Advanced Energy Industries, Inc.

03 Annual Report

making the right moves

In the development, marketing, and support of the process-centered technologies essential to manufacturing plasma-based products, the advantage belongs to Advanced Energy. Whether our products drive critical steps in the manufacture of semiconductors, flat panel displays, data storage products, compact and digital video discs, high-end servers, laser and medical equipment, or large expanses of architectural glass, we offer solutions that represent the leading edge in thinking, technology, design, and function.

At AE, our products cover the field in power, flow, thermal instrumentation and temperature control, and source technology. We operate in regional centers in North America, Asia, and Europe—and we provide global sales and support through direct offices, representatives, and distributors.

Wherever there are applications that require precise thin-films, AE's solutions augment process impact, improve productivity and throughput, and lower the cost of ownership for OEMs and end users.

Our products have the capacity to move whole industries forward. Our solutions put our customers on track to win.

Whether it's a strategy for the race or the acuity to judge the course, whether it's the agility to clear an obstacle or a maneuver that reduces the field, whether it's the play that claims the advantage or the feat that seals the win—*success* is all about making the right moves.

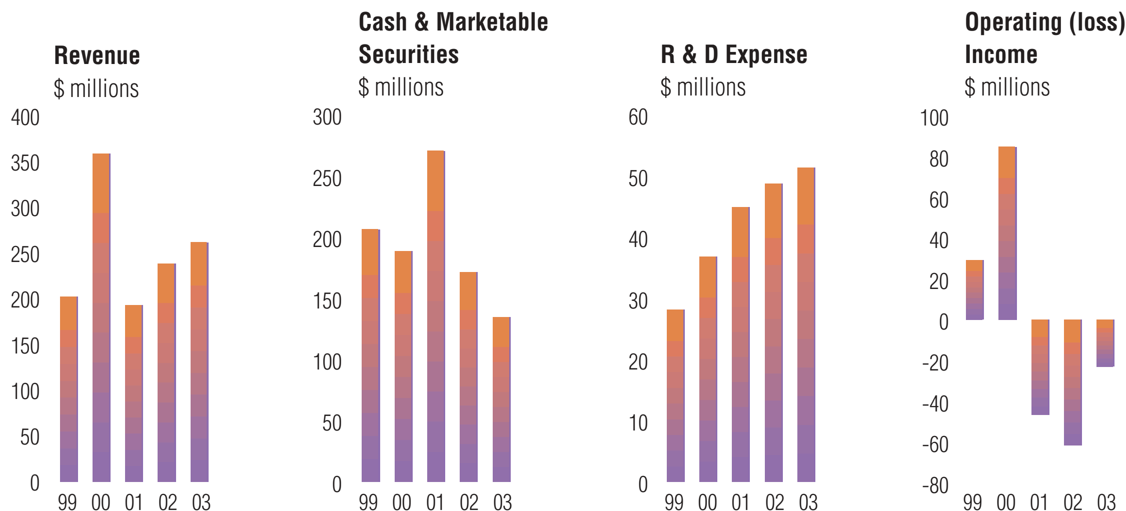
Contents

Financial Highlights	1
Letter to Stockholders	2
Charts	6
Management's Discussion and Analysis	7
Quantitative and Qualitative Disclosures About Market Risk	21
Report of Independent Accountants	22
Consolidated Financial Statements	24
Notes to Consolidated Financial Statements	30
Corporate Management	53
Board of Directors	54
Contact and Stockholder Information	IBC

Financial Highlights

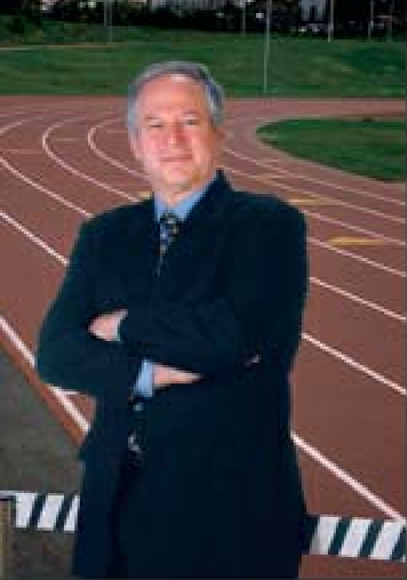
In thousands except per share data

Fiscal year ended	**2003**	2002	2001	2000	1999
Net sales	**$262,402**	$238,898	$193,600	$359,782	$202,849
Gross profit	**87,947**	68,760	57,432	176,453	92,202
Operating expenses	**111,079**	130,745	104,319	91,253	62,876
(Loss) income from operations	**(23,132)**	(61,985)	(46,887)	85,200	29,326
Net (loss) income	**(44,241)**	(41,399)	(31,379)	68,034	19,066
Basic (loss) earnings per share	**(1.37)**	(1.29)	(0.99)	2.17	0.64
Diluted (loss) earnings per share	**(1.37)**	(1.29)	(0.99)	2.10	0.62
Cash and marketable securities	**135,213**	172,347	271,978	189,527	207,483
Working capital	**206,156**	247,942	349,608	277,154	257,484
Total assets	**414,731**	455,733	450,195	365,835	325,433
Long-term debt including current portion	**201,651**	212,220	207,724	83,927	138,866
Stockholders' equity	**151,834**	183,339	214,345	238,798	156,989
Basic weighted-average common shares outstanding	**32,271**	32,026	31,712	31,336	29,706
Diluted weighted-average common shares outstanding	**32,271**	32,026	31,712	32,425	30,934



On the Web

For an online version of this report as well as a complete overview of product information, charts, and graphs, please visit our Web site at **www.advanced-energy.com.**



To our stockholders, customers, employees, suppliers, and friends—

It's Q1, 2004. If 2003 had been a horse-race, right now we'd be charging out of the backstretch. A regatta—rounding the mark for the spinnaker run. A marathon—coming off the top of heartbreak hill. Whatever the analogy, like the two years before it, 2003 presented us with a difficult course. The right moves in product development and in worldwide operations kept us at the front of the pack. With more of the right moves in 2004—we'll break away.

