ADVANCED ENERGY INDUSTRIES INC

FORM 10-Q
(Quarterly Report)

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Industry	Electronic Instr. & Controls
Sector	Technology
Fiscal Year	12/31

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2003.

☐ 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 Rule 12b-2 of the Exchange Act). Yes __X__ No _______.

As of August 6, 2003, there were 32,280,479 shares of the registrant's Common Stock, par value $0.001 per share, outstanding.

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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)

	June 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 46,383	$ 70,188
Marketable securities	102,969	102,159
Accounts receivable, net	44,776	43,885
Income tax receivable	14,078	14,720
Inventories	55,727	57,306
Other current assets	7,265	6,828
Deferred income tax assets, net	26,160	17,510
Total current assets	297,358	312,596
PROPERTY AND EQUIPMENT, net	41,404	41,178
OTHER ASSETS:		
Deposits and other	5,195	5,181
Goodwill and intangibles, net	86,255	86,601
Demonstration and customer service equipment, net	5,343	6,086
Deferred debt issuance costs, net	3,541	4,091
Total assets	$439,096	$455,733
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade accounts payable	$ 18,988	$ 16,055
Accrued payroll and employee benefits	8,598	9,348
Other accrued expenses	17,425	19,964
Acquisition related escrow	—	1,675
Customer deposits	511	77
Capital lease obligations, current portion	221	691
Senior borrowings, current portion	12,785	14,506
Accrued interest payable on convertible subordinated notes	2,460	2,338
Total current liabilities	60,988	64,654
LONG-TERM LIABILITIES:		
Capital leases, net of current portion	646	669
Senior borrowings, net of current portion	7,432	9,996
Deferred income tax liabilities, net	9,392	8,663
Convertible subordinated notes payable	187,718	187,718
Other long-term liabilities	618	694
	205,806	207,740
Total liabilities	266,794	272,394
STOCKHOLDERS' EQUITY	172,302	183,339
Total liabilities and stockholders' equity	$439,096	$455,733

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

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ADVANCED ENERGY INDUSTRIES, INC. AND SUBSIDIARIES

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

	Three Months Ended June 30, 2003 (Unaudited)	Three Months Ended June 30, 2002 (Unaudited)
SALES	$62,946	$67,893
COST OF SALES	42,673	43,581
Gross profit	20,273	24,312
OPERATING EXPENSES:		
Research and development	12,551	12,587
Sales and marketing	8,261	8,712
General and administrative	5,518	7,030
Litigation damages and expenses	—	5,313
Restructuring charges	768	—
Total operating expenses	27,098	33,642
LOSS FROM OPERATIONS	(6,825)	(9,330)
OTHER INCOME (EXPENSE):		
Interest income	444	776
Interest expense	(2,760)	(3,191)
Foreign currency gain	87	4,492
Other expense, net	(111)	(653)
	(2,340)	1,424
Loss before income taxes	(9,165)	(7,906)
BENEFIT FOR INCOME TAXES	(3,391)	(2,767)
NET LOSS	$ (5,774)	$ (5,139)
BASIC AND DILUTED LOSS PER SHARE	$ (0.18)	$ (0.16)
BASIC AND DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,206	32,045

	Six Months Ended June 30, 2003 (Unaudited)	Six Months Ended June 30, 2002 (Unaudited)
SALES	$119,104	$110,780
COST OF SALES	80,881	73,094
Gross profit	38,223	37,686
OPERATING EXPENSES:		
Research and development	25,918	23,835
Sales and marketing	16,591	15,463
General and administrative	11,147	13,828
Litigation damages and expenses	—	5,313
Restructuring charges	2,277	—
Total operating expenses	55,933	58,439
LOSS FROM OPERATIONS	(17,710)	(20,753)

OTHER INCOME (EXPENSE):		
Interest income	964	1,716
Interest expense	(5,626)	(6,488)
Foreign currency gain	9	4,607
Other expense, net	(437)	(408)
	(5,090)	(573)
Loss before income taxes	(22,800)	(21,326)
BENEFIT FOR INCOME TAXES	(8,436)	(7,464)
NET LOSS	$ (14,364)	$ (13,862)
BASIC AND DILUTED LOSS PER SHARE	$ (0.45)	$ (0.43)
BASIC AND DILUTED WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING	32,183	31,959

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)

	Six Months Ended June 30,	
	2003 (Unaudited)	2002 (Unaudited)
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$(14,364)	$(13,862)
Adjustments to reconcile net loss to net cash used in operating activities — Depreciation and amortization	12,382	8,441
Amortization of deferred debt issuance costs	550	670
Amortization of deferred compensation	244	262
(Benefit) provision for deferred income taxes	(9,511)	602
Impairment of investment	175	—
Loss on disposal of property and equipment	860	358
Changes in operating assets and liabilities (net of assets and liabilities acquired) — Accounts receivable, net	(1,130)	(14,153)
Inventories	(64)	1,431
Other current assets	1,207	967
Deposits and other	959	395
Demonstration and customer service equipment	(2,934)	(1,120)
Trade accounts payable	2,791	6,176
Accrued payroll and employee benefits	(793)	143
Customer deposits and other accrued expenses	(1,947)	1,351
Income taxes payable/receivable, net	790	(3,420)
Unrealized gain on intercompany foreign currency loan	—	(4,551)
Net changes in operating assets and liabilities (net of assets and liabilities acquired)	(1,121)	(12,781)
Net cash used in operating activities	(10,785)	(16,310)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Marketable securities transactions	(708)	28,420
Proceeds from sale of assets	1,635	—
Purchase of property and equipment	(8,524)	(4,965)
Purchase of investments and advances	(400)	(1,997)
Acquisition of Aera Japan Limited, net of cash acquired	—	(35,689)
Acquisition of Dressler HF Technik GmbH, net of cash acquired	(1,675)	(14,395)
Acquisition of interest of LITMAS, net of cash acquired	—	(400)
Net cash used in investing activities	(9,672)	(29,026)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on notes payable and capital lease obligations	(4,600)	(3,704)
Proceeds from common stock transactions	908	1,528
Net cash used in financing activities	(3,692)	(2,176)
EFFECT OF CURRENCY TRANSLATION ON CASH	344	1,700
DECREASE IN CASH AND CASH EQUIVALENTS	(23,805)	(45,812)
CASH AND CASH EQUIVALENTS, beginning of period	70,188	81,955
CASH AND CASH EQUIVALENTS, end of period	$ 46,383	$ 36,143
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 5,414	$ 5,804
Cash paid (received) for income taxes, net	$ 179	$ (2,838)
Assets sold for note receivable	$ 1,538	$ —

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
JUNE 30, 2003
(UNAUDITED)

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

In the opinion of management, the accompanying 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 June 30, 2003 and December 31, 2002, and the results of their operations for the three- and six-month periods ended June 30, 2003 and 2002, and cash flows for the six-month periods ended June 30, 2003 and 2002.

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, 2002, filed March 27, 2003.

The preparation of the Company's condensed consolidated financial statements requires the Company's management to make certain estimates and assumptions that affect the amounts reported and disclosed in the condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

CASH AND CASH EQUIVALENTS — The Company considers all amounts on deposit with financial institutions and highly liquid investments with an original maturity of 90 days or less to be cash and cash equivalents.

MARKETABLE SECURITIES — The Company has investments in marketable equity securities and municipal bonds, which have original maturities of 90 days or more. In accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities," these investments are classified as available-for-sale securities and reported at fair value with unrealized gains and losses included in other comprehensive income. Due to the short-term, highly liquid nature of the marketable securities held by the Company, the cost, including accrued interest of such investments, is typically the same as their fair value.

The Company also has investments in marketable equity securities which have been included with deposits and other assets in the accompanying condensed consolidated balance sheets. In accordance with SFAS No. 115, these investments are classified as available-for-sale securities and reported at fair value with unrealized holding gains and losses included in other comprehensive income. During the first quarter of 2003, the fair value of one of these securities continued to decline. Under the provisions of SFAS No. 115 and related interpretations the Company recorded an other than temporary decline in value impairment of approximately $175,000 which is included in other expense in the accompanying condensed consolidated statements of operations. However, in the second quarter of 2003 the fair value of this investment increased approximately $700,000 to approximately $2.5 million. In accordance with SFAS No. 115, this increase in fair value has been reflected as an unrealized gain and is included in other comprehensive income in the Company's statement of stockholders' equity. If the fair value of this investment declines further, the Company may be required to record additional impairments equal to the difference between the carrying value and its fair value if the Company believes that such decline is an other than temporary impairment in accordance with SFAS No. 115.

INVENTORIES — Inventories include costs of materials, direct labor and manufacturing overhead. Inventories are valued 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.

PROPERTY AND EQUIPMENT — Property and equipment is stated at cost or estimated fair value upon acquisition. Additions, improvements, and major renewals are capitalized. Maintenance, repairs, and minor renewals are expensed as incurred.

Depreciation is provided using the straight-line method over three to ten years for machinery, equipment, furniture and fixtures, with computers and communication equipment depreciated over a three-year life. Amortization of leasehold improvements and leased equipment is provided using the straight-line method over the lease term or the estimated useful life of the assets, whichever period is shorter.

DEMONSTRATION AND CUSTOMER SERVICE EQUIPMENT — Demonstration and customer service equipment are manufactured products that are utilized for sales demonstration and evaluation purposes. The Company also utilizes this equipment in its customer service function as replacement and loaner equipment to existing customers. The Company depreciates this equipment based on its estimated useful life of three years.

GOODWILL AND INTANGIBLES — Goodwill and certain other intangible assets with indefinite lives, if present, are not amortized. Instead, goodwill and other intangible assets are subject to periodic (at least annual) tests for impairment. The impairment testing is performed in two steps: (i) the Company assesses goodwill for a potential impairment loss by comparing the fair value of a reporting unit with its carrying value, and (ii) if an impairment is indicated by a reporting unit whose 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.

In the fourth quarter of 2002, the Company completed its evaluation of the goodwill and intangible assets recorded as a result of the acquisitions of Aera, which it acquired on January 18, 2002, Dressler, which it acquired on March 28, 2002, and the remaining 40.5% of LITMAS that the Company did not previously own on April 2, 2002. In the fourth quarter of 2002, the Company also performed its annual goodwill impairment test, and concluded that because the estimated fair value of the Company's reporting units exceeded their carrying amounts, no impairment of goodwill was indicated. As the Company is required to perform the test for impairment at least annually, it is reasonably possible that a future test may indicate impairment, and the amount of impairment may be material to the Company.

Goodwill and other intangibles consisted of the following as of December 31, 2002:

	Original Gross Carrying Amount	Accumulated Amortization	Cumulative Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted-average Useful Life (Years)
	(In thousands, except weighted-average useful life)				
Amortizable intangibles:					
Technology-based	$ 9,378	$ (3,715)	$ 937	$ 6,600	6
Contract-based	9,210	(3,634)	936	6,512	4
Other	8,500	(537)	1,298	9,261	17
Total amortizable intangibles	27,088	(7,886)	3,171	22,373	10
Goodwill	61,955	(3,326)	5,599	64,228	
Total goodwill and intangibles	$89,043	$(11,212)	$8,770	$86,601	

Goodwill and other intangibles consisted of the following as of June 30, 2003:

	Original Gross Carrying Amount	Accumulated Amortization	Cumulative Effect of Changes in Exchange Rates	Net Carrying Amount	Weighted-average Useful Life (Years)
	(In thousands, except weighted-average useful life)				
Amortizable intangibles:					
Technology-based	$ 9,778	$ (4,456)	$ 1,108	$ 6,430	6
Contract-based	9,210	(4,734)	1,318	5,794	4
Other	8,500	(962)	1,407	8,945	17
Total amortizable intangibles	27,488	(10,152)	3,833	21,169	10
Goodwill	61,955	(3,326)	6,457	65,086	
Total goodwill and intangibles	$89,443	$(13,478)	$10,290	$86,255	

Aggregate amortization expense related to other intangibles for the three-month periods ended June 30, 2003 and 2002 was approximately $1.2 million, and approximately $2.3 million and $1.9 million for the six-month periods ended June 30, 2003 and 2002, respectively. Estimated amortization expense related to the Company's acquired intangibles fluctuates with changes in exchange rates between the U.S. dollar, the Japanese yen and the euro. Estimated amortization expense for each of the five years 2003 through 2007 is as follows:

	(In thousands)
2003	$4,213
2004	4,313
2005	4,313
2006	2,427
2007	1,103

CONCENTRATIONS OF CREDIT RISK — Financial instruments, which potentially subject the Company to credit risk include cash, marketable securities, trade accounts receivable and others. The Company maintains cash and cash equivalents, investments, and certain other financial instruments with various major financial institutions. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any one institution. The Company's customers generally are concentrated in the semiconductor capital equipment industry. As a result the Company is generally exposed to credit risk associated with this industry. Sales by the Company's foreign subsidiaries are primarily denominated in currencies other than the U.S. dollar. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information.

