District Court for the District of Colorado seeking a declaratory ruling that its new plasma source products Xstream™ With Active Matching Network™ ("Xstream Products") are not in violation of U.S. Patents held by MKS Instruments, Inc. ("MKS"). This case was transferred by the Colorado court to the United States District Court for the district of Delaware for consolidation with a patent infringement suit filed in that court by MKS in May 2003, alleging that the Company's Xstream Products infringe five patents held by MKS. The Company believes that the Delaware court, in its May 2002 judgment in prior litigation between the Company and MKS, clearly defined the limits of the MKS technology. The Company specifically designed its Xstream Products not to infringe MKS's patents, with the advice of a team of independent experts. In February 2004, the Delaware court restated its rulings on the construction of claims in the MKS patents consistent with its holding in the prior litigation. The Company intends to defend vigorously against the MKS complaint. The current patent case has been set for trial in July 2004.

On September 17, 2001, Sierra Applied Sciences, Inc. ("Sierra") filed for declaratory judgment asking the U.S. District Court for the District of Colorado to rule that their products did not infringe the Company's U.S. patent no. 5,718,813 and that the patent was invalid. On March 24, 2003, the Court granted the Company's motion to dismiss the case for lack of subject matter jurisdiction. The Court of Appeals for the Federal Circuit affirmed the dismissal on April 13, 2004 as to all of Sierra's current activities, but remanded for findings related to past sales of older products. Because the volume of sales was immaterial and the products are now obsolete, a motion to dismiss these remaining claims will be presented to the court.

(8) FOREIGN OPERATIONS

The Company has operations in the U.S., Europe and Asia Pacific. The following is a summary of the Company's operations by region:

	Quarters Ended March 31,	
	2004	2003
	(In thousands)	
Sales:		
Originated and sold in the U.S.	\$ 58,802	\$ 29,418
Originated in U.S. and sold outside the U.S.	13,500	6,439
Originated in Europe and sold in the U.S.	112	—
Originated in Europe and sold outside the U.S.	8,512	4,997
Originated in Asia Pacific and sold outside the U.S.	23,561	15,304
	<u>\$104,487</u>	<u>\$ 56,158</u>
Income (loss) from operations:		
U.S.	\$ 3,182	\$ (8,807)
Europe	612	(394)
Asia Pacific	7,386	(2,100)
Intercompany eliminations	(1,370)	416
	<u>\$ 9,810</u>	<u>\$(10,885)</u>
	March 31, 2004	December 31, 2003
Identifiable assets:		
U.S.	\$ 496,545	\$ 424,661
Europe	42,873	48,150
Asia Pacific	252,888	210,585
Intercompany eliminations	(363,673)	(268,665)
	<u>\$ 428,633</u>	<u>\$ 414,731</u>

Intercompany sales among the Company's geographic areas are recorded on the basis of intercompany prices established by the Company.

(9) SUPPLEMENTAL CASH FLOW DISCLOSURES

In the first quarter of 2004, the Company made a strategic decision to further focus its marketing and product support resources on its core competencies and reorient its operating infrastructure towards sustained profitability. As a result, the Company sold its Noah chiller business to an unrelated third party for \$797,000 in cash and a \$1.9 million note receivable due March 31, 2009. The note bears interest at 5.0%, payable annually on March 31. The sale included property and equipment with a book value of approximately \$300,000, inventory of approximately \$1.0 million, goodwill and intangible assets net of accumulated amortization of approximately \$900,000, demonstration and customer service equipment of approximately \$140,000, and estimated warranty obligations of approximately \$140,000. The Company recognized a gain on the sale of \$404,000, which has been recorded as other income and expense in the accompanying condensed consolidated financial statements.

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

Special Note on Forward-Looking Statements

The following discussion contains, in addition to historical information, forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements that are other than historical information are forward-looking statements. For example, statements relating to our beliefs, expectations and plans are forward-looking statements, as are statements that certain actions, conditions or circumstances will continue. Forward-looking statements involve risks and uncertainties, which are difficult to predict and many of which are beyond our control. As a result, our actual results may differ materially from the results discussed in the forward-looking statements. We assume no obligation to update any forward-looking statements or the reasons why our actual results might differ.

Risks and Uncertainties

We have invested significant human and financial resources to establish a manufacturing facility in China and transition our supply base to Tier 1 Asian suppliers, but might not be able to achieve the intended benefits as quickly as anticipated, or at all.

As part of our strategy to reduce our operating cash flow breakeven point we are relying on lower labor and component costs associated with our new China-based manufacturing facility and transition to Tier 1 Asian suppliers. During the transition period, we are operating duplicate manufacturing facilities, which is negatively affecting our gross margin. By the end of 2004, we expect to have transitioned approximately 70% of our Power and Flow Control manufacturing production to China based on current expected demand. This strategy involves significant risks, including:

- Our customers may not accept products manufactured at our Chinese facility;
- Certain major customers have strict “copy exact” requirements which may delay or prevent acceptance of lower-cost components from Tier 1 Asian suppliers;
- We may face health-related risks, such as outbreaks of diseases, in the Asian countries in which we have manufacturing, distribution or sales facilities and the adverse impact of any quarantine or closure of such facilities;
- We may not be able to attract and retain key personnel in our Chinese facility;
- We may incur significant costs to test and repair products manufactured in our China facility to mitigate the risk of shipping lower-quality products to our customers;
- The Chinese government may allow the yuan to float against the U.S. dollar, which could significantly increase our operating costs; and
- Disruption of our United States employee base.

In addition to these risks, we may not be able to successfully comply with China's governmental regulations. The regulatory environment in China is evolving, and officials in the Chinese government often exercise discretion in deciding how to interpret and apply applicable regulations. Consequently, actions by Chinese governmental regulators may limit or adversely affect our ability to conduct business in China.

Our inability to manage these risks among others could significantly impact our goal to reduce our operating cash flow breakeven point, as well as result in significant costs, expenditures, asset impairments and potentially damage our relationships with existing and prospective customers.