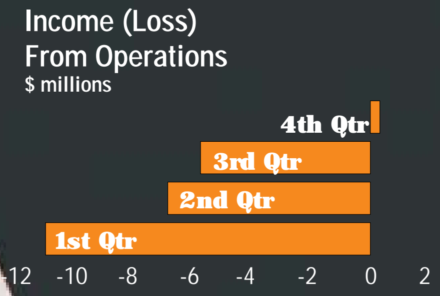
Year 2003 Results.

Net sales in 2003 were $262.4 million compared with $238.9 in 2002—a 10% increase. Our net loss this year was $44.2 million, or $1.37 per diluted share, compared with a net loss of $41.4 million, or $1.29 per diluted share, in 2002. Gross profit increased to $87.9 million from $68.8 million. And gross margin was 33.5% in 2003 compared with 28.8% in 2002.

We improved SG&A expense, without amortization of intangible assets, to $49.3 million, or 18.8% of sales from $60.1 million, or 25.1% of sales in 2002. R&D increased in dollars to $51.6 million in 2003 over $49.0 million for 2002, but as a percent of sales, it declined to 19.7% in 2003 from 20.5% in 2002.

We ended the year with $135.2 million of cash and marketable securities; $206.2 million of working capital; $414.7 million of total assets; and $151.8 million of stockholders' equity.

As you can see, it wasn't exactly a championship year for us from a numbers standpoint. But let me explain how it was highly successful in other ways—and how those things will make a difference in the numbers to come. In fact, if you'll look at Q4 results, you'll see the impact taking effect.



Progress consists of small and constant corrections.

Vigilance, tact, persistence, force, daring—success.

The Track Behind
Year 2003 Review

With the industry downturn persisting for a third year, we approached 2003 with our continuing strategy: use our time to condition ourselves for the upturn. Shape talent and sharpen skills. Refine techniques and perfect plays. Build teamwork and strengthen relationships. Approach every challenge as a contest to win or lose. Score the most points possible. And above all, learn which moves make the difference.

We won a lot. Our lead in technology continued to lengthen with design wins across nearly all of our product lines and markets, especially 300 mm semiconductor, flat panel, and architectural glass.

As in the two previous years, to offset sluggish demand, we focused our research and development on core product groups—power, flow, thermal, and plasma and ion sources—where we are able to realize more high value revenue. And by developing comprehensive solutions, we were able to offer higher value products at lower cost.

In some cases, we added to the breadth of our offerings in various markets—for example, selling source technology and flow control products where we had previously only sold power products.

Loyalty, vision, integrity, teamwork, tenacity—leader-

And it seemed like we lost one, too—a space with a customer we'd charted to win. This company clearly preferred our technology, but to meet its aggressive delivery schedule, we would have had to compromise product quality. Yet, as I write this, that customer has reopened discussions with us—because they want the better solutions. We never accept defeat gracefully. We analyze it ruthlessly, discover our weakness, rebuild our strength, and try again.

Perhaps our most meaningful feats, apart from improving our relationships with customers, came from bringing our China facility on line and outsourcing to Tier One Asian suppliers—initiatives planned to cut costs and improve response times at both the top and bottom of industry cycles. In only five months from the time we signed a lease for the 88,000 square foot facility in Shenzhen, we were qualifying our first power products. And all this in spite of the travel restrictions imposed by homeland security orders, the war in Iraq, and the SARS outbreak. The phone bill was a little high, but we saved on airfare!

By Q3, we had transferred the manufacture of six products to this state-of-the-art facility, passed factory audits, and were shipping product to several of our OEMs. Concurrently, we saw cost reductions and quality improvements from our Tier One Asian suppliers.

The real impact of the savings was not as obvious in 2003 because of the duplication in manufacturing and supplier costs during the transition. But with each new quarter, the savings will grow.

Finally, we continued to strengthen customer relationships and improve customer response. We consolidated operations, relocated production lines, and sold facilities. Unhappily, we also reduced headcount—always a difficult decision.

This year we made the hard moves, the smart moves, the crucial moves we had to make. In a tight race under difficult conditions, the *right* moves make all the difference.

Every goal tests our skill—and will.

The Course Ahead

Year 2004 and Beyond

By Q4, the difference was becoming obvious. Seeing income from operations for the first time in ten quarters is a great motivator in pursuing more cost-containment efforts. We believe we're on course for a medal year. The big news, of course, is that markets are improving: by year's end, sales to semiconductor equipment and flat panel display customers posted double-digit growth. In fact, we see growing strength across all our product lines as a result of our strong record of design wins throughout the downturn.

Customers choose our products because they're looking for real value. And because they offer greater precision, better reliability, and more repeatability in the manufacture of larger wafers, the applications of smaller geometries, and the use of new materials. With the industry expanding in these directions, we not only see higher-dollar revenue sales, but more opportunities.

In the data storage sector, there has been a sizable rise in demand for recordable discs. The equipment for this manufacturing process requires more of our products than for prerecorded discs. And architectural glass manufacturing offers expanding possibilities.

Applications continue to grow outside of our traditional markets as well, as in the surface treatments of glass, metals, fabric, optics, and polymers. R&D investments here have the potential to create markets less subject to cyclical peaks and troughs.

And our efforts in China and with our Tier One Asian suppliers are progressing splendidly. As the production ramp-up continues, we're in position to make our move.

The Athletes Within

Teamwork and Coaching

Our every effort, every contest, and every win involves our tireless and exceptional employees. In the face of disheartening obstacles, they are motivated. In the face of interminable projects, they are relentless. Even in the face of uncertain futures, they are loyal. They are the epitome of performance under pressure. And I am their greatest fan.