WARRANTY POLICY — The Company offers warranty coverage for its products for periods ranging from 12 to 36 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 costs. Estimated warranty costs are recorded at the time of sale of the related product, are adjusted as appropriate and are considered a cost of sales.

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 U.S. dollars at period-end exchange rates, and income statement activity and cash flows are 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 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 gains on foreign currency transactions of approximately $87,000 and $9,000 for the three- and six-month periods ended June 30, 2003, respectively. In the second quarter of 2002, the Company recognized a net foreign currency gain of approximately $4.5 million, the majority of which was related to an intercompany loan of Japanese yen (which was settled in January 2003) that Advanced Energy U.S. made to its subsidiary Advanced Energy Japan K.K. (“AE-Japan”) (which has a functional currency of yen) for the purpose of effecting the acquisition of Aera. The loan was transacted in the first quarter of 2002, for approximately 5.7 billion yen (approximately $44 million based on an exchange rate of 130:1). During the first quarter of 2002, the exchange rate between the U.S. dollar and the Japanese yen remained relatively stable, and an immaterial loss was recorded related to this intercompany loan. During the second quarter of 2002, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of approximately $4.6 million.

REVENUE RECOGNITION — The Company generally recognizes revenue upon shipment of its products and spare parts, at which time title passes to the customer, as its shipping terms are FOB shipping point, the price is fixed and collectibility is reasonably assured. Generally, the Company does not generate revenue from the installation of its products. In certain limited instances, some 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 in the accompanying condensed consolidated balance sheets.

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 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 the Company’s normal policy for repair of defective products.

The Company has an arrangement with one of its major customers, a semiconductor capital equipment manufacturer, in which completed products are shipped to the customer and held by them in their warehouse. The customer draws products from this inventory as needed, at which time title passes to the customer and the Company recognizes revenue. The customer is subject to the Company’s normal warranty policy for repair of defective products.

In certain instances the Company delivers 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 depreciation.

INCOME TAXES — The Company accounts for income taxes in accordance with 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. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that such assets will be realized. At June 30, 2003 the Company reassessed its valuation allowance and determined that no adjustment to the valuation allowance was required based on the Company's conclusion that it is more likely than not that its deferred tax assets, net of related deferred tax liabilities and valuation allowance, will be realized through future taxable income. This assessment requires significant judgment, and is based on management's expectation of future profitable operations and taxable income. Should circumstances change such that the Company's conclusion changes, this valuation allowance could be increased to reserve all or a portion of the net deferred tax assets and the amount of the related charge could be material.

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. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. The Company believes that it is more likely than not that it will realize the benefits of its deferred tax asset, net of valuation allowance. Any reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

RESTRUCTURING COSTS — Restructuring charges include the costs associated with actions taken by the Company in response to the continuing 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 closure of facilities and employee termination related charges.

Effective January 1, 2003, the Company adopted SFAS No. 146, "Accounting for Exit or Disposal Activities." This statement addresses significant issues regarding the recognition, measurement and reporting of costs that are associated with exit and disposal activities, including restructuring activities that were previously accounted for pursuant to the guidance set forth in Emerging Issues Task Force ("EITF") Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity." SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002. The adoption of SFAS No. 146 did not have a material effect on the Company's financial position or results of operations, however expense recognition of certain restructuring activities in 2003 have been delayed due to its adoption.

At the end of 2002, the Company announced major changes in its operations to occur through the end of 2003. These included a manufacturing location 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 recognized charges in the second quarter of 2003 that consisted primarily of the involuntary termination of approximately 55 manufacturing and administrative personnel in the Company's U.S. operations. Certain of the employees were terminated and paid prior to the end of the second quarter of 2003, which resulted in restructuring charges totaling approximately $768,000 for the three months ended June 30, 2003. In addition, certain employees will be required to render service beyond a minimum retention period (generally 60 days). In accordance with SFAS No. 146, the Company measured the termination benefits at the communication date, but approximately $350,000 will be recognized as expense in the third and fourth quarters of 2003 as these employees complete their service requirement.

Also, 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. Approximately 36 employees accepted the voluntary termination benefits prior to March 31, 2003 with termination dates in the second quarter of 2003. All termination benefits were paid in the second quarter of 2003.

At June 30, 2003, outstanding liabilities related to the 2003 and 2002 restructuring charges were approximately $3.9 million, and were reported as part of other accrued expenses on the accompanying condensed consolidated balance sheet. The Company also expects to incur additional charges of $1.5 million to $2.0 million during the remainder of 2003 related to these operational changes.

The Company recorded restructuring charges totaling $9.1 million in 2002, primarily associated with changes in operations designed to reduce redundancies and better align the Company’s Aera mass flow controller business within its operating framework. The Company’s restructuring plans and associated costs consisted of $6.0 million to close and consolidate certain manufacturing facilities, and $3.1 million for related headcount reductions of approximately 223 employees.

Included in the $6.0 million facility charge are the closure of the Company’s Advanced Energy Voorhees (“AEV”) manufacturing facilities, due to the transfer of the manufacturing of AEV’s products to Fort Collins, Colorado, and the closure of a manufacturing facility in Fort Collins, expected to be completed by the third quarter of 2003; the closure of Engineering Measurments Company’s (“EMCO”) manufacturing facilities due to the transfer of the manufacturing of EMCO’s products to Fort Collins, Colorado and Shenzhen, China, expected to be completed by the third quarter of 2003; and the closure of LITMAS, which was completed in the first quarter of 2003. During the fourth quarter of 2002, the Company closed its San Jose, California sales and service location, and the Company’s Austin, Texas manufacturing facility for the Aera-brand mass flow controller products. The Company transferred the manufacturing of these products to Hachioji, Japan to be co-located with Aera Japan Limited. These costs consist primarily of payments required under operating lease contracts and costs for writing down related leasehold improvements.

The employee termination costs of $3.1 million consisted of severance benefits. All terminations and termination benefits were communicated to the affected employees prior to the accrual of the related charges. The affected employees were all part of the Company’s U.S. operations and included full-time permanent and temporary employees, and consisted primarily of manufacturing and administrative personnel.

At December 31, 2002, outstanding liabilities related to the 2002 restructuring charges were approximately $6.0 million, and were reported as part of other accrued expenses on the accompanying condensed consolidated balance sheet.

The following table summarizes the components of the restructuring charges, the payments and non-cash charges, and the remaining accrual as of June 30, 2003:

	Employee Severance and Termination Costs	Facility Closure Costs	Total Restructuring Charges
		(In thousands)	
Accrual balance December 31, 2001	$ 965	$ 462	$ 1,427
Payments in the first six months of 2002	(965)	(212)	(1,177)
Accrual balance June 30, 2002	—	250	250
Third quarter 2002 restructuring charge	1,033	2,187	3,220
Fourth quarter 2002 restructuring charge	2,021	3,819	5,840
Payments in the last six months of 2002	(1,447)	(1,874)	(3,321)
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
Payments in the first six months of 2003	(3,244)	(1,128)	(4,372)
Accrual balance June 30, 2003	$ 542	$ 3,352	$ 3,894

STOCK-BASED COMPENSATION — Prior to May 7, 2003 the Company had five stock-based compensation plans, which are more fully described in Note 16 to the Company’s Form 10-K for the year ended December 31, 2002. On May 7, 2003 the Company’s stockholders approved the 2003 Stock Option Plan (the “2003 Plan”), the 2003 Non-Employee Directors’ Stock Option Plan (the “2003 Directors’ Plan”) and an amendment to the Employee Stock Purchase Plan (“ESPP”).

The 2003 Plan provides for the issuance of up to 3,250,000 shares of common stock. Shares may be issued under the 2003 Plan on exercise of incentive stock options or non-qualified stock options granted under the 2003 Plan or as restricted stock awards. Stock appreciation rights may also be granted under the 2003 Plan, and the shares represented by the stock appreciation rights will be deducted from shares issuable under the 2003 Plan. The exercise price of incentive stock options and non-qualified stock options cannot be less than the market value of the Company's common stock on the date of grant. The Company has the discretion to determine the vesting period of options granted under the 2003 Plan, however option grants will generally vest over four years, contingent upon the optionee continuing to be an employee, director or consultant of the Company. As of June 30, 2003 no awards have been granted under the 2003 Plan. The Company's 1995 Employee Stock Option Plan terminated upon shareholder approval of the 2003 Plan.

The 2003 Directors' Plan provides for the issuance of up to 150,000 shares of common stock on exercise of non-qualified stock options granted under the 2003 Directors' Plan. The exercise price of options granted under the 2003 Directors' Plan cannot be less than the market value of the Company's common stock on the date of grant. Non-employee directors are automatically granted an option to purchase 15,000 shares on the first date elected or appointed as a member of the Company's board, and 5,000 shares on any date re-elected as a member of the board. Options granted on the date first elected or appointed as a member of the Company's board immediately vest as to one-third of the shares subject to the grant, then another one-third on each of the first two anniversaries of the date granted, provided the optionee continues to be a director. Options granted upon re-election are immediately exercisable. As of June 30, 2003 125,000 shares of common stock were available for grant under this plan. The Company's Non-Employee Directors Stock Option Plan terminated upon shareholder approval of the 2003 Directors' Plan.

The Company's ESPP was amended to increase the number of common shares reserved for issuance under the plan from 200,000 shares to 400,000 shares. At June 30, 2003, approximately 185,000 shares remained available for future issuance.

The Company accounts for employee stock-based compensation using the intrinsic value method prescribed by APB 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 loss.

For the quarters ended June 30, 2003 and 2002, approximately $122,000 and $131,000, respectively, of stock-based compensation expense was included in the determination of net loss as reported related to Sekidenko option grants made prior to the Company's acquisition of Sekidenko. For the six-month periods ended June 30, 2003 and 2002 Sekidenko related stock-based compensation expense was approximately $244,000 and $262,000, respectively.

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 loss would have increased to the following adjusted amounts:

	Three Months Ended June 30, 2003	Three Months Ended June 30, 2002	Six Months Ended June 30, 2003	Six Months Ended June 30, 2002
	(Unaudited) (In thousands, except per share data)			
Net loss:				
As reported	$(5,774)	$(5,139)	$(14,364)	$(13,862)
Adjustment for stock-based compensation determined under fair value based method for all awards, net of related tax effects	(2,599)	(2,423)	(5,289)	(4,518)
As adjusted	$(8,373)	$(7,562)	$(19,653)	$(18,380)
Basic and diluted loss per share:				
As reported	$ (0.18)	$ (0.16)	$ (0.45)	$ (0.43)
As adjusted	(0.26)	(0.24)	(0.61)	(0.58)

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 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 ESPP are estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Three Months Ended June 30, 2003	Three Months Ended June 30, 2002	Six Months Ended June 30, 2003	Six Months Ended June 30, 2002
OPTIONS:				
Risk-free interest rates	2.91%	4.65%	2.91%	4.48%
Expected dividend yield rates	0.0%	0.0%	0.0%	0.0%
Expected lives	7 years	7 years	7 years	7 years
Expected volatility	87.16%	86.89%	87.41%	87.46%
ESPP:				
Risk-free interest rates	1.42%	1.95%	1.52%	2.05%
Expected dividend yield rates	0.0%	0.0%	0.0%	0.0%
Expected lives	0.5 years	0.5 years	0.5 years	0.5 years
Expected volatility	82.48%	88.00%	85.65%	88.00%

Based on the Black-Scholes option pricing model, the weighted-average estimated fair value of employee stock option grants was $6.02 and $30.33 for the three months ended June 30, 2003 and 2002, respectively and was $6.50 and $25.07 for the six months ended June 30, 2003 and 2002, respectively. The weighted-average estimated fair value of purchase rights granted under the ESPP was $4.70 and $11.87 for the three months ended June 30, 2003 and 2002, respectively, and was $4.69 and $9.56 for the six months ended June 30, 2003 and 2002, respectively.

EARNINGS PER SHARE — Basic earnings per share ("EPS") is computed by dividing (loss) income 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, options and warrants) had been converted to such common shares, and if such assumed conversion is dilutive. Due to the Company's net loss for the three- and six- month periods ended June 30, 2003 and 2002, 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 June 30, 2003 and 2002 were approximately 3.9 million and 2.6 million, respectively. Potential shares of common stock issuable upon conversion of the Company's convertible subordinated notes payable were approximately 5.4 million and 5.8 million, respectively.