We have \$187.7 million of convertible subordinated notes outstanding with maturity dates in the second half of 2006.

Our 5.0% convertible subordinated notes with a principal balance of \$121.5 million are due September 1, 2006, and our 5.25% convertible subordinated notes with a principal balance of \$66.2 million are due November 15, 2006. Our 5.0% notes are convertible into common stock at \$29.83 per share. Our 5.25% notes are convertible into common stock at \$49.53 per share.

We will be required to repay the notes at maturity, unless we refinance the debt or our stock price rises sufficiently above the conversion levels. Repayment of such notes at maturity, if we are required to do so, would have a significant impact on our cash available for operations. Our inability to repay such notes at maturity would give significant rights to the holders of the notes, in preference to our stockholders.

On April 28, 2004, the closing price of our common stock on the Nasdaq National Market was \$14.69 per share.

We might not be able to refinance the notes prior to their maturity on commercially favorable terms, or at all.

At March 31, 2004, our cash, cash equivalents and marketable securities totaled approximately \$128 million reflecting a decrease of \$7.2 million from December 31, 2003. If we are unable to generate sufficient additional cash from operations or a capital offering prior to the maturity of the notes, we will be unable to repay the notes when they become due. If we are unable to repay the notes, the trustee of the notes will have the right to bring judicial proceedings against us to enforce the note holders' rights, including the right to repayment prior and in preference to our common stockholders.

Intellectual property rights are difficult to enforce in China.

Commercial law in China is relatively undeveloped compared to the commercial law in the United States. Limited protection of intellectual property is available under

Chinese law. Consequently, manufacturing our products in China may subject us to an increased risk that unauthorized parties may attempt to copy or otherwise obtain or use our intellectual property. We cannot assure you that we will be able to effectively protect our intellectual property rights or have adequate legal recourse in the event that we encounter difficulties with infringements of our intellectual property under Chinese law.

Our quarterly and annual operating results fluctuate significantly and are difficult to predict.

Beginning in 2001 and through late 2003, demand for our products from the semiconductor capital equipment industry declined substantially from its peak in 2000 and we incurred significant losses each quarter from the second quarter of 2001 through the fourth quarter of 2003. While we were able to generate net income of \$6.9 million in the first quarter of 2004, the markets in which we serve are highly cyclical. Due to the highly cyclical nature of the semiconductor industry we cannot provide assurance that we will be able to maintain sustained profitability. A failure on our part to maintain or increase our revenue and contain our expenditures will cause our liquidity to suffer and could cause the price of our securities to decline.

Fluctuations in our operating results historically have resulted in corresponding changes in the market prices of our securities. Our operating results are affected by a variety of factors, many of which are beyond our control and difficult to predict. These factors include:

- Changes in economic conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;
- The timing and nature of orders placed by our customers;
- The seasonal variations in capital spending by our customers;
- Changes in customers' inventory management practices;
- Customer cancellations of previously placed orders and shipment delays;
- Pricing competition from our competitors;
- Customer demands to reduce prices, enhance features, improve reliability, shorten delivery times and extend payment terms;
- Component shortages or allocations or other factors that change our levels of inventory or substantially increase our spending on inventory or result in manufacturing delays;
- The introduction of new products by us or our competitors;
- Declines in macroeconomic conditions;
- Potential litigation especially regarding intellectual property; and
- Our exposure to currency exchange rate fluctuations between the several functional currencies in foreign locations in which we have operations.

The semiconductor and semiconductor capital equipment industries are highly volatile, which impacts our operating results.

The semiconductor and semiconductor capital equipment industries have historically been cyclical because of sudden changes in demand for semiconductors and manufacturing capacity. The rate of changes in demand, including end demand, is accelerating, and the effect of these changes is occurring sooner, exacerbating the volatility of these cycles. These changes affect the timing and amount of our customers' equipment purchases and investments in new technology, as well as our costs and operations.

During periods of declining demand for semiconductor equipment components, our customers typically reduce purchases, delay delivery of products and cancel orders. We might incur significant charges as we seek to align our cost structure with the reduction in sales. In addition, we might not be able to respond adequately or quickly enough to the declining demand. We may also be required to record significant reserves for excess and obsolete inventory as demand for our products changes. Our inability to reduce costs and the charges resulting from other actions taken in response to changes in demand for our products would adversely affect our operating results.

During periods of growth in the semiconductor and semiconductor capital equipment industries, we might not be able to acquire or develop sufficient manufacturing capacity or components to meet our customers' increasing demand for our products. In addition, we might be required to make substantial capital investments to increase capacity.

During 2001, 2002 and much of 2003, the semiconductor capital equipment industry experienced the steepest cutback in capital equipment purchases in industry history. While we are experiencing an increase in sales to semiconductor capital equipment manufacturers, we cannot be certain that there will be a sustained recovery for the semiconductor industry or that another severe and prolonged downturn will not occur in the near future. A decline in the level of orders as a result of any future downturn or slowdown in the semiconductor industry would harm our business, financial condition and results of operations.

A significant portion of our sales is concentrated among a few customers.

Our ten largest customers accounted for 59% and 53% of our total sales during the three-month periods ended March 31, 2004 and 2003, respectively. Our largest customer, Applied Materials, accounted for 28% of our total sales in the 2004 period and 23% of our total sales in the 2003 period. The loss of any of our significant customers or a material reduction in any of their purchase orders would significantly harm our business, financial condition and results of operations.

Our customers continuously exert pressure on us to reduce our prices and extend payment terms. Given the nature of our customer base and the highly competitive

markets in which we compete, we may be required to issue price concessions to our customers to remain competitive. A ten percent reduction in our historical selling prices could lead to a seven percent or greater decline in gross margin. We may not be able to reduce our other operating expenses in an amount sufficient to offset potential margin declines.

The markets in which we operate are highly competitive.