Eyes on the Prize

In most sports, there's an inspirational, ultimate goal—say, a blanket of roses, a silver cup, or an Olympic medal. In our business we have one, too: sustained profitability. It's a marathon with many mileposts. I want you to know that we're on course. Track conditions are improving. We've got our eyes on the prize. And we're making the right moves.

Watch us win.

Thank you for your continuing interest and support.

Douglas S. Schatz

Chairman, President, and CEO

Success is built upon daily victories.

2003 Revenue Mix by Industry

- 59% Semiconductor
- 11% Flat Panel Display
- 10% Data Storage
- 20% Advanced Product Applications

2002 Revenue Mix by Industry

- 68% Semiconductor
- 8% Flat Panel Display
- 6% Data Storage
- 18% Advanced Product Applications

2003 Markets by Geographic Area

- 47% US and Canada
- 19% Europe
- 34% Asia/Pacific

AE. RUNNING HARD. AE's products are used in the manufacture of—
Semiconductors, CDs, DVDs, Architectural Glass Coatings, MRIs, Flat Panel Displays, and Optical Coatings.

Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion contains, in addition to historical information, forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. 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:

- Acceptance by our customers of products manufactured at our China-based manufacturing facility;
- Strict customer "copy exact" requirements which may delay or prevent acceptance of lower-cost components from Tier 1 Asian suppliers;
- 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;
- Significant fluctuations in our quarterly operating results that are difficult to predict;
- Timing and nature of orders placed by our customers, including their product acceptance criteria;
- Changes in our customers' inventory management practices;
- Customer cancellations of previously placed orders and shipment delays;
- Pricing competition from our competitors as well as pricing pressure from our customers;
- The introduction of new products by us or our competitors;
- Component shortages or allocations or other factors that change our levels of inventory or substantially increase our spending on inventory;
- Costs incurred and judgments resulting from patent or other litigation;
- Timing and challenges of integrating recent and potential future acquisitions and strategic alliances;
- Periodic charges for excess and obsolete inventory; and
- Future warranty costs in excess of anticipated levels.

For a discussion of these and other factors that may impact our realization of our forward-looking statements, see "Cautionary Statements — Risk Factors" in our Form 10-K for the year ended December 31, 2003.

OVERVIEW

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

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

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

We provide solutions to a diversity of markets and geographic regions. However, we are focused on the semiconductor capital equipment industry, which accounted for approximately 59% of our sales in 2003, 68% of our sales in 2002 and 64% in 2001. We expect future sales to the semiconductor capital equipment industry to represent approximately 55% to 70% of our total revenue, depending upon the strength or weakness of industry cycles. Our sales to customers outside the United States represented approximately 53%, 40% and 36% of our sales in 2003, 2002 and 2001, respectively. We expect our international sales to continue to grow as a percentage of our total sales as more customers build or have their products built in lower-cost regions outside of the United States.

In 2001, 2002 and much of 2003 the semiconductor capital equipment industry experienced the steepest cutback in capital equipment purchases in industry history. As a result, demand for our products from the semiconductor capital equipment industry declined substantially from the peak in 2000, and we have incurred significant operating losses each quarter from the second quarter of 2001 through the third quarter of 2003. In mid 2003, the semiconductor capital equipment industry entered the early stages of what appears to be a return to higher product demand and in the fourth quarter of 2003, we generated positive operating income of approximately $300,000. We are focused on returning to sustained profitability and achieving operating cash flow breakeven. To achieve this goal, we are in the process of developing a more variable operating model to allow us to remain profitable during industry downturns and continue to be successful during periods of expansion. We are taking the following actions:

Management's Discussion and Analysis of Financial Condition and Results of Operations

- Establishing a China-based manufacturing facility;
- Transitioning a portion of our supply base to Tier 1 Asian suppliers;
- Closing certain facilities and reducing our permanent head-count; and
- Engaging contract manufacturers to manufacture certain products and components which were previously manufactured by us.

In April 2003, we opened our 88,000 square-foot China-based manufacturing facility in Shenzhen, China. At the end of 2003, approximately 11% of our worldwide production was manufactured in China. By the end of 2004, we expect to have transitioned approximately 70% of our Power and Flow Control manufacturing production to China. During the transition period we are running duplicate manufacturing facilities, which is placing pressure on our gross margin. We expect our gross margin to improve throughout 2004 if industry conditions continue to improve.

We plan to transition approximately 50% of our raw material purchasing to Tier 1 Asian suppliers. As of December 31, 2003, approximately 27% of our purchasing has been successfully transitioned and we expect to transition the remaining 23% by December 31, 2004. Our biggest obstacle in our Tier 1 supplier initiative is complying with certain major customers' stringent "copy exact" requirements. We are working closely with our largest original equipment manufacturers, or OEM's, to ensure the transition proceeds on schedule. However, our transition goals may prove difficult to realize because of customer needs.

During 2003, we closed manufacturing facilities in Longmont, Colorado; Matthews, North Carolina; and Austin, Texas. In the first half of 2004, we plan to close our manufacturing facility in Voorhees, New Jersey. We expect to incur between $500,000 and $700,000 in restructuring charges in 2004, however, this estimate is subject to change based upon changes in the demand for our products and potential changes to our operating model. We also closed various sales and services locations throughout the world in an effort to rationalize our manufacturing capacity and sales force with the current industry environment.

In the second quarter of 2003, as part of our ongoing cost reduction measures, we engaged a contract manufacturer to manufacture printed circuit boards for our direct current, radio frequency and computer workstation products. In the third quarter of 2003, we sold our Longmont, Colorado manufacturing facility to a contract manufacturer who continues to use this facility to manufacture our industrial flow products.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The following discussion and analysis of our financial condition and results of operations is based upon our 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, among others, affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

VALUATION OF INTANGIBLE ASSETS AND GOODWILL — We have approximately $88.9 million of intangible assets and goodwill as of December 31, 2003, including approximately $19.4 million related to amortizable intangibles and $69.5 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, as well as foreign currency fluctuations.