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

	Six Months Ended June 30, 2003 (Unaudited)	Six Months Ended June 30, 2002 (Unaudited)
	(In thousands)	
Net loss, as reported	$(14,364)	$(13,862)
Adjustment to arrive at comprehensive net loss, net of taxes:		
Unrealized holding gain on available-for-sale marketable securities	747	628
Cumulative translation adjustments	1,428	2,279
Comprehensive net loss	$(12,189)	$(10,955)

SEGMENT REPORTING — The Company operates in one segment for the manufacture, marketing and servicing of key subsystems, primarily to the semiconductor capital equipment industry. In accordance with SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information," the Company's chief operating decision maker has been identified as the Office of the Chief Executive Officer, which reviews operating results to make decisions about allocating resources and assessing performance for the entire company. SFAS No. 131, which is based on a management approach to segment reporting, establishes requirements to report selected segment information quarterly and to report annually entity-wide disclosures about products and services, major customers, and the countries in which the entity holds material assets and reports revenue. All material operating units qualify for aggregation under SFAS No. 131 due to their similar customer base and similarities in: economic characteristics; nature of products and services; and procurement, manufacturing and distribution processes. To report revenue from external customers for each product and service or group of similar products and services would not be practicable. Since the Company operates in one segment, all financial information required by SFAS No. 131 can be found in the accompanying condensed consolidated financial statements.

GAINS AND LOSSES FROM EXTINGUISHMENT OF DEBT — Effective January 1, 2003, the Company adopted SFAS No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections." This statement rescinds SFAS No. 4, "Reporting Gains and Losses from Extinguishment of Debt," which required all gains and losses from extinguishments of debt to be aggregated and, if material, classified as an extraordinary item, net of income taxes. As a result, the criteria in Accounting Principles Board Opinion No. 30 will now be used to classify those gains and losses. Any gain or loss on the extinguishment of debt that was classified as an extraordinary item in prior periods presented that does not meet the criteria in APB 30 for classification as an extraordinary item shall be reclassified. The Company adopted the provisions of SFAS No. 145 on January 1, 2003. The adoption of this Statement will require the Company to reclassify its pretax extraordinary gain of $4,223,000 recorded during the fourth quarter of 2002 to income from continuing operations in future financial statements.

DERIVATIVE INSTRUMENTS — The Company accounts for its derivative instruments in accordance with SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." SFAS No. 133 establishes accounting and reporting standards for derivative instruments and for hedging activities by requiring all derivatives to be recorded on the balance sheet as either an asset or liability and measured at their fair value. Changes in the derivative's fair value will be recognized currently in earnings unless specific hedging accounting criteria are met. SFAS No. 133 also establishes uniform hedge accounting criteria for all derivatives. The Company did not seek specific hedge accounting treatment for its foreign currency forward contracts.

The Company, including its subsidiaries, enters into foreign currency forward contracts with counterparties to mitigate foreign currency exposure from foreign currency denominated trade purchases and intercompany receivables and payables. These derivative instruments are not held for trading or speculative purposes. To the extent that changes occur in currency exchange rates, the Company is exposed to market risk on its open derivative instruments. This market risk exposure is generally offset by the gain or loss recognized upon the translation of its intercompany payables and receivables. Foreign currency forward contracts are entered into with major commercial U.S., Japanese and German banks that have high credit ratings, and the Company does not expect the counterparties to fail to meet their obligations under outstanding contracts. Foreign currency gains and losses under these arrangements are not deferred. The Company generally enters into foreign currency forward contracts with maturities ranging from one to eight months, with contracts outstanding at June 30, 2003 maturing through December 2003.

The Company's subsidiary AE-Japan enters into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions with its parent. At June 30, 2003, AE-Japan held foreign currency forward contracts with notional amounts of $5.0 million and market settlement amounts of $4.9 million for an unrealized gain position of approximately $100,000 that has been included in foreign currency gain in the accompanying condensed consolidated statements of operations.

During 2003, the Company's subsidiary Advanced Energy Industries GmbH ("AE-Germany") entered into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions with its parent. At June 30, 2003, AE-Germany held foreign currency forward contracts with notional amounts of $700,000 and market settlements amounts of $755,000 for an unrealized loss position of approximately $55,000 that has been included in foreign currency gain in the accompanying condensed consolidated statements of operations.

ESTIMATES AND ASSUMPTIONS — The preparation of the Company's condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America 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 revenues 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, accounting for stock-based compensation, and assessing excess and obsolete inventory and various others 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.

NEW ACCOUNTING PRONOUNCEMENTS — In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity". SFAS No. 150 establishes standards on the classification and measurement of financial instruments with characteristics of both liabilities and equity. SFAS No. 150 will become effective for financial instruments entered into or modified after May 31, 2003 and for all financial instruments at the beginning of the first interim period beginning after June 15, 2003. The Company is in the process of assessing the effect of implementing SFAS No. 150, and does not expect the implementation of this pronouncement to have a material effect on its financial condition or results of operations.

In April 2003, the FASB issued SFAS No. 149, “Amendment of Statement 133 on Derivative Instruments and Hedging Activities”. SFAS No. 149 amends SFAS No. 133 to provide clarification on the financial accounting and reporting of derivative instruments and hedging activities and requires contracts with similar characteristics to be accounted for on a comparable basis. The Company is in the process of assessing the effect of implementing SFAS No. 149, and does not expect the adoption of it, which will be effective for contracts entered into or modified after June 30, 2003, to have a material effect on its financial condition or results of operations.

In January 2003 the FASB issued FASB Interpretation No. 46, “Consolidation of Variable Interest Entities” (“FIN No. 46”). This interpretation clarifies existing accounting principles related to the preparation of consolidated financial statements when the equity investors in an entity do not have the characteristics of a controlling financial interest or when the equity at risk is not sufficient for the entity to finance its activities without additional subordinated financial support from others parties. FIN No. 46 requires a company to evaluate all existing arrangements to identify situations where a company has a “variable interest” (commonly evidenced by a guarantee arrangement or other commitment to provide financial support) in a “variable interest entity” (commonly a thinly capitalized entity) and further determine when such variable interests require a company to consolidate the variable interest entities’ financial statements with its own. The Company is required to perform this assessment by September 30, 2003 and consolidate any variable interest entities for which it will absorb a majority of the entities’ expected losses or receive a majority of the expected residual gains. Management has not yet performed this assessment and is currently evaluating the impact on its financial statements of adopting this Standard.

In November 2002 the EITF reached a consensus on Issue No. 00-21, “Revenue Arrangements with Multiple Deliverables.” EITF Issue No. 00-21 addresses revenue recognition on arrangements encompassing multiple elements that are delivered at different points in time, defining criteria that must be met for elements to be considered to be a separate unit of accounting. If an element is determined to be a separate unit of accounting, the revenue for the element is recognized at the time of delivery. EITF Issue No. 00-21 is effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. Management does not believe the adoption of EITF Issue No. 00-21 will have a material impact on its consolidated financial position or results of operations.

In November 2002 the FASB issued FASB Interpretation No. 45, “Guarantor’s Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others” (“FIN No. 45”). This interpretation requires a liability to be recognized at the time a company issues a guarantee for the fair value of obligations assumed under certain guarantee agreements. Additional disclosures about guarantee agreements are also required in interim and annual financial statements, including a roll forward of the company’s product warranty liabilities. The disclosure provisions of FIN No. 45 were effective for the Company as of December 31, 2002. The provisions for initial recognition and measurement of guarantee agreements are effective on a prospective basis for guarantees that are issued or modified after December 31, 2002. The adoption of FIN No. 45 did not have a material impact on the Company’s financial position or results of operations.

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

(2) ACQUISITIONS

LITMAS — During 1998 the Company acquired a 29% ownership interest in LITMAS, a privately held, North Carolina-based early-stage company that designed and manufactured plasma gas abatement systems and high-density plasma sources. The purchase price consisted of $1 million in cash. On October 1, 1999, the Company acquired an additional 27.5% interest in LITMAS for an additional $560,000. The purchase price consisted of $385,000 in the Company’s common stock and $175,000 in cash. The acquisition was accounted for using the purchase method of accounting and resulted in $523,000 allocated to intangible assets as goodwill. The results of operations of LITMAS have been consolidated in the Company’s consolidated financial statements from the date the controlling interest of 56.5% was acquired. On October

1, 2000, the Company acquired an additional 3.0% interest in LITMAS for an additional $250,000, bringing the Company's ownership interest in LITMAS to 59.5%. On April 2, 2002, the Company completed its acquisition of the 40.5% of LITMAS that it did not previously own, by issuing approximately 120,000 shares of the Company's common stock valued at approximately $4.2 million, and approximately $400,000 of cash. The acquisition of the remaining minority interest in LITMAS resulted in approximately $5 million of additional goodwill.

DRESSLER — On March 28, 2002, the Company completed its acquisition of Dressler HF Technik GmbH ("Dressler"), a privately owned Stolberg, Germany-based provider of power supplies and matching networks, for a purchase price of approximately $15 million in cash and a $1.7 million escrow. The escrow fund was retained by the Company until January 2003, at which time the related escrow liability was settled. The purchase price was also subject to a $3.0 million earn-out provision if Dressler achieved certain key business objectives by March 30, 2003. These business objectives were not met prior to the expiration date.

The Company believes that Dressler will expand the Company's product offerings to customers in the semiconductor, data storage, and flat panel equipment markets due to its strong power product portfolio that includes a wide range of power levels and RF frequencies. In addition, with inroads already made into the laser and medical markets, Dressler will be used to explore new market opportunities for the Company. Dressler will also strengthen the Company's presence in the European marketplace. Dressler has well- established relationships with many European customers, who look to Dressler for innovative technical capability, quality products, and highly responsive customer service. The Company also expects to achieve synergies in product technology, production efficiency, logistics and worldwide service.

The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, "Business Combinations," and the operating results of Dressler are reflected in the accompanying condensed consolidated financial statements prospectively from the date of acquisition. The tangible assets acquired and liabilities assumed were recorded at estimated fair values as determined by the Company's management. Goodwill and other intangible assets were recorded at estimated fair values based upon independent appraisals. In the fourth quarter of 2002, the Company finalized its purchase price allocation.

The purchase price, as finalized, was allocated to the net assets of Dressler as summarized below:

	(In thousands)
Cash and cash equivalents	$ 680
Accounts receivable	1,939
Inventories	1,111
Other current assets	83
Fixed assets	260
Goodwill	9,405
Other intangibles	7,750
Other assets	19
Accounts payable	(314)
Accrued payroll	(39)
Other accrued expenses	(474)
Deferred tax liability	(2,945)
Income taxes payable	(725)
	$16,750

The excess purchase price over the estimated fair value of tangible net assets acquired was allocated to goodwill and intangibles (see Note 1). In the fourth quarter of 2002, the Company reviewed these assets for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company will continue to review these assets in the future for impairment. The Company recognized approximately $1.2 million of amortization expense related to these amortizable intangibles acquired from Dressler in the six-month period ended June 30, 2003.

Prior to the combination, there were transactions between the Company and Dressler in 2001 and the first three months of 2002. In 2001, the Company purchased approximately $2 million of inventory from Dressler, and Dressler purchased approximately $200,000 of inventory from the Company. In the first three months of 2002, the Company purchased approximately $500,000 of inventory from Dressler. These purchases were made in the normal course of the Company's business.

AERA — On January 18, 2002, the Company completed its acquisition of Aera Japan Limited ("Aera"), a privately held Japanese corporation. The Company effected the acquisition through its wholly owned subsidiary, AE-Japan, which purchased all of the outstanding stock of Aera. The aggregate purchase price paid by AE-Japan was 5.73 billion Japanese yen (approximately $44 million, based upon an exchange rate of 130:1), which was funded from the Company's available cash. In connection with the acquisition, AE-Japan assumed approximately $34 million of Aera's debt. Aera, which is headquartered in Hachioji, Japan, has manufacturing facilities there and manufacturing, sales and service offices in Kirchheim, Germany; and Bundang, South Korea; and sales and service offices in Dresden, Germany and Edinburgh, Scotland. In response to the continuing downturn in the semiconductor capital equipment industry and as a result of the ongoing execution of the Company's strategy, the Company plans to close its Edinburgh, Scotland and Kirchheim, Germany facilities later in 2003. Aera supplies the semiconductor capital equipment industry with product lines that include digital mass flow controllers; pressure-based mass flow controllers, liquid mass flow controllers, ultrasonic liquid flow meters and liquid vapor delivery systems.