We face substantial competition, primarily from established companies, some of which have greater financial, marketing and technical resources than we do. Our primary competitors are Celerity Group, Inc.; Comdel; Daihen Corp.; Huettinger Elektronik GmbH; Kyosan Electric Manufacturing Co. Ltd.; MKS Instruments, Inc.; Mykrolis Corp.; Shindengen; and STEC, Inc., a Horiba Group Company. We expect that our competitors will continue to develop new products in direct competition with ours, improve the design and performance of their products and introduce new products with enhanced performance characteristics.

To remain competitive, we must improve and expand our products and product offerings. In addition, we may need to maintain a high level of investment in research and development and expand our sales and marketing efforts, particularly outside of the United States. We might not be able to make the technological advances and investments necessary to remain competitive. Our inability to improve and expand our products and product offerings would have an adverse affect on our sales and results of operations.

We are exposed to risks associated with potential future acquisitions.

Integrating the entities that we may acquire into our business requires a substantial amount of our resources and management time. Moreover, the integration process may result in unforeseen operating difficulties and may require significant financial, operational and managerial resources that would otherwise be available for the operation, development and expansion of our existing business. We cannot assure you that the integration of our acquired entities will be successful or that we will realize the potential financial, operating or other benefits that we expect from these acquisitions.

We may in the future make additional acquisitions of, or significant investments in, businesses with complementary products, services and technologies. Acquisitions involve numerous risks, including but not limited to:

- Diversion of management's attention from other operational matters;
- The inability to realize expected synergies resulting from the acquisition;
- Failure to commercialize purchased technology;
- Significant and unanticipated capital investments required to integrate acquired businesses and technologies;
- Retaining existing customers and strategic partners of acquired companies;
- Increased levels of intangible asset amortization expense;

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- Potential material charges for impairment of acquired intangible assets; and
- Dilution of earnings.

Mergers and acquisitions are inherently subject to multiple significant risks. If we are unable to effectively manage these risks, our business, financial condition and results of operations will be adversely affected.

We might not be able to compete successfully in international markets or meet the service and support needs of our international customers.

For the quarters ended March 31, 2004 and 2003, our sales to customers outside the United States were approximately 43% and 48%, respectively. Our success in competing in international markets is subject to our ability to manage various risks and difficulties, including, but not limited to:

- Our ability to develop relationships with suppliers and other local businesses;
- Compliance with product safety requirements and standards that are different from those of the United States;
- Variations in enforcement of intellectual property and contract rights in different jurisdictions;
- Trade restrictions, political instability, disruptions in financial markets and deterioration of economic conditions;
- The ability to provide sufficient levels of technical support in different locations;
- Collecting past due accounts receivable from foreign customers; and
- Changes in tariffs, taxes and foreign currency exchange rates.

Our ability to implement our business strategies and maintain market share will be compromised if we are unable to manage these and other international risks successfully.

Component shortages exacerbated by our dependence on sole and limited source suppliers could affect our ability to manufacture products and systems and could delay our shipments.

Our business depends on our ability to manufacture products that meet the rapidly changing demands of our customers. Our ability to manufacture depends in part on the timely delivery of parts, components and subassemblies from suppliers. We rely on sole and limited source suppliers for some of our parts, components and subassemblies that are critical to the manufacturing of our products. This reliance involves several risks, including the following:

- The potential inability to obtain an adequate supply of required parts, components or subassemblies;
- The potential for a sole source provider to cease operations;
- Our potential need to fund the operating losses of a sole source provider;

- Reduced control over pricing and timing of delivery of parts, components and subassemblies; and
- The potential inability of our suppliers to develop technologically advanced products to support our growth and development of new products.

If we are unable to successfully qualify additional suppliers and manage relationships with our existing and future suppliers, we will experience shortages of parts, components or subassemblies, increased material costs and shipping delays for our products, which will adversely affect our results of operations and relationships with current and prospective customers.

We are highly dependent on our intellectual property and are exposed to various risks related to legal proceedings and claims.

Our success depends significantly on our proprietary technology. We attempt to protect our intellectual property rights through patents and non-disclosure agreements; however, we might not be able to protect our technology, and competitors might be able to develop similar technology independently. In addition, the laws of some foreign countries might not afford our intellectual property the same protections as do the laws of the United States. Our intellectual property is not protected by patents in several countries in which we do business, and we have limited patent protection in other countries. If we are unable to successfully protect our intellectual property, our results of operations will be adversely affected.

Intellectual property litigation is costly. In May 2003, MKS Instruments, Inc. filed a patent infringement suit against us in the United States District Court in Wilmington, Delaware, alleging that our Xstream™ With Active Matching Network™ products infringe five patents held by MKS. We intend to defend vigorously against the MKS complaint. However, we may incur litigation costs that are material to our financial condition and results of operations to defend against the MKS or any future litigation. Additionally, an adverse determination in the MKS or any future litigation could cause us to lose proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses or alternative technologies from others or prevent us from manufacturing or selling our products and impact future revenue. Any of these events could adversely affect our business, financial condition and results of operations.

We must achieve design wins to retain our existing customers and to obtain new customers.

The constantly changing nature of semiconductor fabrication technology causes equipment manufacturers to continually design new systems. We must work with these manufacturers early in their design cycles to modify our equipment or design new equipment to meet the requirements of their new systems. Manufacturers typically choose one or two vendors to provide the components for use with the early system shipments. Selection as one of these vendors is called a design win. It is critical that we

achieve these design wins in order to retain existing customers and to obtain new customers.

Once a manufacturer chooses a component for use in a particular product, it is likely to retain that component for the life of that product. Our sales and growth could experience material and prolonged adverse effects if we fail to achieve design wins. However, design wins do not always result in substantial sales or profits.

We believe that equipment manufacturers often select their suppliers based on factors such as long-term relationships. Accordingly, we may have difficulty achieving design wins from equipment manufacturers who are not currently customers. In addition, we must compete for design wins for new systems and products of our existing customers, including those with whom we have had long-term relationships. If we are not successful in achieving design wins our sales and results of operations will be adversely impacted.

Our success depends upon our ability to attract and retain key personnel.