Due to our cost reduction initiatives we have restructured our business. As a result we have eliminated certain duplicative facilities and consolidated the operational and administrative activities of our reporting units. Based on our similar production characteristics, shared manufacturing facilities and blended financial reporting environment, our management reviews our results of operations as a single reporting unit.

We review our intangible assets and goodwill for impairment annually and whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Factors we consider important which could indicate impairment include under performance relative to historical or expected future operating results, changes in the manner of our use of the asset or the strategy for our overall business and negative industry or general economic trends.

In the fourth quarter of 2003, we engaged a third party valuation firm to perform the annual impairment analysis of our non-amortizable intangible assets and goodwill, which indicated that no charge for impairment was currently required. This assessment required 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. These projections of future results are by their nature subjective, and while they represent management's current best assessment of the future, they may be materially different than actual future results. We will continue to perform impairment analyses

of our 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 would have a material adverse impact on our 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 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 estimated discount rates, 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, and volatility of the industries in which we serve, 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 excess and obsolete inventory. For the years ended December 31, 2003, 2002 and 2001, we recorded charges of $3.0 million, $5.8 million and $6.4 million, respectively, for excess and obsolete inventory. As of December 31, 2003, we had inventory balances of approximately $65.7 million. A significant decrease in the demand for our products, technological change, or new product development could result in charges for excess and obsolete inventory that are material to our financial condition and results of operations.

RESERVE FOR WARRANTY — We provide warranty coverage for our products, ranging from 12 to 60 months, with the majority of our products ranging from 18 to 24 months, and estimate the anticipated cost of repairing our products under such warranties based on the historical cost 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. We recorded warranty charges of $8.1 million, $13.2 million and $7.6 million in 2003, 2002 and 2001, respectively.

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 collectability is reasonably assured. Generally, we do not have obligations to our customers after our products are shipped other than pursuant to warranty obligations. In limited instances we provide installation of our products. In accordance with Emerging Issues Task Force Issue 00-21 “Accounting for Revenue Arrangements With Multiple Deliverables”, we allocate revenue based on the fair value of the

Management's Discussion and Analysis of Financial Condition and Results of Operations

delivered item, generally the product, and the undelivered item, installation, based on their respective fair values. Revenue related to the undelivered item is deferred until the services have been completed. In certain limited instances, some of our 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 and deferred revenue.

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

We may also deliver products to customers for evaluation purposes. In these arrangements, the customer retains the products for specified periods of time without commitment to purchase. On or before the expiration of the evaluation period, the customer either rejects the product and returns it to 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 products are reported on our balance sheet at an estimated value based on the lower of cost or market, and are included in the amount for demonstration and customer service equipment, net of accumulated amortization.

STOCK-BASED COMPENSATION — In accordance with Statement of Financial Accounting Standards Nos. 123 and 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. In future periods the Financial Accounting Standards Board will likely require companies to expense the fair value of their stock-based compensation over the respective vesting period. Such new accounting guidance is expected to have a material effect upon our results of operations.

DEFERRED INCOME TAXES — We account 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. During 2003, we recorded valuation allowances against certain of our United States and foreign net deferred tax assets in jurisdictions where we have incurred significant losses in 2001, 2002 and 2003. Given such experience, management could not conclude that it was more likely than not that these net deferred tax assets would be realized. While there are indications that the markets in which we operate may improve in 2004 and 2005, these indications have not yet resulted in substantial taxable income. Accordingly, our management, in accordance with SFAS No. 109, in evaluating the recoverability of these net deferred tax assets, was required to place greater weight on our historical results as compared to projections regarding future taxable income. If we generate future taxable income, or should we be able to conclude that sufficient taxable income is reasonably assured based on profitable operations, in the appropriate tax jurisdictions, against which these tax attributes may be applied, some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity.

When recording acquisitions, we have recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Any reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

RECENT ACQUISITIONS

On March 28, 2002, we completed the acquisition of Dressler HF Technik GmbH, or Dressler, a privately owned Stolberg, Germany-based provider of power supplies and matching networks. We acquired Dressler to expand our product offerings to customers in the semiconductor, data storage and flat panel equipment markets with Dressler's power product portfolio that includes a wide range of power levels and radio frequencies. In addition, with inroads already made into the laser and medical markets, Dressler enables us to explore new market opportunities. Dressler also strengthens our presence in the European marketplace and has well-established relationships with many European customers, who look to Dressler for innovative technical capability, high quality products, and highly responsive customer service.

On January 18, 2002, we completed the acquisition of Aera Japan Limited, or Aera, a privately held Japanese corporation. Aera supplies the semiconductor capital equipment industry with product lines that include digital mass flow controllers, thermal-based mass flow controllers, pressure-based mass flow controllers, liquid mass flow controllers and liquid vapor delivery systems. Aera provides us with a key leadership position in the gas delivery market. In addition, Aera's products expand our offering of critical subsystem solutions that enable the plasma-based manufacturing processes used in the manufacture of semiconductors.

The results of operations of these acquired companies are included in our consolidated statements of operations as of and since the date of acquisition.