The Company believes that Aera provides it with a key leadership position in the gas delivery market and expands the Company's offering of critical sub-system solutions that enable the plasma-based manufacturing process used in the manufacture of semiconductors, as well as providing improved access to potential Asian-based customers for the Company's other products.

The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, "Business Combinations," and the operating results of Aera are reflected in the accompanying condensed consolidated financial statements prospectively from the date of acquisition. The tangible assets acquired and liabilities assumed were recorded at estimated fair values as determined by the Company's management. Goodwill and other intangible assets were recorded at estimated fair values based upon independent appraisals. In the fourth quarter of 2002, the Company finalized its purchase price allocation.

The purchase price, as finalized, was allocated to the net assets of Aera as summarized below:

	(In thousands)
Cash and cash equivalents	$ 8,276
Marketable securities	115
Accounts receivable	8,405
Inventories	19,243
Other current assets	530
Fixed assets	13,388
Goodwill	24,869
Other intangibles	12,500
Other assets	427
Accounts payable	(2,329)
Accrued payroll	(2,924)
Other liabilities	(2,164)
Deferred tax liability	(4,765)
Current portion of long-term debt	(12,008)
Long-term debt	(19,598)
	$ 43,965

There were no transactions between the Company and Aera prior to the combination. The excess purchase price over the estimated fair value of tangible net assets acquired was allocated to goodwill and intangibles (see Note 1). In the fourth quarter of 2002, the Company reviewed these assets for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company recognized approximately $700,000 and $1.3 million of amortization expense related to the amortizable intangibles acquired from Aera in the six-month periods ended June 30, 2003 and 2002, respectively.

Had the acquisitions of Aera and Dressler occurred on January 1, 2002, the pro forma, unaudited, combined results of operations for the Company, Aera and Dressler for the six-month period ended June 30, 2002 would not have differed materially from the reported results of operations for the Company.

(3) MARKETABLE SECURITIES

MARKETABLE SECURITIES consisted of the following:

	June 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Commercial paper	$ 36,499	$ 65,250
Municipal bonds and notes	56,205	34,100
Institutional money markets	10,265	2,809
Total marketable securities	$102,969	$102,159

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 approximately 120 days.

(4) ACCOUNTS RECEIVABLE

ACCOUNTS RECEIVABLE consisted of the following:

	June 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Domestic	$13,648	$16,475
Foreign	29,458	27,378
Allowance for doubtful accounts	(2,497)	(3,056)
Trade accounts receivable	40,609	40,797
Other	4,167	3,088
Total accounts receivable	$44,776	$43,885

(5) INVENTORIES

INVENTORIES consisted of the following:

	June 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
	(In thousands)	
Parts and raw materials	$39,077	$40,147
Work in process	4,621	4,435
Finished goods	12,029	12,724
Total inventories	$55,727	$57,306

Inventories include costs of materials, direct labor and manufacturing overhead. Inventories are valued at the lower of market or cost, computed on a first-in, first-out basis. Inventory is expensed as cost of sales upon shipment of product.

(6) STOCKHOLDERS' EQUITY

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

	June 30, 2003 (Unaudited)	December 31, 2002 (Unaudited)
Common stock, $0.001 par value, 70,000 shares authorized, 32,244 and 32,140 shares issued and outstanding, respectively	$ 32	$ 32
Additional paid-in capital	139,337	138,429
Retained earnings	29,829	44,193
Deferred compensation	(298)	(542)
Unrealized holding gains (losses) on available-for-sale securities, net of tax	714	(33)
Cumulative translation adjustments, net of tax	2,688	1,260
Total stockholders' equity	$172,302	$183,339

(7) DEFERRED COMPENSATION

During 1999 and 2000, prior to its acquisition by the Company, a shareholder of the Company's wholly owned subsidiary, Sekidenko, Inc., granted employees options under a preexisting arrangement to purchase shares of his common stock already outstanding at exercise prices below fair value. Under this agreement, 29,700 and 34,250 of such options were granted in 1999 and 2000, respectively. These options result in the Company recognizing $109,000 as compensation expense over the four-year vesting period related to the 1999 grants, and $1,995,000 as compensation expense over the four-year vesting period related to the 2000 grants. Compensation expense of approximately $244,000 and $262,000 was recognized in the six-month periods ended June 30, 2003 and 2002, respectively. Deferred compensation is presented as a reduction of stockholders' equity, and the remaining amount of deferred compensation of $298,000 as of June 30, 2003 is being amortized over the four-year vesting period of the related stock options.

(8) CONVERTIBLE SUBORDINATED NOTES PAYABLE

In August 2001, the Company issued $125 million of 5.00% convertible subordinated notes ("5.00% Notes"). These notes mature September 1, 2006, with interest payable on March 1st and September 1st of each year beginning March 1, 2002. Net proceeds to the Company were $121.25 million, after deducting $3.75 million of offering costs, which have been capitalized and are being amortized as additional interest expense over a period of five years. Holders of the 5.00% Notes may convert the notes at any time before maturity into shares of the Company's common stock at a conversion rate of 33.5289 shares per each $1,000 principal amount of notes, equivalent to a conversion price of approximately $29.83 per share. The conversion rate is subject to adjustment in certain circumstances. The Company may redeem the 5.00% Notes, in whole or in part, at any time before September 4, 2004, at specified redemption prices plus accrued and unpaid interest, if any, to the date of redemption if the closing price of the Company's common stock exceeds 150% of the conversion price then in effect for at least 20 trading days within a period of 30 consecutive trading days ending on the trading day before the date of mailing of the provisional redemption notice. Upon any provisional redemption, the Company will make an additional payment in cash with respect to the 5.00% Notes called for redemption in an amount equal to $150.56 per $1,000 principal amount of notes, less the amount of any interest paid on the note. The Company may also make this additional payment in shares of its common stock, and any such payment will be valued at 95% of the average of the closing prices of the Company's common stock for the five consecutive trading days ending on the day prior to the redemption date. The Company will be obligated to make an additional payment on all notes called for provisional redemption. The Company may also redeem the 5.00% Notes from September 4, 2004 through August 31, 2005 at 102% times the principal amount, from September 1, 2005 through August 31, 2006 at 101% times the principal amount, and thereafter at 100% of the principal amount. The 5.00% Notes are subordinated to the Company's present and potential future senior debt, and are effectively subordinated in right of payment to all indebtedness and other liabilities of the Company's subsidiaries. At June 30, 2003, approximately $2.0 million of interest expense related to the 5.00% Notes was accrued as a current liability.

In November 1999, the Company issued $135 million of 5.25% convertible subordinated notes ("5.25% Notes"). These notes mature November 15, 2006, with interest payable on May 15th and November 15th each year beginning May 15, 2000. Net proceeds to the Company were approximately $130.5 million, after deducting $4.5 million of offering costs, which have been capitalized and are being amortized as additional interest expense over a period of seven years. Holders of the 5.25% Notes may convert the notes at any time into shares of the Company's common stock, at $49.53 per share. The Company may redeem the 5.25% Notes on or after November 19, 2002 at a redemption price of 103.00% of the principal amount, and may redeem at successively lesser amounts thereafter until November 15, 2006, at which time the Company may redeem at a redemption price equal to the principal amount. At June 30, 2003, approximately $435,000 of interest expense related to the 5.25% Notes was accrued as a current liability.

In October and November 2002, the Company repurchased approximately $15.4 million principal amount of its 5.25% Notes and $3.5 million principal amount of its 5.00% Notes. These purchases were made in the open market, for a cost of approximately $14.5 million, and resulted in a pre-tax gain of $4.3 million in the fourth quarter of 2002. In October and November 2000, the Company repurchased an aggregate of approximately $53.4 million principal amount of its 5.25% Notes in the open market, for a cost of approximately $40.8 million. At June 30, 2003, approximately $66.2 million principal amount of the 5.25% Notes and $121.5 million principal amount of the 5.00% Notes remained outstanding.

The Company may continue to purchase additional notes in the open market from time to time, if market conditions and the Company's financial position are deemed favorable for such purposes.

(9) COMMITMENTS AND CONTINGENCIES

GUARANTEES — The Company offers warranty coverage for its products for periods ranging from 12 to 36 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. Estimated warranty costs are recorded at the time of sale of the related product, are adjusted as appropriate and are considered a cost of sales.

The following summarizes the activity in the Company's warranty reserves during the six-month period ended June 30, 2003:

	Balance at Beginning of Period	Additions Charged to Expense	Deductions	Balance at End of Period
		(In thousands)		
Reserve for warranty obligations	$9,402	$3,498	$(5,529)	$7,371

DISPUTES AND LEGAL ACTIONS — The Company is involved in disputes and legal actions arising in the normal course of its business. 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 May 2002, the Company recognized approximately $5.3 million of litigation damages and related legal expenses pertaining to a judgment entered by a jury against the Company and in favor of MKS

Instruments, Inc. (“MKS”) in a patent-infringement suit in which the Company was the defendant. The Company has entered into a settlement agreement with MKS allowing it to sell the infringing product subsequent to the date of the jury award. The settlement agreement is in effect until all patents subject to the litigation expire. Under the settlement agreement, royalties payable to MKS from sales of the licensed product were approximately $23,000 and $80,000 for the three- and six-month periods ended June 30, 2003, respectively, and are recorded as a component of cost of sales.

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. In May 2003, MKS filed a patent infringement suit against the Company in the United States District Court in Wilmington Delaware, 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. The Company intends to pursue its declaratory ruling and defend vigorously against the MKS complaint.

(10) SUPPLEMENTAL CASH FLOW DISCLOSURES

In the second quarter of 2003, as part of the Company’s ongoing cost reduction measures, the Company committed to a plan to sell certain inventory and property and equipment assets to an unrelated third party at their respective net book values. These assets were primarily used in the manufacture of a component for the Company’s direct current and radio frequency products and were sold on June 30, 2003. In conjunction with the sale, the Company received approximately $1.6 million in cash and a short-term note receivable for approximately $1.5 million in exchange for inventory with a carrying value of approximately $2.1 million and property and equipment with a carrying value of approximately $1.0 million.

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. As a result, our actual results may differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences or prove any forward-looking statements, by hindsight, to be overly optimistic or unachievable, include, but are not limited to the following:

- our ability to successfully implement our cost reduction measures, including the transition of our supply base to Tier 1 Asian suppliers and the successful development of our China-based manufacturing facility;
- changes or slowdowns in general economic conditions or conditions in the semiconductor and semiconductor capital equipment industries and other industries in which our customers operate;
- the spread of infectious diseases in any of the regions in which we operate, including but not limited to Severe Acute Respiratory Syndrome;
- the timing and nature of orders placed by major customers, as well as such customers’ product acceptance criteria;
- changes in customers’ inventory management practices;
- customer cancellations of previously placed orders and shipment delays;
- pricing competition from our competitors;
- component shortages or allocations or other factors that change our levels of inventory or substantially increase our spending on inventory;
- the introduction of new products by us or our competitors;
- costs incurred and judgments resulting from patent or other litigation;
- costs incurred by responding to specific feature requests by customers;
- our ability to attract and retain key personnel; and

- our exposure to currency exchange rate fluctuations between the several functional currencies in foreign locations in which we have operations.

For a discussion of these and other factors that may impact our realization of our forward-looking statements, see our Annual Report on Form 10-K for the year ended December 31, 2002, filed March 27, 2003, Part I “Cautionary Statements — Risk Factors.”

New risk factors emerge from time to time, and it is not possible for management to predict all such risk factors, nor can it assess the impact of all risk factors on its business, or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Our expectations, beliefs and projections are expressed in good faith and are believed to have a reasonable basis. However, we make no assurance that such expectations, beliefs or projections will be achieved.

Because of the risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results. We have no obligation or intent to release publicly any revisions to any forward-looking statements, whether as a result of new information, future events, or otherwise.

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. 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 condensed consolidated financial statements.

VALUATION OF INTANGIBLE ASSETS AND GOODWILL — We have approximately $86.3 million of intangible assets and goodwill as of June 30, 2003, including approximately $21.2 million related to amortizable intangibles and $65.1 million in goodwill. In addition to the original cost of these assets, their recorded value is impacted by a number of our policy elections, including estimated useful lives and impairment charges, if any, as well as foreign currency fluctuations. In accordance with Statement of Financial Accounting Standards, or SFAS 142, “Goodwill and Other Intangible Assets,” we identified three reporting units. Generally, we allocated goodwill to the reporting unit that created goodwill upon its acquisition. However, we believe that our recently acquired companies provide future growth opportunities to our core business and as a result we allocated approximately 25% of the goodwill created upon the acquisitions of Aera and EMCO to our core business. We performed an annual impairment analysis of our non-amortizable intangible assets and goodwill during the fourth quarter of 2002, which indicated that no impairment was required. This assessment requires estimates of future revenue, operating results and cash flows, as well as estimates of critical valuation inputs such as discount rates, terminal values and similar data. We will continue to perform periodic and annual impairment analyses of the non-amortizable intangible assets and goodwill resulting from our acquisitions. As a result of future periodic, at least annual, impairment analyses we may record impairment charges that have a material adverse impact on our financial position and operating results. Additionally, we may make strategic business decisions in future periods which impact the fair value of our intangible assets and goodwill, which could result in significant impairment charges.