Our success depends in large part upon our ability to attract, retain and motivate key employees, including our senior management team and our technical, marketing and sales personnel. We do not have employment agreements with any of our executive officers or other key employees. These employees may voluntarily terminate their employment with us at any time. In recent years, we have experienced turnover in key management positions such as the chief operating officer. The process of hiring employees with the combination of skills and attributes required to carry out our strategy can be extremely competitive and time consuming. We may not be able to successfully retain existing personnel or identify, hire and integrate new personnel. If we lose the services of key personnel for any reason, including retirement, or are unable to attract additional qualified personnel, our business, financial condition and results of operations will be adversely affected. Additionally, we do not maintain key-person life insurance policies on our executive officers.

Warranty costs on certain products may be in excess of historical experience.

In recent years, we have experienced higher than expected levels of warranty costs on certain products. We have been required to repair, rework and, in some cases, replace these products. Our warranty costs generally increase when we introduce newer, more complex products. We recorded warranty expense of approximately \$2.3 million and \$2.1 million for the quarters ended March 31, 2004 and 2003, respectively. If such levels of warranty costs persist or increase in the future, our financial condition and results of operations will be adversely affected.

We are subject to numerous governmental regulations.

We are subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of our

products and control systems. We might incur significant costs as we seek to ensure that our products meet safety and emissions standards, many of which vary across the states and countries in which our products are used. In the past, we have invested significant resources to redesign our products to comply with these directives. We believe we are in compliance with current applicable regulations, directives and standards and have obtained all necessary permits, approvals and authorizations to conduct our business. However, compliance with future regulations, directives and standards could require us to modify or redesign some products, make capital expenditures or incur substantial costs. If we do not comply with current or future regulations, directives and standards:

- We could be subject to fines;
- Our production could be suspended; or
- We could be prohibited from offering particular products in specified markets.

Our inability to comply with current or future regulations, directives and standards will adversely affect our operating results.

Our Chief Executive Officer owns a significant percentage of our outstanding common stock, which could enable him to control our business and affairs.

Douglas S. Schatz, our Chief Executive Officer, owned approximately 33.1% of our common stock outstanding as of April 28, 2004. This stockholding gives Mr. Schatz significant voting power. Depending on the number of shares that abstain or otherwise are not voted on a particular matter, Mr. Schatz may be able to elect all of the members of our board of directors and to control our business affairs for the foreseeable future.

Critical Accounting Policies

The following discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. In preparing our financial statements, we must make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities at the date of our financial statements. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements:

- Valuation of intangible assets and goodwill
- Long-lived assets including intangibles subject to amortization
- Reserve for excess and obsolete inventory
- Reserve for warranty
- Commitments and contingencies

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- Revenue recognition
- Stock-based compensation
- Deferred income taxes

Please see the discussion of critical accounting policies in our Form 10-K for the year ended December 31, 2003, filed with the Securities and Exchange Commission on February 24, 2004.

OVERVIEW

We design, manufacture and support a group of key components and subsystems primarily for vacuum process systems. Our primary products are complex power conversion and control systems. Our products also control the flow of fluids into the process chambers, provide thermal sensing within the chamber, deposit thin-films of diamond-like carbon and clean the chamber. Our customers use our products in plasma-based thin-film processing equipment that is essential to the manufacture of, among other things:

- Semiconductor devices for electronics applications;
- Flat-panel displays for hand-held devices, computer and television screens;
- Compact discs, DVDs and other digital storage media;
- Optical coatings for architectural glass, eyeglasses and solar panels; and
- Industrial laser and medical applications.

We also sell spare parts and repair services worldwide through our customer service and technical support organization.

We provide solutions to a diversity of markets and geographic regions. However, we are focused on the semiconductor capital equipment industry, which accounted for approximately 66% and 59% of our sales in the three-month periods ended March 31, 2004 and 2003, respectively. We expect future sales to the semiconductor capital equipment industry to represent approximately 55% to 70% of our total revenue, depending upon the strength or weakness of industry cycles.

In mid 2003, the semiconductor capital equipment industry entered the early stages of a return to higher product demand and in the first quarter of 2004, we generated net income of approximately \$6.9 million. We are focused on maintaining profitability and achieving operating cash flow breakeven. To achieve this goal, we are in the process of developing a more variable operating model to allow us to remain profitable during industry downturns and continue to be successful during periods of expansion. We are focusing on the following actions:

- Establishing a China-based manufacturing facility; and
- Transitioning a portion of our supply base to Tier 1 Asian suppliers.

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In April 2003, we opened our 88,000 square-foot manufacturing facility in Shenzhen, China. By the end of 2004, we expect to have transitioned approximately 70% of our Power and Flow Control manufacturing production to China, based on current expected demand. During the transition period we are running duplicate manufacturing facilities, which is placing pressure on our gross margin. We expect our gross margin to improve throughout 2004 if industry conditions continue to improve.

We plan to transition approximately 50% of our raw material purchasing to Tier 1 Asian suppliers by the end of 2004. Our biggest obstacle in our Tier 1 supplier initiative is complying with certain major customers' stringent "copy exact" requirements. We are working closely with our largest original equipment manufacturers, or OEM's, to ensure the transition proceeds on schedule. However, our transition goals may prove difficult to realize because of customer needs and product mix.

Management is focused on improving gross and operating margins and believes that when the transition to China-based manufacturing and shift to Tier 1 suppliers is complete our margins will improve. However, with continued competitive pricing pressures a return to historic gross and operating margin levels may be difficult.