RESULTS OF OPERATIONS

The following table summarizes certain data as a percentage of sales extracted from our statements of operations:

	Years Ended December 31,		
	2003	2002	2001
Sales	**100.0%**	100.0%	100.0%
Cost of sales	**66.5**	71.2	70.3
Gross profit	**33.5**	28.8	29.7
Operating expenses:			
Research and development	**19.7**	20.5	23.3
Sales and marketing	**11.8**	14.6	12.3
General and administrative	**8.7**	12.8	11.1
Litigation damages and expenses (recovery)	**—**	2.2	(0.8)
Restructuring charges	**1.7**	3.8	1.6
Impairment of goodwill and other intangible assets	**0.4**	0.8	2.8
Impairment of investments and advances	**—**	—	3.6
Total operating expenses	**42.3**	54.7	53.9
Loss from operations	**(8.8)**	(25.9)	(24.2)
Other expense	**(3.6)**	(0.7)	(1.1)
Net loss before income taxes and minority interest	**(12.4)**	(26.6)	(25.3)
(Provision) benefit for income taxes	**(4.5)**	9.3	9.0
Minority interest in net loss	**—**	—	0.1
Net loss	**(16.9)%**	(17.3)%	(16.2)%

SALES

The following tables summarize annual net sales, and percentages of net sales, by customer type for each of the three years in the period ended December 31, 2003. Sales for the years ended December 31, 2003 and 2002 include combined sales from Aera and Dressler, subsequent to their acquisitions of approximately $51.5 million and $47.0 million, respectively:

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Semiconductor capital equipment	**$155,153**	$163,108	$123,869
Data storage	**26,397**	13,570	10,974
Flat panel display	**28,953**	19,826	19,772
Advanced product applications	**51,899**	42,394	38,985
	$262,402	$238,898	$193,600

	Years Ended December 31,		
	2003	2002	2001
Semiconductor capital equipment	**59%**	68%	64%
Data storage	**10**	6	6
Flat panel display	**11**	8	10
Advanced product applications	**20**	18	20
	100%	100%	100%

The following tables summarize annual net sales, and percentages of net sales, by geographic region for each of the three years in the period ended December 31, 2003:

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
United States and Canada	**$124,185**	$143,698	$124,746
Europe	**48,185**	32,791	28,957
Asia Pacific	**88,919**	61,327	39,038
Rest of world	**1,113**	1,082	859
	$262,402	$238,898	$193,600

	Years Ended December 31,		
	2003	2002	2001
United States and Canada	**47%**	60%	64%
Europe	**19**	14	15
Asia Pacific	**34**	26	21
Rest of world	**—**	—	—
	100%	100%	100%

Sales were $262.4 million in 2003, $238.9 million in 2002 and $193.6 million in 2001, representing an increase of 10% from 2002 to 2003 and 23% from 2001 to 2002. Excluding the acquisitions of Aera and Dressler, our sales would have increased approximately 10% from 2002 to 2003 and would have been relatively flat from 2001 to 2002.

According to a leading industry research firm sales of semiconductor capital equipment have grown at a compounded annual growth rate in excess of 11% over the past 30 years. However, we believe the industry is highly cyclical and is impacted by changes in the macroeconomic environment, changes in semi-

Management's Discussion and Analysis of Financial Condition and Results of Operations

conductor supply and demand and rapid technological advances in both semiconductor devices and wafer fabrication processes. Rapid growth and expansion during 2000 was followed by the most pronounced slump in industry history, with year-to-year revenues falling approximately 40% throughout the industry from 2000 to 2001 and declining nominally thereafter. Our sales over the last three years illustrate this cyclicality. Our sales to the semiconductor capital equipment industry declined by approximately 2% from 2001 to 2002, excluding the effect of the acquisitions of Aera and Dressler; and by approximately 5% from 2002 to 2003.

Our sales to the data storage, flat panel display and advanced product applications markets, increased each year from 2001 through 2003. This growth is primarily attributed to market share gains, order trends and the general expansion of end customer products including large flat panel displays, liquid crystal displays, DVD applications and applications dependent upon industrial coatings.

Looking forward to 2004, our revenue may increase due to the recovery of the semiconductor capital equipment industry. Our other markets are also expected to grow in 2004. However, our average selling prices are likely to decline across all of our markets due to cost reduction initiatives by our major customers.

GROSS MARGIN

Our gross margin was 33.5% in 2003, 28.8% in 2002 and 29.7% in 2001. Our gross margin improved from 2002 to 2003 primarily due to our cost reduction measures, including our ongoing efforts to transition a portion of our manufacturing capacity to China and our supply base to Tier 1 Asian suppliers, as well as improved absorption due to the higher sales base; however, the transition of a portion of our manufacturing capacity to China has required us to operate duplicative manufacturing facilities which during 2003 impacted our gross margin. While we expect the transition of a portion of our production to China and our move to Tier 1 Asian suppliers will improve our gross margins in future periods, factors that could cause our gross margins to be negatively impacted include, but are not limited to the following:

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

We recognized charges for excess and obsolete inventory of approximately $3.0 million, $5.8 million and $6.4 million in 2003, 2002 and 2001, respectively. Our warranty charges in 2003, 2002 and 2001 were approximately $8.1 million, $13.2 million and $7.6 million. Taken together, these charges represented approximately 4.2%, 8.0% and 7.2% of sales during 2003, 2002 and 2001, respectively.

The major items affecting our gross margin in these years follow:

- 2003, 2002 and 2001 represent the most severe downturn in the semiconductor industry's history. As a result, our sales declined significantly, which impacted our absorption of fixed costs.
- The semiconductor industry is moving to 300mm wafers and smaller line widths. Typical of products early in their life cycle and at low production levels, these products have lower margins than our established products.
- Our cost of sales was adversely affected by periodic write-downs of excess and obsolete inventory, particularly in the fourth quarter of 2002 when our management made a strategic decision to discontinue certain product offerings, which resulted in an increase in excess and obsolete inventory expense.
- We incurred warranty expense in excess of both historical rates and our expectations related to certain products, which required substantial rework, repair, and in some cases, replacement. The development of these products in 1999 and 2000 was accelerated to meet pressing customer needs in the midst of historically high product demand. During 2002 and 2003 a significant portion of our warranty reserves were used to address these products.