LONG-LIVED ASSETS INCLUDING INTANGIBLES SUBJECT TO AMORTIZATION — Depreciation and amortization of our long-lived assets is provided using the straight-line method over their estimated useful lives. Changes in circumstances such as the passage of new laws or changes in regulations, technological advances, changes to our business model or changes in our capital strategy could result in the actual useful lives differing from initial estimates. In those cases where we determine that the useful life of a long-lived asset should be revised, we will depreciate the net book value in excess of the estimated residual value over its revised remaining useful life. Factors such as changes in the planned use of equipment, customer attrition, contractual amendments or mandated regulatory requirements could result in shortened useful lives.

Long-lived assets and asset groups are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. The estimated future cash flows are based upon, among other things, assumptions about expected future operating performance and may differ from actual cash flows. Impairments will also be assessed when assets are determined to be held-for-sale, as opposed to held and used in operations.

RESERVE FOR EXCESS AND OBSOLETE INVENTORY— Inventory is valued at the lower of cost or market. Given the rapid change in technology, we monitor and forecast expected inventory needs based on our constantly changing sales forecast. 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 our 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.

RESERVE FOR WARRANTY — We provide warranty coverage for our products, ranging from 12 to 36 months, with the majority of our products ranging from 18 to 24 months, and estimate the anticipated costs of repairing our products under such warranties based on the historical costs of the repairs and expected product failure rates. The assumptions we use to estimate warranty accruals are reevaluated periodically in light of actual experience and, when appropriate, the accruals are adjusted. Our determination of the appropriate level of warranty accrual is subjective, and based on estimates. The industries in which we operate are subject to rapid technological change. As a result, we periodically introduce newer, more complex products, which tend to result in increased warranty costs. We expect the industries in which we operate to continue to require the introduction of new technologies, which could cause our warranty costs to increase in the future. Should product failure rates differ from our estimates, actual costs could vary significantly from our expectations.

FAIR VALUE OF DERIVATIVE INSTRUMENTS — We have entered into various foreign currency forward contracts to mitigate our foreign currency exposure from foreign currency denominated trade purchases and intercompany receivables and payables. These derivative instruments are not held for trading or speculative purposes. The valuation of derivative instruments under SFAS No. 133 requires us to make estimates and judgments that affect the fair value of the instruments. Fair value of our derivatives is determined relative to changes in the forward yield curves and discount rates. Such amounts are subject to significant estimates which may change in the future.

COMMITMENTS AND CONTINGENCIES — We are involved in disputes and legal actions arising in the normal course of our business. While we currently believe that the amount of any ultimate potential loss would not be material to our 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 our financial position or reported results of operations in a particular quarter. An unfavorable decision, particularly in patent litigation, could require material changes in production processes and products or result in our inability to ship products or components found to have violated third-party patent rights. We accrue loss contingencies in connection with our litigation when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

REVENUE RECOGNITION — We generally recognize revenue upon shipment of our products and spare parts, at which time title passes to the customer, as our shipping terms are FOB shipping point, the price is fixed and collectibility is reasonably assured. Generally, we do not generate revenue from the installation of our products. In certain limited instances, some customers have negotiated product acceptance provisions relative to specific orders. Under these circumstances we defer revenue recognition until the related acceptance provisions have been satisfied. Revenue deferrals are reported as customer deposits in the accompanying condensed consolidated balance sheets.

In certain instances we require our customers to pay for a portion or all of their purchases prior to our building or shipping the products. We record cash payments received prior to shipment as customer deposits in the accompanying condensed consolidated balance sheets, then recognize revenue upon shipment of the products. We do not offer price protections to our customers or allow returns, unless covered by our normal policy for repair of defective products.

We have an arrangement with one of our major customers, a semiconductor capital equipment manufacturer, in which completed products are shipped to the customer and held by them in their warehouse. The customer draws products from this inventory as needed, at which time title passes to the customer and we recognize revenue. The customer is subject to our normal warranty policy for repair of defective products.

In certain instances we 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 us, or accepts the product. Upon acceptance, title passes to the customer, we invoice the customer for the product, and revenue is recognized. Pending acceptance by the customer, such systems are reported on our balance sheet at an estimated value based on the lower of cost or market, and are included in the amounts for demonstration and customer service equipment, net of accumulated depreciation.

While we maintain a stringent credit approval process, significant judgments are made by management in connection with assessing our customers' ability to pay at the time of shipment. Despite this assessment, from time to time, our customers are unable to meet their payment obligations. We continue to monitor our customers' credit worthiness, and use our judgment in establishing the estimated amounts of customer receivables which will ultimately not be collected. A significant change in the liquidity or financial position of our customers could have a material adverse impact on the collectibility of our accounts receivable and our future operating results.

STOCK-BASED COMPENSATION — As allowed by SFAS No. 123 and SFAS No. 148, we have elected to continue to account for our employee stock-based compensation plans using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and related Interpretations, which do not require compensation expense to be recorded if the consideration to be received is at least equal to the fair value of the common stock to be received at the measurement date. We provide information as to what our earnings and earnings per share would have been had we used the fair value method prescribed by SFAS No. 123.

DEFERRED INCOME TAXES — Each reporting period we estimate our ability to realize our net deferred tax assets. Realization of our net deferred tax assets is dependent upon our generating sufficient taxable income in the appropriate tax jurisdictions in future years to obtain benefit from the reversal of net deductible temporary differences and from tax loss and tax credit carryforwards. At June 30, 2003 we reassessed our valuation allowance and determined that no adjustment to the valuation allowance was required based on our conclusion that it is more likely than not that our deferred tax assets, net of related deferred tax liabilities and valuation allowance, will be realized through future taxable income. This assessment requires significant judgment, and is based on management's expectation of future profitable operations and taxable income. Should circumstances change such that our conclusion changes, this valuation allowance could be increased to reserve all or a portion of the net deferred tax assets and the amount of the related charge could be material.

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. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. We believe that it is more likely than not that we will realize the benefits of our deferred tax assets, net of valuation allowance. Reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

OVERVIEW

We design, manufacture and support a group of key components and subsystems for vacuum process systems. Our primary products are complex power conversion and control systems. Our products also control the flow of gasses into the process chambers and provide thermal control and sensing within the chamber. Our customers use our products in plasma-based thin-film processing equipment that is essential to the manufacture of semiconductors; compact disks, DVDs and other digital storage media; flat-panel computer and television screens; coatings for architectural glass and optics; industrial laser and medical applications; and a power supply for advanced technology computer workstations. 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 59% and 73% of our sales in the six-month periods ended June 30, 2003 and 2002, respectively. In 2002 and 2001 the semiconductor capital equipment industry saw the steepest cutback in capital equipment purchases in industry history. This cutback continues to affect our sales to this industry. 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 the industry cycles.

We have incurred significant losses over the past nine quarters primarily as a result of lower revenues. Our results in the first six months of 2003 and the second quarter of 2002 include revenues from two companies acquired during the first quarter of 2002, Aera and Dressler. Over the past nine quarters, we have been unable to achieve profitability at current revenue levels and do not have confidence of an industry recovery in the short-term. We have established a goal of reducing our operating cash flow breakeven point to a quarterly revenue level of approximately $55 million to $60 million by the end of 2003, but cannot provide any assurance that such goals or revenue levels are achievable in 2003.

Results of Operations for the Three Months Ended June 30, 2003 and 2002

SALES

Sales were $62.9 million in the second quarter of 2003 and $67.9 million in the second quarter of 2002, representing a decrease of 7% from the second quarter of 2002 to the second quarter of 2003. In the second quarter of 2002 the semiconductor capital equipment industry experienced a mild recovery from the extended industry downturn which began in 2001. This recovery subsided in the fourth quarter of 2002 and has only slightly improved during 2003. Our sales in the second quarter of 2003 increased approximately 12% from the first quarter 2003 level of $56.2 million. Our quarterly revenue levels continue to be extremely volatile due to significant fluctuations in demand for our products from the industries in which we operate, especially the semiconductor capital equipment industry.

Our revenue decrease from the second quarter of 2002 to the second quarter of 2003 came primarily from the semiconductor capital equipment industry, while the other industries we serve showed varying levels of improvement.

The following tables summarize net sales and percentages of net sales by customer type for the three-month periods ended June 30, 2003 and 2002:

	Three Months Ended June 30,	
	2003	2002
	(In thousands)	
Semiconductor capital equipment	$37,783	$50,629
Data storage	8,263	4,038
Flat panel display	5,247	2,677
Advanced product applications	11,653	10,549
	$62,946	$67,893

	Three Months Ended June 30,	
	2003	2002
Semiconductor capital equipment	60%	75%
Data storage	13	6
Flat panel display	8	4
Advanced product applications	19	15
	100%	100%

The following table summarizes percentage changes in net sales by customer type for us from the three-month period ended June 30, 2002 to the three-month period ended June 30, 2003:

	Second quarter 2003 change from second quarter 2002
Semiconductor capital equipment	(25)%
Data storage	105%
Flat panel display	96%
Advanced product applications	10%
Total sales	(7)%

Applied Materials, Inc. is our largest customer and accounted for 18% of our sales for the three months ended June 30, 2003, and 34% of our sales for the three months ended June 30, 2002. No other customer accounted for more than 10% during these periods.

The following tables summarize net sales and percentages of net sales by geographic region for the three-month periods ended June 30, 2003 and 2002:

	Three Months Ended June 30,	
	2003	2002
	(In thousands)	
United States and Canada	$27,959	$45,986
Europe	13,614	8,584
Asia Pacific	21,232	13,163
Rest of world	141	160
	$62,946	$67,893

	Three Months Ended June 30,	
	2003	2002
United States and Canada	44%	68%
Europe	22	13
Asia Pacific	34	19
Rest of world	—	—
	100%	100%

GROSS MARGIN

Our gross margin was 32.2% in the second quarter of 2003 and 35.8% in the second quarter of 2002. Our gross margin declined due to the lower revenue base and duplicative costs associated with our China manufacturing facility and transition to Tier 1 Asian suppliers.

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

- costs associated with transitioning a portion of our manufacturing to our new China facility;
- unanticipated costs to comply with our customers’ copy exact requirements, especially related to our China transition and move to Tier 1 Asian suppliers;
- the semiconductor industry’s continued move to 300mm wafers and smaller line widths, which require new products that early in their life cycle and at low production levels, typically have lower margins than our established products;
- cost reduction programs initiated by semiconductor manufacturers and semiconductor capital equipment manufacturers;
- 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;

- significant patent litigation losses, resulting in unanticipated royalty costs; and
- continued erosion in our sales base, due to industry cycles, general economic conditions and other factors.

We provide warranty coverage for our products ranging from 12 to 36 months, with the majority of our products ranging from 18 to 24 months, and estimate the anticipated costs of repairing our products under such warranties based on the historical costs of the repairs and expected product failure rates. The assumptions we use to estimate warranty accruals are reevaluated periodically in light of actual experience, and when appropriate, the accruals are adjusted. Our determination of the appropriate level of warranty accrual is subjective and based on estimates. Should product failure rates differ from our estimates, actual costs could vary significantly from our expectations.

We recognized charges for warranty expense of $1.6 million in each of the second quarters of 2003 and 2002 which affected our gross margin by approximately 2.5% and 2.4%, respectively. In 2002 we recorded significant reserves for a specific product warranty based on our estimated cost per unit to repair the product and the estimated number of these units in the field. During the second quarter of 2003, we continued our analysis of the potential warranty cost related to this product and reversed approximately $274,000 of this product’s warranty reserve due to lower than anticipated repair costs per unit and fewer units being returned for repair. The reversal of warranty costs in the second quarter of 2003 affected our gross margin by approximately 0.4%.

The following summarizes the activity in our warranty reserve during the second quarter of 2003:

	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
		(In thousands)		
Reserve for warranty obligations	$8,343	$1,595	$(2,567)	$7,371

Historically, price competition has not had a material effect on margins. However, as a result of the prolonged downturn in the semiconductor industry, OEMs and semiconductor capital equipment manufacturers are striving to reduce their costs. Any cost reduction programs initiated by OEMs and semiconductor capital equipment manufacturers could have a significant impact on our future gross margins.