Results of Operations

SALES

The following tables summarize net sales and percentages of net sales by customer type for the three-month periods ended March 31, 2004 and 2003:

	Three Months Ended March 31,	
	2004	2003
	(In thousands)	
Semiconductor capital equipment	\$ 68,989	\$33,078
Data storage	8,623	3,883
Flat panel display	10,604	6,686
Advanced product applications	16,271	12,511
	<u>\$104,487</u>	<u>\$56,158</u>

	Three Months Ended March 31,	
	2004	2003
Semiconductor capital equipment	66%	59%
Data storage	8	7
Flat panel display	10	12
Advanced product applications	16	22
	<u>100%</u>	<u>100%</u>

The following tables summarize net sales and percentages of net sales by geographic region for the three-month periods ended March 31, 2004 and 2003:

	Three Months Ended March 31,	
	2004	2003
	(In thousands)	
United States and Canada	\$ 58,914	\$29,418
Europe	15,872	9,442
Asia Pacific	29,414	17,298
Rest of world	287	—
	<u>\$104,487</u>	<u>\$56,158</u>

	Three Months Ended March 31,	
	2004	2003
United States and Canada	57%	52%
Europe	15	17
Asia Pacific	28	31
Rest of world	—	—
	<u>100%</u>	<u>100%</u>

Sales were \$104.5 million in the first three months of 2004 and \$56.2 million in the first three months of 2003, representing an increase of 86%.

According to a leading industry research firm, sales of semiconductor capital equipment have grown at a compounded annual growth rate in excess of 11% over the past 30 years. However, we believe the industry is highly cyclical and is impacted by changes in the macroeconomic environment, changes in semiconductor supply and demand and rapid technological advances in both semiconductor devices and wafer fabrication processes. Our sales from the 2003 period to the 2004 period illustrate this cyclicity. Our sales to the semiconductor capital equipment industry increased by approximately 109% from the first quarter of 2003 to the first quarter of 2004, primarily driven by the recovery of the semiconductor and semiconductor capital equipment industries. Sales to our largest semiconductor capital equipment customers represented the majority of the increased sales volume.

Our sales to the data storage, flat panel display and advanced product applications markets, increased by 122%, 59% and 30%, respectively, from the first quarter of 2003 to the first quarter of 2004. This growth is primarily attributed to market share gains, order trends and the general expansion of end customer products including large flat panel displays, liquid crystal displays, DVD applications and applications dependent upon industrial coatings.

Looking forward to the remainder of 2004, there is no assurance that our revenue may remain consistent with the first quarter of 2004 level or increase due to the continued recovery of the semiconductor capital equipment industry. Changes in the macroeconomic environment, and semiconductor supply and demand, among other changes that are beyond our control, introduce significant volatility into our forecasts. Our average selling prices may also decline across all of our markets due to cost reduction initiatives by our major customers.

GROSS MARGIN

Our gross margin was 36.8% in the first quarter of 2004 and 32.0% in the first quarter of 2003. Our gross margin improved from the 2003 period to the 2004 period primarily due to our cost reduction measures, including our ongoing efforts to transition a portion of our manufacturing capacity to China and our supply base to Tier 1 Asian suppliers, as well as improved absorption due to the higher sales base; however, the transition of a portion of our manufacturing capacity to China has required us to operate duplicative manufacturing facilities which during the 2004 quarter impacted our gross margin. While

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we expect the transition of a portion of our production to China and our move to Tier 1 Asian suppliers will improve our gross margins in future periods, factors that could cause our gross margins to be negatively impacted include, but are not limited to the following:

- Continued pricing pressure from our major customers;
- Costs associated with transitioning a portion of our production to our new China facility, including costs incurred to operate duplicate manufacturing facilities;
- Unanticipated costs to comply with our customers' "copy exact" requirements, especially related to our China transition and move to Tier 1 Asian suppliers;
- Cost reduction programs initiated by semiconductor manufacturers and semiconductor capital equipment manufacturers that negatively impact our average selling price;
- Warranty costs in excess of historical rates and our expectations;
- Increased levels of excess and obsolete inventory, either due to market conditions, the introduction of new products by our competitors, or our decision to discontinue certain product lines; and
- Changes in foreign currency exchange rates that might affect our costs.

We recognized charges for excess and obsolete inventory of approximately \$584,000 and \$462,000 in the first quarter of 2004 and 2003, respectively. Our warranty charges in the first quarter of 2004 and 2003 were approximately \$2.3 million and \$2.1 million, respectively. Taken together, these charges represented approximately 2.8% and 4.5% of sales during the 2004 and 2003 first quarters, respectively.

Other items affecting our gross margin in these periods follow:

- In the first quarter of 2003 the semiconductor industry continued to experience the most severe downturn in its history. As a result the absorption of fixed costs was negatively impacted by our lower sales level.
- The semiconductor industry is moving to 300mm wafers and smaller line widths. Typical of products early in their life cycle and at low production levels, these products have lower margins than our established products.
- We incurred warranty expense in excess of our expectations related to certain products, which required substantial rework, repair, and in some cases, replacement. The development of these products in 1999 and 2000 was accelerated to meet pressing customer needs in the midst of historically high product demand. During 2003 a significant portion of our warranty reserves were used to address these products.

The following summarizes the activity in our warranty reserve during the first quarter of 2004 and 2003:

	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
			(In thousands)	
2004	\$6,612	\$2,320	\$(2,421)	\$6,511
2003	\$9,402	\$2,069	\$(3,128)	\$8,343

RESEARCH AND DEVELOPMENT EXPENSES

The market for our subsystems for vacuum process systems and related accessories is characterized by ongoing technological changes. We believe that continued and timely development of new products and enhancements to existing products to support OEM requirements is necessary for us to maintain a competitive position in the markets we serve. Accordingly, we devote a significant portion of our personnel and financial resources to research and development projects and seek to maintain close relationships with our customers and other industry leaders in order to remain responsive to their product requirements. We believe that the continued investment in research and development and ongoing development of new products are essential to the expansion of our markets, and expect to continue to make significant investments in research and development activities. Since our inception, all of our research and development costs have been expensed as incurred.

Our research and development expenses were \$13.4 million in the first three months of 2004 and 2003. As a percentage of sales, research and development expenses decreased from 23.8% in the first quarter of 2003 to 12.8% in the first quarter of 2004, due to the higher sales base. We expect our 2004 quarterly research and development expenses, in dollar terms, to be in line with the first quarter of 2004.