The following summarizes the activity in our warranty reserve during 2003 and 2002:

(In thousands)	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
2003	**$9,402**	**$ 8,105**	**$(10,895)**	**$6,612**
2002	$4,471	$13,150	$ (8,219)	$9,402

RESEARCH AND DEVELOPMENT

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

Our research and development expenses were $51.6 million in 2003, $49.0 million in 2002 and $45.2 million in 2001. As a percentage of sales, research and development expenses decreased from 23.3% in 2001 to 20.5% in 2002 and 19.7% in 2003, due to the higher sales base. The 5.3% increase in research and development expenses from 2002 to 2003 was primarily due to increases in payroll and depreciation of equipment used for new product development. The 8.5% increase in research and development expenses from 2001 to 2002 was primarily due to the acquisitions of Aera and Dressler and expenditures to launch new products. Combined research and development expenses for Aera and Dressler were approximately $2.7 million in 2002. We expect our 2004 research and development expenses, in dollar terms, to be in line with 2003.

SALES AND MARKETING EXPENSES

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

Sales and marketing expenses were $31.0 million in 2003, $34.9 million in 2002 and $23.8 million in 2001. The 11.1% decrease in sales and marketing expenses from 2002 to 2003 was primarily due to the closing of certain sales and service locations. See Restructuring Charges below for further discussion on these site closures. As a percentage of sales, sales and marketing expenses decreased from 14.6% in 2002 to 11.8% in 2003 due to our cost reduction measures and the higher sales base. Sales and marketing expenses increased from 12.3% of sales in 2001 to 14.6% in 2002 primarily due to our acquisitions of Aera and Dressler in 2002. Combined sales and marketing expenses for these companies were approximately $9.6 million in 2002. We expect sales and marketing expenses to increase in 2004, due to our higher anticipated sales level.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses support our worldwide corporate, legal, patent, tax, financial, corporate governance, administrative, information systems and human resource functions in addition to our general management. General and administrative expenses were $22.9 million in 2003, $30.5 million in 2002 and $21.5 million in 2001. The 24.9% decrease in general and administrative expense from 2002 to 2003 was due to our ongoing cost reduction measures as discussed in Restructuring Charges. As a percentage of sales, general and administrative expenses decreased from 12.8% in 2002 to 8.7% in 2003 due to our cost reduction measures and the higher sales base. The 41.9% increase in general and administrative expenses from 2001 to 2002 was primarily due to the absorption of additional headcount as a result of our acquisitions of Aera and Dressler, which contributed approximately $8.8 million to our general and administrative expenses in 2002. As a percentage of sales, general and administrative expenses increased from 11.1% in 2001 to 12.8% in 2002. We expect our general and administrative expenses in 2004 to be in line with 2003.

LITIGATION DAMAGES AND EXPENSES (RECOVERY)

During 2001, we received a $1.5 million settlement for recovery of legal expenses pertaining to a patent infringement suit in which we were the plaintiff.

During 2002, we recorded a charge of $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 five percent of our total sales each year since the product's introduction. We have entered into a settlement agreement with MKS allowing us to sell the infringing product to one of our customers subsequent to the date of the jury award. Under the settlement agreement, royalties payable to MKS from sales of the infringing product were not material in 2003.

During 2003, litigation with MKS recommenced involving claims that one of our new products infringed certain patents held by MKS. The current patent case has been set for trial in

Management's Discussion and Analysis of Financial Condition and Results of Operations

July 2004 and we anticipate significantly increased spending for legal and other trial related expenses in 2004.

RESTRUCTURING CHARGES

During 2001, in response to the downturn in the semiconductor capital equipment industry, we implemented several reductions in force totaling 240 regular employees and 90 temporary employees and closed our manufacturing facilities in Austin, Texas and San Jose, California. Total restructuring charges for 2001 were approximately $3.1 million.

We recorded restructuring charges totaling $9.1 million in 2002, primarily associated with changes in operations designed to reduce redundancies and better align Aera's mass flow controller business within its operating framework. Our 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.

At the end of 2002, we announced major changes in our operations to occur through 2003. These included establishing 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 restructuring charges of approximately $4.3 million during 2003. These charges consisted of the recognition of expense for involuntary employee termination benefits for 109 employees in our United States operations and voluntary employee termination benefits, primarily in our Japanese operations for 36 employees, and asset impairments incurred as a result of closing our Longmont, CO manufacturing facilities.

GOODWILL AND OTHER INTANGIBLE ASSET IMPAIRMENTS

During 2003, we determined that one of our mass flow controller products would not conform to changing customer requirements, and as such would no longer be accepted by our customers. As a result, we performed an assessment of the carrying value of the related intangible asset. This assessment consisted of estimating the intangible asset's fair value and comparing the estimated fair value to the carrying value of the asset. We estimated the intangible asset's fair value by applying a hypothetical royalty rate to the projected revenue stream and using a cash flow model discounted at discount rates consistent with the risk of the related cash flows. Based on this analysis we determined that the fair value of the intangible asset was minimal and recorded an impairment of the carrying value of approximately $1.2 million. Sales of this product represented less than 1% of our total sales during 2001, 2002 and 2003.

During 2000, we made periodic advances and investments totaling approximately $9.5 million to Symphony Systems, Inc. In 2001, Symphony's financial situation began to deteriorate significantly, and we determined that due to Symphony's need for immediate liquidity, its declining business prospects, including the indefinite postponement of a significant order for its products from a major semiconductor capital equipment manufacturer, the value of our investment in and advances to Symphony had substantially declined. We valued our investments in and advances to Symphony at December 31, 2001, at approximately $1 million, which reflected our assessment of the value of the Symphony technology license, which we believed had continuing value to us. The amount of the impairment related to Symphony was $6.8 million.

Symphony effectively ceased operations in February 2002. We hired Symphony's key employees, and acquired Symphony's remaining assets in a foreclosure and liquidation sale of such assets in April 2002. We recorded the assets acquired at their estimated fair values. The excess purchase price over the estimated fair value of tangible assets acquired of approximately $2.5 million was allocated to amortizable intangibles, with a weighted-average estimated useful life of approximately 5 years.