RESEARCH AND DEVELOPMENT EXPENSES

We believe continued investment in the research and development of new products and subsystems is critical to our ability to serve new and existing markets, develop new products and improve existing product designs. However, we cannot provide assurance that the products we develop will meet customer requirements when those products are introduced to the market. To be advantageously positioned for a turnaround in demand, we continue to invest heavily in new product development even during industry downturns, which allows us to compete for ongoing design wins on our customers' new production tools. Since our inception, all of our research and development costs have been expensed as incurred.

Our research and development expenses were $12.6 million in each of the second quarter of 2003 and second quarter of 2002. Despite our cost reduction measures, our research and development expenses remained flat from the second quarter of 2002 to the second quarter of 2003 primarily due to expenditures to launch new radio frequency and direct current products. As a percentage of sales, research and development expenses increased from 18.5% in the second quarter of 2002 to 19.9% in the second quarter of 2003 because of the lower sales base in 2003.

SALES AND MARKETING EXPENSES

As we have expanded our product offerings and sales channels through acquisitions and product development, our sales and marketing efforts have become increasingly complex. We continue to refine our sales and marketing functions as we acquire and integrate new companies. We have continued the effort to market directly to end users of our products, in addition to our traditional marketing to manufacturers of semiconductor capital equipment and other thin-film systems. 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 $8.3 million in the second quarter of 2003, and $8.7 million in the second quarter of 2002. This represents a 5.2% decrease from the second quarter of 2002 to the second quarter of 2003. This decrease was primarily due to our ongoing cost reduction measures, partially offset by depreciation of additional demonstration and customer service equipment. As a percentage of sales, sales and marketing expenses increased from 12.8% in the second quarter of 2002 to 13.1% in the second quarter of 2003, primarily due to the lower sales base.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses support our worldwide corporate, legal, patent, tax, financial, administrative, information systems and human resources functions in addition to our general management and integration costs related to acquisitions. General and administrative expenses were $5.5 million in the second quarter of 2003, and $7.0 million in the second quarter of 2002. The 21.5% decrease in general and administrative expenses from the 2002 period to the 2003 period was primarily due to our ongoing cost reduction measures.

LITIGATION DAMAGES AND EXPENSES

During the second quarter of 2002, we recorded a charge of approximately $5.3 million pertaining to damages awarded by a jury in a patent infringement case in which we were the defendant, and legal expenses related to the judgment. The Applied Science and Technology, or ASTeX, division of MKS Instruments, Inc. was the plaintiff in the case, which was tried in a Delaware court. Sales of the product in question have accounted for less than 5% of total sales since the product's introduction. We have entered into a settlement agreement with MKS allowing us to sell the infringing product to our customer subsequent to the date of the jury award. Royalties payable to MKS under the settlement agreement from sales of the licensed product have not been material.

RESTRUCTURING CHARGES

At the end of 2002, we announced major changes in our operations to occur through the end of 2003. These included a manufacturing location 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 recognized charges in the second quarter of 2003 that consisted primarily of the involuntary termination of approximately 55 manufacturing and administrative personnel in our U.S. operations. Certain of the employees were terminated and paid prior to the end of the second quarter of 2003, which resulted in restructuring charges totaling approximately $768,000 for the three months ended June 30, 2003. In addition, certain employees will be required to render service beyond a minimum retention period (generally 60 days). In accordance with SFAS No. 146, we measured the termination benefits at the communication date, but approximately $350,000 will be recognized as expense in the third and fourth quarters of 2003 as these employees complete their service requirement.

OTHER INCOME (EXPENSE)

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

Interest income was approximately $444,000 in the second quarter of 2003 and $776,000 in the second quarter of 2002. 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 operating losses and capital investments.

Interest expense consists principally of accruals of interest on our convertible subordinated notes, on borrowings under capital lease facilities, debt assumed in our acquisition of Aera, and amortization of our deferred debt issuance costs. Interest expense was approximately $2.8 million in the second quarter of 2003 and $3.2 million in the second quarter of 2002. The decrease in interest expense was primarily due to our repurchase of approximately $15.4 million and $3.5 million of our 5.25% and 5.00% convertible subordinated notes in the fourth quarter of 2002.

Our foreign subsidiaries' sales are primarily denominated in currencies other than the U.S. dollar. We recorded net foreign currency gains of $87,000 in the second quarter of 2003 and $4.5 million in the second quarter of 2002. The majority of our second quarter 2002 gain was related to an intercompany loan of Japanese yen, which was settled in January 2003, that we made to our wholly owned subsidiary Advanced Energy Japan K.K., which has a functional currency of yen, for the purpose of effecting the acquisition of Aera. The loan was transacted in the first quarter of 2002, for approximately 5.7 billion yen, approximately $44 million based on an exchange rate of 130:1. During the second quarter of 2002, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of approximately $4.6 million.

We have entered into various foreign currency forward contracts to mitigate currency fluctuations in the Japanese yen and the euro.

At June 30, 2003, our subsidiary AE-Japan held foreign currency forward contracts with notional amounts of $5.0 million and market settlement amounts of $4.9 million for an unrealized gain position of approximately $100,000 that has been included in foreign currency gain in the accompanying condensed consolidated statements of operations.

During 2003, our subsidiary AE-Germany entered into foreign currency forward contracts to buy U.S. dollars to mitigate currency exposure from its payable position arising from trade purchases and intercompany transactions. At June 30, 2003, AE-Germany held foreign currency forward contracts with notional amounts of $700,000 and market settlements amounts of $755,000 for an unrealized loss position of approximately $55,000 that has been included in foreign currency gain in the accompanying condensed consolidated statements of operations.

Miscellaneous expense was approximately $111,000 in the second quarter of 2003 and $653,000 in the second quarter of 2002.

BENEFIT FOR INCOME TAXES

The income tax benefit for the second quarter of 2003 was $3.4 million and represented an effective rate of 37%. The income tax benefit for the second quarter of 2002 was $2.8 million and represented an effective rate of 35%. The increase in our effective tax rate was due to our legal restructuring as discussed in Note 1 to our consolidated financial statements on Form 10-K for the year ended December 31, 2002, filed with the Securities and Exchange Commission on March 27, 2003.

Changes in our relative earnings and the earnings of our foreign subsidiaries affect our consolidated effective tax rate. We adjust our income taxes periodically based upon the anticipated tax status of all foreign and domestic entities, and have adopted income tax planning strategies to reduce our worldwide income tax expense.

Realization of our net deferred tax assets is dependent upon our generating sufficient taxable income in the appropriate tax jurisdictions in future years to obtain benefit from the reversal of net deductible temporary differences and from tax loss and tax credit carryforwards. At June 30, 2003 we reassessed our valuation allowance and determined that no adjustment to the valuation allowance was required based on our conclusion that it is more likely than not that our deferred tax assets, net of related deferred tax liabilities and valuation allowance, will be realized through future taxable income. This assessment requires significant judgment, and is based on management’s expectation of future profitable operations and taxable income. Should circumstances change such that our conclusion changes, this valuation allowance could be increased to reserve all or a portion of the net deferred tax assets and the amount of the related charge could be material.

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. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. We believe that it is more likely than not that we will realize the benefits of our deferred tax assets, net of valuation allowance. Reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

Results of Operations for the Six Months Ended June 30, 2003 and 2002

SALES

Sales were $119.1 million in the first six months of 2003 and $110.8 million in the first six months of 2002, representing an increase of 7.5% from the first six months of 2002 to the first six months of 2003. Sales in the first six months of 2003 included $23.4 million from Aera and Dressler, sales in the first six months of 2002 included $20.9 million from Aera and Dressler.

Our revenue increase from the 2002 six-month period to the 2003 six-month period came primarily from the data storage, flat panel display and advanced product applications industries, while the semiconductor capital equipment industry declined substantially.

The following tables summarize net sales and percentages of net sales by customer type for the six-month periods ended June 30, 2003 and 2002:

	Six Months Ended June 30,	
	2003	2002
	(In thousands)	
Semiconductor capital equipment	$ 70,861	$ 81,071
Data storage	12,146	6,465
Flat panel display	11,933	4,927
Advanced product applications	24,164	18,317
	$119,104	$110,780

	Six Months Ended June 30,	
	2003	2002
Semiconductor capital equipment	59%	73%
Data storage	11	6
Flat panel display	10	4
Advanced product applications	20	17
	100%	100%

Applied Materials, Inc. is our largest customer and accounted for 21% of our sales for the six months ended June 30, 2003, and 30% of our sales for the six months ended June 30, 2002. No other customer accounted for more than 10% during these periods.

The following tables summarize net sales and percentages of net sales by geographic region for the six-month periods ended June 30, 2003 and 2002:

	Six Months Ended June 30,	
	2003	2002
	(In thousands)	
United States and Canada	$ 57,377	$ 72,737
Europe	23,056	14,176
Asia Pacific	38,530	23,636
Rest of world	141	231
	$119,104	$110,780

	Six Months Ended June 30,	
	2003	2002
United States and Canada	48%	66%
Europe	19	13
Asia Pacific	33	21
Rest of world	—	—
	100%	100%

GROSS MARGIN

Our gross margin was 32.1% in the first six months of 2003 and 34.0% in the first six months of 2002. The year-over-year decrease in gross margin was due to duplicative facilities associated with our transition to China-based manufacturing and the transition to Tier 1 Asian suppliers, partially offset by a reduction in charges for warranty related repairs.

We recognized charges for warranty expense of \$3.5 million and \$3.9 million in the first six months of 2003 and 2002, respectively, which affected our gross margin by approximately 2.9% and 3.5%, respectively. In 2002 we recorded significant reserves for a specific product warranty based on our estimated cost per unit to repair the product and the estimated number of these units in the field. During the first half of 2003, we continued our analysis of the potential warranty cost related to this product, and during the second quarter of 2003 reversed approximately $274,000 of this product's warranty reserve due to lower than anticipated repair costs per unit and fewer units being returned for repair. The reversal of warranty costs in the first half of 2003 affected our gross margin by approximately 0.2%.

We recognized charges for warranty expense of $1.9 million in the first quarter of 2003.

The following summarizes the activity in our warranty reserve during the six-month period ended June 30, 2003:

	Balance at Beginning of Period	Additions Charged to Expense	Deductions	Balance at End of Period
		(In thousands)		
Reserve for warranty obligations	$9,402	$3,498	$(5,529)	$7,371

RESEARCH AND DEVELOPMENT EXPENSES

Our research and development expenses were $25.9 million in the first six months of 2003 and $23.8 million in the first six months of 2002. As a percentage of sales, research and development expenses increased from 21.5% in the first six months of 2002 to 21.8% in the first six months of 2003. The increase in research and development expenses from the 2002 period to the 2003 period was primarily due to the acquisitions of Aera and Dressler, a licensing agreement and expenditures to launch new radio frequency and direct current products, partially offset by our cost reduction measures.

SALES AND MARKETING EXPENSES

Sales and marketing expenses were $16.6 million in the first six months of 2003 and $15.5 million in the first six months of 2002. The 7.3% increase in sales and marketing expenses from the 2002 period to the 2003 period was primarily due to the acquisitions of Aera and Dressler, and depreciation of demonstration and customer service equipment additions, partially offset by our cost reduction measures. As a percentage of sales, sales and marketing expenses were approximately 14.0% in both periods.

GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses were $11.1 million in the first six months of 2003 and $13.8 million in the first six months of 2002. The 19.4% decrease in general and administrative expenses from the 2002 period to the 2003 period was primarily due to our ongoing cost reduction measures. As a percentage of sales, general and administrative expenses decreased from 12.5% in the first six months of 2002 to 9.4% in the first six months of 2003, primarily due to the higher sales base and cost reduction measures discussed above.

LITIGATION DAMAGES AND EXPENSES

During the second quarter of 2002, we recorded a charge of approximately $5.3 million pertaining to damages awarded by a jury in a patent infringement case in which we were the defendant, and legal expenses related to the judgment. The Applied Science and Technology, or ASTeX, division of MKS Instruments, Inc. was the plaintiff in the case, which was tried in a Delaware court. Sales of the product in question have accounted for less than 5% of total sales since the product's introduction. We have entered into a settlement agreement with MKS allowing us to sell the infringing product to our customer subsequent to the date of the jury award. Royalties payable to MKS under the settlement agreement from sales of the licensed product were not material in the periods presented.

RESTRUCTURING CHARGES

As part of our ongoing efforts to bring our operating costs in line with the current market environment we recorded restructuring charges totaling $2.3 million in the first six months of 2003. Our first quarter 2003 charges of approximately $1.5 million were 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. Approximately 36 employees accepted the voluntary termination benefits prior to March 31, 2003 with termination dates in the second quarter of 2003. All termination benefits were paid in the second quarter of 2003.