SALES AND MARKETING EXPENSES

We continue to rationalize our sales and marketing functions with current industry conditions, while at the same time striving to increase market share and net sales. We have continued the effort to market directly to end users of our products, in addition to our traditional marketing to manufacturers of plasma-based equipment. Our sales and marketing expenses support domestic and international sales and marketing activities that include personnel, trade shows, advertising, and other selling and marketing activities.

Sales and marketing expenses were \$8.0 million the first three months of 2004 and \$8.3 million in the first three months of 2003. The 3.5% decrease in sales and marketing expenses from the 2003 quarter to the 2004 quarter was primarily due to a reduction of our sales and marketing headcount and investment in demonstration and customer service equipment, partially offset by the variable component of sales commissions. As a percentage of sales, sales and marketing expenses decreased from 14.8% in the first three months of 2003 to 7.7% in the first three months of 2004 due to our cost reduction measures and the higher sales base. We expect our quarterly sales and marketing

expenses in 2004 to be in line with the first quarter of 2004.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses support our worldwide corporate, legal, patent, tax, financial, corporate governance, administrative, information systems and human resource functions in addition to our general management. General and administrative expenses were \$6.9 million in the first three months of 2004 and \$5.6 million in the first three months of 2003. The 23.2% increase in general and administrative expense from the 2003 period to the 2004 period was primarily due to legal fees associated with our ongoing patent litigation, increased health insurance premiums, and salary increases. As a percentage of sales, general and administrative expenses decreased from 10.0% in the first quarter of 2003 to 6.6% in the first quarter of 2004 due to the higher sales base. We expect our quarterly general and administrative expenses in 2004 to be in line with, or slightly above, the first quarter of 2004.

RESTRUCTURING CHARGES

At the end of 2002, we announced major changes in our operations to occur through the end of 2003. These included establishing a new manufacturing facility in China, consolidating worldwide sales forces, a move to Tier 1 suppliers, primarily in Asia, and the intention to close or sell certain facilities. Associated with the above plan, we recorded charges totaling approximately \$1.5 million in the first quarter of 2003 primarily associated with manufacturing and administrative personnel headcount reductions in our Japanese operations. In accordance with Japanese labor regulations we offered voluntary termination benefits to all of our Japanese employees. The voluntary termination benefits were accepted by 36 employees, with termination dates in the second quarter of 2003.

In the first quarter of 2004, we recorded restructuring charges of approximately \$220,000 primarily consisting of the recognition of expense for involuntary employee termination benefits associated with the headcount reduction of approximately 34 employees in our U.S. operations. All effected employees were terminated prior to March 31, 2004.

OTHER INCOME (EXPENSE)

Other income (expense) consists primarily of interest income and expense, foreign currency exchange gains and losses and other miscellaneous gains, losses, income and expense items.

Interest income was \$429,000 in the first three months of 2004 and \$520,000 in the first three months of 2003. The decrease in interest income was due to our lower level of investment in marketable securities resulting from our use of a portion of our cash reserves to fund our operations and invest in our Chinese manufacturing facility.

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Interest expense consists principally of interest on our convertible subordinated notes, on borrowings under capital lease facilities and senior debt, and amortization of our deferred debt issuance costs. Interest expense was approximately \$2.8 million in the first three months of 2004 and \$2.9 million in the first three months of 2003. The decrease in interest expense was primarily due to the repayment of a portion of our senior debt.

Our foreign subsidiaries' sales are primarily denominated in currencies other than the U.S. dollar. We recorded a net foreign currency gain of \$101,000 in the first three months of 2004 and a loss of \$78,000 in the first three months of 2003.

Other income was \$1.1 million in the first three months of 2004 and primarily consisted of the sale of a portion of a marketable equity security for a gain of approximately \$700,000, and the sale of our Noah chiller business for a gain of approximately \$400,000. Other expense was \$326,000 in the first three months of 2003 and consisted primarily of a \$175,000 other than temporary decline in value impairment of a marketable equity security.

(PROVISION) BENEFIT FOR INCOME TAXES

The income tax provision for the first three months of 2004 was \$1.7 million and represented an effective tax rate of approximately 20%, and relates to taxable income generated in foreign jurisdictions. The income tax benefit for the first three months of 2003 was \$5.0 million and represented an effective rate of 37%.

During the third quarter of 2003, we recorded valuation allowances against certain of our United States and foreign net deferred tax assets in jurisdictions where we have incurred significant losses. Given such experience, management could not conclude that it was more likely than not that these net deferred tax assets would be realized. Accordingly, management, in accordance with SFAS No. 109, in evaluating the recoverability of these net deferred tax assets, was required to place greater weight on our historical results as compared to projections regarding future taxable income. In the first quarter of 2004, we generated income before taxes of approximately \$8.7 million and reversed approximately \$1.3 million of our valuation allowance in the appropriate tax jurisdictions. We will continue to evaluate the valuation allowance on a quarterly basis, and may in the future reverse some portion or all of our valuation allowance and recognize a reduction in income tax expense. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity.

When recording acquisitions, we have recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. During the first quarter of 2004, approximately \$1.1 million of valuation allowance established in purchase accounting was reversed, with a corresponding reduction in goodwill.

The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Reversals of valuation allowances recorded in purchase accounting are reflected as a reduction of goodwill in the period of reversal.

Due to the valuation allowances we recorded in 2003, and expectations of taxable income in foreign jurisdictions, we expect our 2004 effective tax rate to be approximately 15% to 25%, subject to variations in the relative earnings or losses in the tax jurisdictions in which we have operations.

Liquidity and Capital Resources

At March 31, 2004, our principle sources of liquidity consisted of cash, cash equivalents and marketable securities of \$128.0 million, and a credit facility consisting of a \$25.0 million revolving line of credit, none of which was outstanding at March 31, 2004. Advances under the revolving line of credit would bear interest at the prime rate (4.0% at April 28, 2004) minus 1%. Any advances under this revolving line of credit will be due and payable in May 2004. We are subject to covenants on our line of credit that provide certain restrictions related to working capital, net worth, acquisitions and payment and declaration of dividends. We were in compliance with all such covenants at March 31, 2004. We expect to enter into a new one-year revolving line of credit during the second quarter of 2004.