In the fourth quarter of 2002, our sales to the semiconductor capital equipment industry declined substantially from the third quarter of 2002. As a result we evaluated the carrying amount of assets acquired from Symphony by comparing its estimated future cash flows to its carrying value. This analysis indicated that our investment was impaired and we recorded an intangible impairment charge of $1.9 million, which was the remaining book value of Symphony's intangible assets.

During 2001 we terminated the operations of our Tower Electronics, Inc. subsidiary and our Fourth State Technology, or FST, product line due to significant softening in the projected demand for these products. Revenue contributed by Tower and FST operations for 2001 represented less than five percent of our total revenue. As a result of these actions, estimated related future cash flows no longer supported the carrying amounts of related goodwill, and we recorded goodwill impairment charges of $5.4 million in 2001 related to Tower and FST.

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 $1.7 million in 2003, $3.3 million in 2002 and $6.6 million in 2001. The decline in interest income from 2002 to 2003 was due to our lower level of investment in marketable securities and the overall lower rate of interest paid on our investments which resulted from the Federal Reserve lowering interest rates during the period. The

prime rate declined by 0.75% from January 2002 to December 2003. Additionally, during 2003 we used approximately $37.1 million of cash and marketable securities to fund our operations.

Our interest income in 2002 was lower than in 2001 due to our use of cash and marketable securities to finance the acquisitions of Aera in January 2002 and Dressler in March 2002, and to repurchase a portion of our 5.25% and 5.00% convertible subordinated notes in the open market in the fourth quarter of 2002. Interest income also declined throughout 2002 and 2001 due to the Federal Reserve lowering interest rates during the period. The prime rate declined from 9.5% in January 2001 to 4.25% in December 2002.

Interest expense consists principally of interest on our convertible subordinated notes, amortization of our deferred offering costs on these notes, and bank loans and capital leases assumed in the acquisition of Aera. Interest expense was approximately $11.3 million in 2003, $12.5 million in 2002 and $7.4 million in 2001. Interest expense decreased from 2002 to 2003 due to the 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 and due to the repayment of approximately $12.8 million of notes payable and capital lease obligations during 2003.

The increase in interest expense from 2001 to 2002 was primarily due to the issuance of our 5.00% convertible subordinated notes in August 2001 and debt and capital leases assumed in the acquisition of Aera in January 2002.

Our foreign subsidiaries' sales are primarily denominated in currencies other than the U.S. dollar. We recorded net foreign currency gains of $869,000 in 2003, $5.3 million in 2002 and a loss of $235,000 in 2001.

Our foreign currency gain in 2002 was primarily 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., or 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 upon an exchange rate of 130:1. During the first half of that year, the U.S. dollar weakened significantly against the yen to approximately 119:1, resulting in a gain of $4.9 million. In July and September 2002, we entered into various foreign currency forward contracts with our primary banks to mitigate the effects of potential future currency fluctuations between the dollar and the yen until the associated intercompany obligations were settled.

In the fourth quarter of 2002, we repurchased approximately $15.4 million of our 5.25% convertible subordinated notes and $3.5 million of our 5.00% convertible subordinated notes in the open market at an aggregate cost of approximately $14.5 million. These purchases resulted in a gain of $4.2 million. In prior financial statements this gain was reflected as an extraordinary item. In April 2002 the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections." We adopted the provisions of SFAS No. 145 on January 1, 2003. The adoption of this Statement required us to reclassify our pretax extraordinary gain of $4.2 million recorded during 2002 to other (expense) income in these financial statements.

Miscellaneous expense items were $644,000 in 2003, $2.1 million in 2002 and $1.0 million in 2001. Miscellaneous expense in 2003 and 2002 was primarily related to the impairment of a marketable equity security. During the fourth quarter of 2002, the fair value of this security continued a substantial decline, and we determined the decline was other than temporary as defined by the Financial Accounting Standards Board. As a result we recorded an impairment charge of approximately $1.5 million. In the first quarter of 2003, this security continued to decline in value, and we recorded an additional impairment charge of $175,000. Since the first quarter of 2003, the value of this security has appreciated from $1.8 million to $3.3 million at December 31, 2003. However the increase in the fair value of this security will not be reflected in income until the security is sold.

(PROVISION) BENEFIT FOR INCOME TAXES

We account 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. During 2003, we recorded valuation allowances against certain of our United States and foreign net deferred tax assets in jurisdictions where we have incurred significant losses in 2001, 2002 and 2003. Given such experience, management could not conclude that it was more likely than not that these net deferred tax assets would be realized. While there are indications that the markets in which we operate may improve in 2004 and 2005, we have not yet been able to generate significant taxable income in the jurisdictions in which we operate. Accordingly, our management, in accordance with SFAS No. 109, in evaluating the recoverability of these net deferred tax assets, was required to place greater weight on our historical results as compared to projections regarding future taxable income.

Due to the valuation allowances we recorded in 2003, we expect our 2004 effective tax rate to be approximately 15% to 25%, subject to variations in the relative earnings or losses in the tax jurisdictions in which we have operations. If we generate future taxable income, or should we be able to conclude that sufficient

Management's Discussion and Analysis of Financial Condition and Results of Operations

taxable income is reasonably assured based on profitable operations, in the appropriate tax jurisdictions, against which these tax attributes may be applied, some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity.

The income tax provision of $11.8 million for 2003 represented a negative effective tax rate of 36%. The income tax benefit of $22.3 million for 2002 represented an effective tax rate of 35%. The income tax benefit of $17.4 million for 2001 represented an effective rate of 36%.

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. Reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

QUARTERLY RESULTS OF OPERATIONS

The following tables present unaudited quarterly results in dollars and as a percentage of sales for each of the eight quarters in the period ended December 31, 2003. We believe that all necessary adjustments have been included in the amounts stated below to present fairly such quarterly information. Due to the volatility of the industries in which our customers operate the operating results for any quarter are not necessarily indicative of results for any subsequent period.