Our second quarter 2003 charges consisted primarily of the termination of approximately 55 personnel in our U.S. operations. Certain of the employees were terminated and paid prior to the end of the second quarter of 2003, which resulted in restructuring charges totaling approximately $768,000 for the three months ended June 30, 2003. In addition, certain employees will be required to render service beyond a minimum retention period (generally 60 days). In accordance with SFAS No. 146, we measured the termination benefits at the communication date, but approximately $350,000 will be recognized as expense in the third and fourth quarters of 2003 as these employees complete their service requirement.

OTHER (EXPENSE) INCOME

Interest income was approximately $964,000 in the first six months of 2003 and $1.7 million in the first six months of 2002. The decrease in interest income was due to our lower level of investment in marketable securities resulting from the use of a portion of our cash reserves to finance the acquisitions of Aera in January 2002 and Dressler in March 2002, to repurchase approximately $15.4 million and $3.5 million of our 5.25% and 5.00% convertible subordinated notes in the fourth quarter of 2002, and to fund our operating losses and capital investments.

Interest expense was $5.6 million in the first six months of 2003 and $6.5 million in the first six months of 2002. The decrease in interest expense was primarily due to our repurchase of a portion of our convertible subordinated notes in the fourth quarter of 2002, partially offset by debt assumed in our acquisition of Aera.

We recorded net foreign currency gains of $9,000 in the first six months of 2003 and $4.6 million in the first six months of 2002. The majority of our 2002 gain was related to an intercompany loan of Japanese yen, which was settled in January 2003, that we made to our wholly owned subsidiary Advanced Energy Japan K.K., which has a functional currency of yen, for the purpose of effecting the acquisition of Aera. The loan was transacted in the first quarter of 2002, for approximately 5.7 billion yen, approximately $44 million based on an exchange rate of 130:1. During the second quarter of 2002, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of approximately $4.6 million.

Miscellaneous expense was approximately $400,000 in the first six months of 2003 and in the first six months of 2002.

BENEFIT FOR INCOME TAXES

The income tax benefit for the first six months of 2003 was $8.4 million and represented an effective rate of 37%. The income tax benefit for the first six months of 2002 was $7.5 million and represented an effective rate of 35%.

Liquidity and Capital Resources

Our financing strategy has been to raise capital from debt and equity markets to provide liquidity to enable our investments in acquisitions and alliances, which support our strategic vision of being a single source provider of high value subsystems. We maintain substantial levels of cash and marketable securities to have funding readily available for such investment opportunities when they arise. Since 1995, to better enable such strategic investments, we have attained this liquidity with proceeds from underwritten public offerings of our common stock and, since 1999, offerings of convertible subordinated debt.

Operating activities used cash of $10.8 million in the first six months of 2003, reflecting our net loss of $14.4 million partially offset by non-cash items of $4.7 million, increased by net working capital changes of approximately $1.1 million. Non-cash items primarily consisted of depreciation and amortization of $12.4 million; amortization of deferred debt issuance costs of $500,000; and a loss on disposal of property and equipment of $900,000, partially offset by a benefit from deferred income taxes of $9.5 million. Net working capital changes used cash of approximately $1.1 million and primarily consisted of a $1.1 million increase in accounts receivable; a $1.2 million decrease in other current assets; a $2.9 million increase in demonstration and customer service equipment; a $2.8 million increase in trade accounts payable; and a $1.9 million decrease in customer deposits and other accrued expenses.

Operating activities used cash of $16.3 million in the first six months of 2002, reflecting our net loss of $13.9 million partially offset by non-cash items of $10.4 million, increased by net working capital changes of $12.8 million. Non-cash items primarily consisted of depreciation and amortization of $8.4 million; amortization of deferred debt issuance costs of $700,000; and a provision for deferred income taxes of $600,000. Net working capital changes used cash of approximately $12.8 million and primarily consisted of a $14.2 million increase in accounts receivable; a $1.4 million decrease in inventory; a $1.0 million decrease in other current assets; a $1.1 million increase in demonstration and customer service equipment; a $6.2 million increase in trade accounts payable; a $1.4 million increase in customer deposits and other accrued expenses; a $3.4 million increase in net taxes receivable; and a $4.6 million unrealized gain on an intercompany foreign currency loan discussed above.

We expect near-term future operating activities to continue to use cash. Any future decline in the industries in which we operate could substantially affect our ability to generate new sales and collect payments from our customers, could cause us to initiate future reductions in force requiring substantial severance payments, and other cash payments to exit certain operating activities, among other uses of cash. Conversely, as receivable and inventory balances tend to fluctuate with net sales, any future upturn in the industries we serve, primarily the semiconductor industry, may result in an increase in our net receivables and inventory balances. We are typically required to use our cash reserves to finance our inventory purchases and extend credit to our customers to finance their purchases from us. We are unable to provide any assurance regarding our future cash flow from operations.

Investing activities used cash of $9.7 million in the first six months of 2003, and primarily consisted of the purchase of property and equipment for $8.5 million and the settlement of our escrow deposit liability related to our acquisition of Dressler in the first quarter of 2003 of $1.7 million, partially offset by proceeds from the sale of assets of $1.6 million. Investing activities used cash of $29.0 million in the first six months of 2002 and primarily consisted of cash generated from the sale of marketable securities of $28.4 million, offset by purchases of property and equipment of $5.0 million; the acquisition of Aera Japan Limited for $35.7 million net of $8.3 million of cash acquired; the acquisition of Dressler HF Technik GmbH for $14.4 million net of $680,000 of cash acquired; and the purchase of other investments of $2.0 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, acquisitions, 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 levels of cash that are greater than needed for our current operations in the near term.

Financing activities used cash of $3.7 million in the first six months of 2003, and consisted of the repayment of notes payable and capital leases of $4.6 million, partially offset by proceeds from common stock transactions of $900,000. Financing activities used cash of $2.2 million in the first six months of 2002, and consisted of the repayment of notes payable and capital leases of $3.7 million, partially offset by proceeds from common stock transactions of $1.5 million.

We plan to spend approximately $11 million to $12 million in 2003 for the acquisition of equipment, leasehold improvements and furnishings, with depreciation expense for 2003 projected to be $13 million to $14 million. 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, fluctuations in foreign currency exchange rates may significantly impact our capital expenditures and depreciation expense recognized in a particular period.

As of June 30, 2003, we had working capital of $236.4 million, a decrease of $11.6 million from December 31, 2002. Our principal sources of liquidity consisted of $46.4 million of cash and cash equivalents and $103.0 million of marketable securities, and a credit facility consisting of a $25.0 million revolving line of credit, none of which was outstanding at June 30, 2003. Advances under the revolving line of credit bear interest at the prime rate (4.00% at August 7, 2003) minus 1%. Any advances under this revolving line of credit will be due and payable 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 June 30, 2003.

We have committed to advance up to $1.0 million to a privately held company over the next two years. The amount and timing of this advance is dependent upon the privately held company achieving certain business development milestones.

To finance the facilities for our headquarters and main U.S. manufacturing location, we lease our executive offices and manufacturing facilities in Fort Collins, Colorado from two limited liability partnerships whose ownership includes one of our directors, who is also an officer, and other individuals unrelated to us. The leases relating to these spaces expire in 2009, 2011 and 2016 and contain monthly payments of approximately $67,000, $55,000 and $64,000, respectively.

We believe that our cash and cash equivalents, marketable securities, cash flow from operations and available borrowings, will be sufficient to meet our working capital needs for at least the next twelve months. After that time, we may require additional equity or debt financing to address our working capital, capital equipment or expansion needs. In addition, any significant acquisitions we make may require additional equity or debt financing to fund the purchase price, if paid in cash. There can be no assurance that additional funding will be available when required or that it will be available on terms acceptable to us. In 2006, when our convertible subordinated notes become due, it is possible we may need substantial funds to repay such debt, which was $187.7 million at June 30, 2003. Our 5.00% convertible subordinated notes of $121.5 million are due September 1, 2006, and our 5.25% convertible subordinated notes of $66.2 million are due November 15, 2006. Payment would be required if our common stock price remains at low levels throughout this period, the prices at which we can effect conversion are not met in the market in which our stock is traded, and the holders of our notes choose not to otherwise convert. In such a situation there can be no assurance that we will be able to refinance the debt. We may continue to repurchase additional notes in the open market from time to time, if market conditions and our financial position are deemed favorable for such purposes.

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 June 30, 2003, 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 six months of 2003, the rates we earned on our marketable securities approximated 1.7% on a before tax equivalent basis. Because the Federal Reserve repeatedly lowered interest rates throughout 2001 and 2002, the interest rates we earn on our investments likewise decreased substantially. This, in conjunction with using our available cash and cash reserves for acquisitions, including the EMCO acquisition in January 2001, the Aera acquisition in January 2002, the Dressler acquisition in March 2002, and the repurchase of a portion of our convertible subordinated notes in the fourth quarter of 2002, has greatly reduced our recent and anticipated interest income. The impact on interest income of a 10% decrease in the average interest rate would have resulted in approximately $96,000 less interest income in the first six months 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 5.00% for the $121.5 million of our debt that is due September 2006. Our offerings of subordinated debt in 1999 and 2001 increased our fixed interest expense upon each issuance, though interest expense was partially reduced by the repurchase of a portion of these offerings in 2002. Because these rates are fixed, we believe there is no risk of increased interest expense.

The interest rates on our Aera Japan subsidiary's $37 million credit lines are variable and currently range from 1.28% 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 six months of 2003, the U.S. dollar remained relatively stable against the Japanese yen, and weakened approximately 9% against the euro. It is highly uncertain how currency exchange rates will fluctuate in the future. We have entered into various forward foreign currency exchange contracts to mitigate currency fluctuations in the Japanese yen and the euro. 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 June 30, 2003, our subsidiary AE-Japan held foreign currency forward contracts to purchase U.S. dollars with notional amounts of $5,000,000 and market settlement amounts of approximately $4,900,000 for an unrealized gain position of approximately $100,000, and our AE-Germany subsidiary held foreign currency forward contracts to purchase U.S. dollars with notional amounts of $700,000 and market settlement amounts of approximately $755,000 for an unrealized loss position of approximately $55,000.

Other Risk

We have invested in start-up and early-stage companies and strategic alliances and may in the future make additional investments in such companies that develop products which we believe may provide future benefits. We have written down the majority of the cost of one such investment in 2001 and 2002, related to a strategic alliance we started in 2000. Such current investments and any future investments will be subject to all of the risks inherent in investing in companies that are not established, or in which, due to our level of investment, we do not exercise significant management control.

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. Our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 27, 2003, provides a description of an interference action filed in November 2001 in the United States Patent and Trademark Office by the Unaxis Corporation. During the quarter covered by this Form 10-Q the parties settled the interference. Such settlement was not material to our financial position or results of operations.

In April 2003, we filed a claim in the United States District Court for the District of Colorado seeking a declaratory ruling that our new plasma source products Xstream™ With Active Matching Network™ (“Xstream Products”) are not in violation of U.S. patents held by MKS Instruments, Inc. In May 2003, MKS filed a patent infringement suit against us in the United States District Court in Wilmington Delaware, alleging that our Xstream Products infringe five patents held by MKS. We believe that the Delaware court, in its May 2002 judgment in prior litigation between us and MKS, clearly defined the limits of the MKS technology. We specifically designed our Xstream Products not to infringe MKS’s patents, with the advice of a team of independent experts. We intend to pursue our declaratory ruling and defend vigorously against the MKS complaint.

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

We held our 2003 Annual Meeting of Stockholders on Wednesday, May 7, 2003, to vote on five proposals. Proxy statements were sent to all shareholders. The first proposal was for the election of the following six directors: Douglas S. Schatz, Richard P. Beck, Trung T. Doan, Arthur A. Noeth, Elwood Spedden and Gerald M. Starek. All six directors were elected with the following votes tabulated:

Name of Director	Total Vote for Each Director	Total Vote Withheld From Each Director
Mr. Schatz	24,561,755	4,866,752
Mr. Beck	28,780,470	648,037
Mr. Doan	28,361,097	1,067,410
Mr. Noeth	28,329,302	1,099,205
Mr. Spedden	28,329,221	1,099,286
Mr. Starek	28,749,280	679,227

The second proposal was to approve the establishment of the 2003 Stock Option Plan. The 2003 Stock Option Plan was ratified, with the following votes tabulated:

For	Against	Abstain	Non Vote
21,200,276	4,918,351	22,256	3,287,624

The third proposal was to approve the establishment of the 2003 Non-Employee Directors’ Stock Option Plan. The 2003 Non-Employee Directors’ Stock Option Plan was ratified, with the following votes tabulated:

For	Against	Abstain	Non Vote
22,243,699	3,864,440	32,744	3,287,624

The fourth proposal was to approve an amendment to the Employee Stock Purchase Plan to increase the total number of shares of common stock issuable under the plan from 200,000 shares to 400,000 shares. The amendment to the Employee Stock Purchase Plan was ratified, with the following votes tabulated:

For	Against	Abstain	Non Vote
25,697,532	423,290	20,061	3,287,624

The fifth proposal was to approve the appointment of KPMG LLP as independent auditors of Advanced Energy Industries, Inc., for 2003. The appointment of KPMG LLP was ratified, with the following votes tabulated:

For	Against	Abstain
29,287,704	126,747	14,056

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)

10.1 Loan and Security Agreement dated May 9, 2003, by and among Silicon Valley Bank, as a bank and Advanced Energy Industries, Inc., as borrower

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 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

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(1) Incorporated by reference to the Registrant’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2001 (File No. 000-26966), filed August 13, 2001.