During the first quarter of 2004, our cash, cash equivalents and marketable securities decreased \$7.2 million from \$135.2 million at December 31, 2003. In 2006, when our convertible subordinated notes become due, it is possible we may need substantial funds to repay such debt, which totaled \$187.7 million at March 31, 2004. Our 5.0% convertible subordinated notes with a principal balance of \$121.5 million are due September 1, 2006, and our 5.25% convertible subordinated notes with a principal balance of \$66.2 million are due November 15, 2006. Payment would be required if our common stock price remains below approximately \$30 per share for the 5.0% convertible subordinated notes and approximately \$50 per share for the 5.25% convertible subordinated notes. In such a situation, there can be no assurance that we will be able to refinance the debt.

To address our liquidity requirements, we have set a goal to move to a more variable operating model where we will reduce our operating cash flow breakeven point. Additionally, we may raise capital through the public markets during 2004 by issuing common stock or convertible debt securities, or a combination of the two. Such proceeds would be used to realign our capital structure and provide liquidity for future semiconductor capital equipment up-cycles. However, we cannot provide assurance that such sources of liquidity will be available to us on acceptable terms.

We have historically financed our operations and capital requirements through a combination of cash provided by operations, the issuance of long-term debt and common

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stock, bank loans, capital lease obligations and operating leases. However, we have not generated positive cash flow from operations since 2001.

Operating activities used cash of \$4.3 million in the first quarter of 2004, reflecting our net income of \$6.9 million increased by non-cash items of \$5.1 million and offset by net working capital changes of approximately \$16.4 million. Non-cash items primarily consisted of the following:

- Depreciation and amortization of \$4.8 million;
- Provision for deferred income taxes of \$856,000;
- A gain on the sale of a marketable security investment of \$703,000; and
- A gain on the sale of our Noah chiller assets of \$404,000.

Net working capital changes used cash of \$16.4 million and primarily consisted of the following:

- An increase in accounts receivable of \$16.9 million. We expect our accounts receivable to remain high during 2004 if industry conditions continue to stabilize;
- A \$7.1 million increase in inventory. Due to the establishment of our China-based manufacturing facility and increased sales orders we have built our inventory level to mitigate the risk of not being able to meet increasing customer demand for our products;
- A \$9.7 million increase in trade accounts payable, which was primarily incurred to finance our inventory purchases; and
- A \$6.5 million decrease in customer deposits and other accrued expenses.

Operating activities used cash of \$4.6 million in the first three months of 2003, reflecting our net loss of \$8.6 million partially offset by non-cash items of \$1.6 million and net working capital changes of approximately \$2.4 million. Non-cash items primarily consisted of the following:

- Depreciation and amortization of \$6.2 million;
- A benefit for deferred income taxes of \$5.8 million; and
- A loss of the disposal of property and equipment of \$631,000.

Net working capital changes provided cash of \$2.4 million and primarily consisted of the following:

- A \$2.9 million decrease in accounts receivable;
- A \$1.5 million decrease in inventory;
- A \$2.4 million increase in demonstration and customer service equipment; and
- A \$1.5 million decrease in trade accounts payable.

Our near-term future operating activities may continue to use cash. Periods of rapidly

increasing sales may cause increased working capital requirements, thereby requiring the use of cash to fund our operations.

Investing activities generated cash of \$8.0 million in the first three months of 2004 and primarily consisted of the net sale of \$9.7 million of marketable securities, proceeds from the sale of our Noah chiller assets of \$797,000, and proceeds from the sale of a portion of a marketable security investment of \$1.3 million, partially offset by the purchase of equipment for \$3.8 million. We expect to spend approximately \$8.0 million to \$10.0 million for the purchase of property and equipment during the remainder of 2004. Our planned level of capital expenditures is subject to frequent revisions because our business experiences sudden changes as we move into industry upturns and downturns and expected sales levels change. In addition, changes in foreign currency exchange rates may significantly impact our capital expenditures and depreciation expense recognized in a particular period.

Investing activities used cash of \$5.5 million in the first three months of 2003, and primarily consisted of the purchase of property and equipment of \$3.4 million and the settlement of our escrow deposit liability related to our acquisition of Dressler in the first quarter of 2002 of \$1.7 million.

Investing cash flows experience significant fluctuations from period to period as we buy and sell marketable securities, which we convert to cash to fund strategic investments and our operating cash flow, and as we transfer cash into marketable securities when we attain levels of cash that are greater than needed for current operations. However, we do not expect to generate significant levels of cash that are greater than needed for our current operations in the near term.

Financing activities used cash of \$1.6 million in the first quarter of 2004, and consisted of payments on our senior borrowings and capital lease obligations of \$2.0 million, partially offset by proceeds from the exercise of employee stock options of \$374,000.

Financing activities used cash of \$2.0 million in the first quarter of 2003, and consisted primarily of the repayment of our senior borrowings and capital lease obligations of \$2.3 million, partially offset by proceeds from the exercise of employee stock options of \$351,000.

We expect our financing activities to continue to fluctuate in the future. If market conditions and our financial position are deemed appropriate, we may repurchase a portion of our convertible notes in the open market. Our payments under capital lease obligations and notes payable may also increase in the future if we enter into additional capital lease obligations or change the level of our bank financing.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio and long-term debt obligations. We generally place our investments with high credit quality issuers and by policy are averse to principal loss and seek to protect and preserve our invested funds by limiting default risk, market risk and reinvestment risk. As of March 31, 2004, our investments in marketable securities consisted primarily of commercial paper, municipal and state bonds and notes and institutional money markets. These securities are highly liquid. Earnings on our marketable securities are typically invested into similar securities. In the first quarter of 2004, the rates we earned on our marketable securities approximated 1.9% on a before tax equivalent basis. The impact on interest income of a 10% decrease in the average interest rate would have resulted in approximately \$43,000 less interest income in the first quarter of 2004 and \$52,000 less interest income in the first quarter of 2003.