(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 reports on Form 8-K:

(i) We filed with the Securities and Exchange Commission a Current Report on Form 8-K on April 23, 2003 to furnish under Item 12 our press release and conference call transcript announcing our results of operations for the first quarter of 2003.

(ii) We filed a Current Report on Form 8-K with the Securities and Exchange Commission on May 16, 2003 to furnish under Item 5 information relating to a patent infringement suit filed in U.S. District Court in Wilmington, Del. by MKS Instruments, Inc. against Advanced Energy Industries, Inc.

(iii) We filed with the Securities and Exchange Commission a Current Report on Form 8-K on July 24, 2003 to furnish under Item 12 our press release announcing our results of operations for the three- and six-month periods ended June 30, 2003.

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SIGNATURES

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

ADVANCED ENERGY INDUSTRIES, INC

/s/ Michael El-Hillow

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

August 13, 2003

INDEX TO EXHIBITS

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EXHIBIT 10.1

LOAN MODIFICATION AGREEMENT

This Loan Modification Agreement is entered into as of May 9, 2003, by and between SILICON VALLEY BANK ("Bank"), whose address is 3003 Tasman Drive, Santa Clara, California 95054 with a loan production office at 4410 Arapahoe Avenue, Suite 200, Boulder, CO 80303 and ADVANCED ENERGY INDUSTRIES, INC. ("Borrower"), whose address is 1625 Sharp Point Drive, Fort Collins, CO 80525.

1. DESCRIPTION OF EXISTING AGREEMENT. Among other Obligations, which may be owing by Borrower to Bank, Borrower is or may become indebted to Bank pursuant to, among other documents, a Loan and Security Agreement dated May 10, 2002, as it may be amended from time to time (the "Loan Agreement"). The Loan Agreement provides for, among other things, a Committed Revolving Line in the original principal amount of Twenty-Five Million and No/100 Dollars ($25,000,000.00). Defined terms used but not otherwise defined herein shall have the same meanings as set forth in the Loan Agreement.

Hereinafter, all indebtedness owing by Borrower to Bank shall be referred to as the "Obligations."

2. DESCRIPTION OF COLLATERAL. Repayment of the Obligations is secured by the Collateral as described in the Loan Agreement.

Hereinafter, the above-described security documents, together with all other documents securing repayment of the Obligations shall be referred to as the "Security Documents". Hereinafter, the Security Documents, together with all other documents evidencing or securing the Obligations shall be referred to as the "Existing Loan Documents".

3. DESCRIPTION OF CHANGE IN TERMS. Bank hereby agrees to modify the Loan Agreement as follows:

1. The first sentence in subsection (a) of Section 2.1.1 entitled "Revolving Advances" is hereby amended to read as follows:

Bank will make Advances not exceeding (i) the lesser of (A) the Committed Revolving Line or (B) the Borrowing Base, if applicable, minus (ii) the amount of all outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit), and minus (iii) the FX Reserve and all amounts for services utilized under the Cash Management Services Sublimit.

2. Section 2.1.4 is hereby amended entirely to read as follows:

2.1.4 LETTERS OF CREDIT SUBLIMIT.

Bank will issue or have issued Letters of Credit for Borrower's account not exceeding (i) the lesser of the Committed Revolving Line or the Borrowing Base minus (ii) the outstanding principal balance of the Advances minus the Cash Management Sublimit, minus the FX Reserve; however, the face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit) may not exceed $1,000,000. Each Letter of Credit will have an expiry date of no later than 180 days after the Revolving Maturity Date, but Borrower's reimbursement obligation will be secured by cash on terms acceptable to Bank at any time after the Revolving Maturity Date if the term of this Agreement is not extended by Bank. Borrower agrees to execute any further documentation in connection with the Letters of Credit as Bank may reasonably request.

3. Section 2.3 entitled "Interest Rate and Payments on Committed Revolving Line" is amended by changing the first sentence of subsection (a) thereof to read as follows:

(a) Interest Rate. Advances accrue interest on the outstanding principal balance at a per annum rate of one percent (1.00%) below the Prime Rate; provided, however, such interest rate shall not be less than three percent (3.0%) per annum at any time.

4. Section 6.7 entitled "Financial Covenants" is hereby amended entirely to read as follows:

Borrower will maintain on a consolidated basis as of the last day of each fiscal quarter of Borrower unless otherwise noted:

(i) QUICK RATIO. A ratio of Quick Assets to Current Liabilities of at least 2.00 to 1.00; and

(ii) TANGIBLE NET WORTH. A Tangible Net Worth plus Subordinated Debt plus the outstanding principal amount of Borrower's 5.25% Convertible Notes due November 15, 2006 and 5.00% Convertible Notes due September 1, 2006, of at least the sum of $220,000,000 plus 50% of the net profit for such quarter.

5. Section 13.1 entitled "Definitions" is hereby amended as follows:

(i) to change subpart (g) of the definition of "PERMITTED INDEBTEDNESS" to read:

(g) Indebtedness of AE-Japan up to an aggregate principal amount of $25,000,000.

(ii) to change subpart (d) of the definition of "PERMITTED INVESTMENTS" to read :

(d) Investments of Subsidiaries in or to other Subsidiaries or Borrower and Investments by Borrower in Subsidiaries not to exceed $10,000,000 in the aggregate in any fiscal year.

(iii) to change the definition of "REVOLVING MATURITY DATE" to read:

"REVOLVING MATURITY DATE" is May 8, 2004.

and (iv) to change the definition of "TANGIBLE NET WORTH" to read:

"TANGIBLE NET WORTH" is, on any date, the consolidated total assets of Borrower and its Subsidiaries minus, (i) any amounts attributable to (a) goodwill, (b) intangible items such as unamortized debt discount and expense, Patents, trade and service marks and names, Copyrights and research and development expenses except prepaid expenses, and (c) reserves not already deducted from assets, and minus (ii) Total Liabilities.

6. Exhibit D attached hereto shall be substituted for that attached to the Loan Agreement.

4. CONSISTENT CHANGES. The Existing Loan Documents are hereby amended wherever necessary to reflect the changes described above.

5. PAYMENT OF LOAN FEE AND EXPENSES. Borrower shall pay to Bank a fee in the amount of Two Thousand Five Hundred and No/100 Dollars ($2,500.00) (the "Loan Fee") plus all of Bank's reasonable out-of-pocket expenses in connection with this Loan Modification Agreement.

6. NO DEFENSES OF BORROWER. Borrower (and each guarantor and pledgor signing below) agrees that, as of the date hereof, it has no defenses against the obligations to pay any amounts under the Obligations.

7. CONTINUING VALIDITY. Borrower (and each guarantor and pledgor signing below) understands and agrees that in modifying the existing Obligations, Bank is relying upon Borrower's representations, warranties, and agreements, as set forth in the Existing Loan Documents. Except as expressly modified pursuant to this Loan Modification Agreement, the terms of the Existing Loan Documents remain unchanged and in full force and effect. Bank's agreement to modifications to the existing Obligations pursuant to this Loan Modification Agreement in no way shall obligate Bank to make any future modifications to the Obligations. Nothing in this Loan Modification Agreement shall constitute a satisfaction of the Obligations. It is the intention of Bank and Borrower to retain as liable parties all makers and endorsers of Existing Loan Documents, unless the party is expressly released by Bank in writing. Unless expressly released herein, no maker, endorser, or guarantor will be released by virtue of this Loan Modification Agreement. The terms of this paragraph apply not only to this Loan Modification Agreement, but also to all subsequent loan modification agreements.

8. CONDITIONS. The effectiveness of this Loan Modification Agreement is conditioned upon receipt by Bank of the Loan Fee and a fully executed counterpart hereof.

This Loan Modification Agreement is executed as of the date first written above.

BORROWER:	BANK:
ADVANCED ENERGY INDUSTRIES, INC.	SILICON VALLEY BANK
By:/s/ Thomas K. Werning	By: /s/ Frank J. Amoroso
Name: Thomas K. Werning	Name: Frank J. Amoroso
Title: VP - Finance	Title: VP

EXHIBIT D
COMPLIANCE CERTIFICATE

TO: SILICON VALLEY BANK
3003 Tasman Drive
Santa Clara, CA 95054

FROM: ADVANCED ENERGY INDUSTRIES, INC.

The undersigned authorized officer of Advanced Energy Industries, Inc.

("Borrower") certifies that under the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"), (i) Borrower is in complete compliance for the period ending _______________ with all required covenants except as noted below and (ii) all representations and warranties in the Agreement are true and correct in all material respects on this date. Attached are the required documents supporting the certification. The Officer certifies that these are prepared in accordance with Generally Accepted Accounting Principles (GAAP) consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The Officer acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered.

PLEASE INDICATE COMPLIANCE STATUS BY CIRCLING YES/NO UNDER "COMPLIES" COLUMN.

REPORTING COVENANT	REQUIRED	COMPLIES	
Annual (Audited)	FYE within 90 days	Yes	No
10-Q, 10-K and 8-Ks	Within 5 days after filing with SEC	Yes	No
A/R & A/P Agings	Monthly within 30 days*	Yes	No
Borrowing Base Certificate	Monthly within 30 days*	Yes	No
Collateral Audit	Initial and Annual**	Yes	No

Financial Covenant	Required	Actual	Complies	
Maintain on a Quarterly Basis:				
Minimum Quick Ratio	2.00:1.0	_____:1.00	Yes	No
Minimum Tangible Net Worth + SD + CNs	$220, 000,000 plus 50% of quarterly profit	$________	Yes	No

*Only after outstandings exceed $10,000,000

**After outstandings exceed $10,000,000 for 30 days

COMMENTS REGARDING EXCEPTIONS: See Attached.

Sincerely,

Advanced Energy Industries, Inc.

SIGNATURE

TITLE

DATE

BANK USE ONLY

Received by: ---------------------------------------
AUTHORIZED SIGNER

Date: --

Verified: --
AUTHORIZED SIGNER

Date: --

Compliance Status: Yes No

(SILICON VALLEY BANK LOGO)

SILICON VALLEY BANK

PRO FORMA INVOICE FOR LOAN CHARGES

BORROWER:	ADVANCED ENERGY INDUSTRIES, INC.
LOAN OFFICER:	FRANK AMOROSO
DATE:	MAY 19, 2003

DOCUMENTATION FEE	1,500.00
LOAN FEE	2,500.00
TOTAL FEE DUE	$ 4,000.00
	===========

PLEASE INDICATE THE METHOD OF PAYMENT:

{ } A CHECK FOR THE TOTAL AMOUNT IS ATTACHED.

{ } DEBIT DDA # __________________ FOR THE TOTAL AMOUNT.

{ } LOAN PROCEEDS

BORROWER (DATE)

SILICON VALLEY BANK (DATE)
ACCOUNT OFFICER'S SIGNATURE

EXHIBIT 31.1

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 quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of 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: August 13, 2003

/s/ Douglas S. Schatz

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

EXHIBIT 31.2

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 quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of 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: August 13, 2003

/s/ Michael El-Hillow

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

EXHIBIT 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

In connection with the accompanying Form 10-Q of Advanced Energy Industries, Inc. (the "Company") for the quarter ended June 30, 2003 (the "Report"), I, Douglas S. Schatz, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. Section 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: August 13, 2003

/s/ Douglas S. Schatz

Douglas S. Schatz
Chief Executive Officer and 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.

EXHIBIT 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

In connection with the accompanying Form 10-Q of Advanced Energy Industries, Inc. (the "Company") for the quarter ended June 30, 2003 (the "Report"), I, Michael El-Hillow, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 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: August 13, 2003

/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.