The interest rates on our subordinated debt are fixed, specifically, at 5.25% for the \$66.2 million of our debt due November 2006, and at 5.0% for the \$121.5 million of our debt that is due September 2006. Because these rates are fixed, we believe there is no risk of increased interest expense with regard to these instruments.

The interest rates on our Aera Japan subsidiary's credit lines are variable and currently range from 1.5% to 3.1%. We believe a 10% increase in the average interest rate on these instruments would not have a material effect on our financial position or results of operations.

Foreign Currency Exchange Rate Risk

We transact business in various foreign countries. Our primary foreign currency cash flows are generated in countries in Asia and Europe. During the first quarter of 2004, the U.S. dollar weakened approximately 3% against the Japanese yen, and strengthened approximately 2% against the euro. It is highly unpredictable how currency exchange rates will fluctuate in the future. We have entered into various foreign currency forward exchange contracts to mitigate against currency fluctuations in the Japanese yen, euro, Taiwanese dollar and Chinese yuan. The notional amount of our foreign currency contracts at March 31, 2004 was \$9.2 million. The potential fair value loss for a hypothetical 10% adverse change in foreign currency exchange rates at March 31, 2004, would be approximately \$920,000, which would be essentially offset by corresponding gains related to the underlying assets. We will continue to evaluate various methods to minimize the effects of currency fluctuations when we translate the financial statements of our foreign subsidiaries into U.S. dollars. At March 31, 2004 we held foreign currency forward exchange contracts, maturing through April 2004, to purchase U.S. dollars and sell various foreign currencies. The following table summarizes our outstanding

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contracts as of March 31, 2004:

	Notional Amounts	Market Settlement Amounts	Unrealized (Loss)/Gain
Japanese yen contracts	\$3,400,000	\$3,436,000	\$(36,000)
Euro contract	200,000	195,000	5,000
Taiwanese dollar contract	4,600,000	4,599,000	1,000
Chinese yuan contract	1,000,000	1,000,000	—
Balance at March 31, 2004	\$9,200,000	\$9,230,000	\$(30,000)

ITEM 4. CONTROLS AND PROCEDURES

(a) *Disclosure Controls and Procedures.* Under the supervision and with the participation of our chief executive officer and chief financial officer, we have implemented controls and other procedures that are designed to ensure that we record, process, summarize and report in a timely manner the information required to be disclosed by us in our Exchange Act reports, including this Form 10-Q (“disclosure controls and procedures”). Our disclosure controls and procedures include controls and procedures designed to ensure that material information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure. Our chief executive officer and chief financial officer evaluated our disclosure controls and procedures as of the end of the quarter covered by this Form 10-Q and concluded that such controls and procedures are effective.

(b) *Internal Control over Financial Reporting.* Under the supervision and with the participation of our chief executive officer and chief financial officer, we have implemented controls and other procedures that are designed to provide us with reasonable assurance as to the reliability of our financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles (“internal control over financial reporting”). During the quarter covered by this Form 10-Q, there was no change in our internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we are party to various legal proceedings related to our business. On September 17, 2001, Sierra Applied Sciences, Inc. filed for declaratory judgment asking the U.S. District Court for the District of Colorado to rule that their products did not infringe our U.S. patent no. 5,718,813 and that the patent was invalid. On March 24, 2003, the Court granted our motion to dismiss the case for lack of subject matter jurisdiction. The Court of Appeals for the Federal Circuit affirmed the dismissal on April 13, 2004 as to all of Sierra's current activities, but remanded for findings related to past sales of older products. Because the volume of sales was immaterial and the products are now obsolete, a motion to dismiss these remaining claims will be presented to the court.

For a description of the material pending legal proceedings to which we are a party, please see our 2003 Annual Report on Form 10-K, filed with the Securities and Exchange Commission on February 24, 2004.

ITEM 2. CHANGES IN SECURITIES AND USE OF PROCEEDS

Not applicable.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits:

3.1 Restated Certificate of Incorporation, as amended.(1)

3.2 By-laws.(2)

31.1 Certification of the Chief Executive Officer Pursuant to rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.2 Certification of the Chief Financial Officer Pursuant to rule 13a-14(a) under the Securities

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Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32.1 Certification of the 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 the Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

-
- (1) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003 (File No. 000-26966), filed November 4, 2003.
 - (2) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 33-97188), filed September 20, 1995, as amended.

(b) Reports on Form 8-K

We filed the following report on Form 8-K:

- (i) We filed with the Securities and Exchange Commission a Current Report on Form 8-K on February 12, 2004 to furnish under Item 12 our press release announcing our results of operations for the three- and twelve-month periods ended December 31, 2003.

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.

ADVANCED ENERGY INDUSTRIES, INC.

/s/ Michael El-Hillow

Michael El-Hillow Executive Vice President, Chief Financial Officer (Principal Financial Officer)	April 30, 2004
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INDEX TO EXHIBITS

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I, Douglas S. Schatz, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Energy Industries, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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. 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
 - c. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal year 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:
 - 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: April 30, 2004

/s/ Douglas S. Schatz

Douglas S. Schatz
Chief Executive Officer, President
and Chairman of the Board

I, Michael El-Hillow, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Advanced Energy Industries, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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. 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
 - c. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal year 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:
 - 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: April 30, 2004

/s/ Michael El-Hillow

Michael El-Hillow
Executive Vice President, Chief Financial
Officer (Principal Financial Officer)

Certification of the Chief Executive Officer
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 accompanying Form 10-Q of Advanced Energy Industries, Inc. (the “Company”) for the quarter ended March 31, 2004 (the “Report”), I, Douglas S. Schatz, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: April 30, 2004

/s/ Douglas S. Schatz

Douglas S. Schatz
Chief Executive Officer, President

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Certification of the Chief Financial Officer
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 accompanying Form 10-Q of Advanced Energy Industries, Inc. (the “Company”) for the quarter ended March 31, 2004 (the “Report”), I, Michael El-Hillow, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: April 30, 2004

/s/ Michael El-Hillow

Michael El-Hillow
Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.