	Quarters Ended							
(In thousands, except per share data)	Mar. 31, 2002	June 30, 2002	Sept. 30, 2002	Dec. 31, 2002	**Mar. 31, 2003**	**June 30, 2003**	**Sept. 30, 2003**	**Dec. 31, 2003**
Sales	$42,887	$67,893	$70,674	$ 57,444	**$56,158**	**$62,946**	**$ 68,567**	**$ 74,731**
Gross profit	13,374	24,312	26,600	4,474	**17,950**	**20,273**	**23,093**	**26,631**
(Loss) income from operations	(11,423)	(9,330)	(5,788)	(35,444)	**(10,885)**	**(6,825)**	**(5,741)**	**319**
Other (expense) income	(1,997)	1,424	(2,797)	1,663	**(2,750)**	**(2,340)**	**(2,261)**	**(1,957)**
Net loss	$(8,723)	$(5,139)	$ (5,580)	$(21,957)	**$(8,590)**	**$(5,774)**	**$(27,438)**	**$(2,439)**
Basic and diluted loss per share	$ (0.27)	$ (0.16)	$ (0.17)	$ (0.68)	**$ (0.27)**	**$ (0.18)**	**$ (0.85)**	**$ (0.08)**

	Quarters Ended							
	Mar. 31, 2002	June 30, 2002	Sept. 30, 2002	Dec. 31, 2002	**Mar. 31, 2003**	**June 30, 2003**	**Sept. 30, 2003**	**Dec. 31, 2003**
Percentage of Sales:								
Sales	100.0%	100.0%	100.0%	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Gross margin	31.2	35.8	37.6	7.8	**32.0**	**32.2**	**33.7**	**35.6**
(Loss) income from operations	(26.6)	(13.7)	(8.2)	(61.7)	**(19.4)**	**(10.8)**	**(8.4)**	**0.4**
Other (expense) income	(4.7)	2.1	(4.0)	2.9	**(4.9)**	**(3.7)**	**(3.3)**	**(2.6)**
Net loss	(20.3)%	(7.6)%	(7.9)%	(38.2)%	**(15.3)%**	**(9.2)%**	**(40.0)%**	**(3.3)%**

Due to the cyclical nature of the semiconductor capital equipment industry as well as the other industries in which our customers operate, and the sudden changes resulting in severe downturns and upturns, we have experienced and expect to continue to experience significant fluctuations in our quarterly operating results. Our levels of operating expenditures are based, in part, on expectations of future revenues that such expenses support. If revenue levels in a particular quarter do not meet expectations, operating results may be adversely affected.

Our quarterly operating results in 2002 and 2003 reflect the fluctuating demand for our products during this period, principally from manufacturers of semiconductor capital equipment, data storage equipment and flat panel displays, and our ability to adjust our manufacturing capacity and infrastructure to meet this demand. Additionally our average selling prices across all markets declined approximately 2% during 2003.

Sales to the semiconductor capital equipment industry increased 66% in the second quarter of 2002 from the prior quarter, then declined 5% in the third quarter of 2002 from the second quarter of 2002, and a further 42% in the fourth quarter of 2002 from the third quarter of 2002, due to the market conditions discussed above. In the first quarter of 2003 sales to the semiconductor capital equipment industry decreased another 3%. In the second, third and fourth quarters, sales to this industry increased 14%, 1% and 22%, respectively, quarter over quarter.

Data storage sales fluctuated significantly throughout 2002. Flat panel sales increased substantially in the third and fourth quar-

ters of 2002 due to seasonal fluctuations. Data storage sales increased by 128%, 113% and 11% during the first, second and third quarters of 2003. In the fourth quarter of 2003, data storage sales declined 44%. The improvement in data storage sales through the third quarter of 2003, was primarily caused by the growth of DVD applications which are demanding more capacity, density and refined power. The decline in the fourth quarter of 2003 was due to the seasonal demand for end consumer products. Flat panel sales declined by 26% and 22% in the first and second quarters of 2003, then increased by 36% and 38% in the third and fourth quarters of 2003. The volatility of the flat panel market was partially caused by seasonal factors and the increased demand for products utilizing this technology as well as the increasing size and resolution of displays associated with consumer electronic products. Our revenue from all sectors is heavily influenced by general economic conditions and consumer spending patterns in each of the industries we serve.

As a result of the semiconductor capital equipment industry slowdown which started in 2001, we periodically evaluated our reserves for excess and obsolete inventory and income tax valuation allowances, as well as assessed the carrying value of our long-lived assets. As a result of these periodic assessments, our management deemed increased amounts of our inventory to be excess or obsolete particularly in the fourth quarter of 2002; certain intangible assets' fair values did not support their carrying value in the fourth quarter of 2002 and third quarter of 2003; warranty costs associated with certain products were in excess of historical experience and our expectations which also adversely affected margins, particularly in the fourth quarter of 2002; and in the third quarter of 2003, due to our continued losses, we recorded a significant valuation allowance against certain of our United States and foreign net deferred tax assets.

In 2002, gross margins improved each quarter through the third quarter, primarily due to better absorption from our increasing sales base. In the fourth quarter of 2002, our gross margin declined substantially as the sudden decline of 19% in our sales base hampered our fixed cost absorption and caused us to adjust our excess and obsolete inventory reserves to reflect our revised sales outlook.

During 2003, as we began the implementation of our China-based manufacturing facility and transition of a portion of our supply base to Tier 1 Asian suppliers, our gross margin was negatively affected due to the costs of running duplicative facilities and new supplier qualification efforts.

OFF-BALANCE SHEET ARRANGEMENTS

The following table sets forth our significant off-balance sheet arrangements, long-term debt and capital lease obligations as of December 31, 2003.

Payments Due by Period (In thousands)							
Contractual obligations	2004	2005	2006	2007	2008	Thereafter	Total
Convertible subordinated notes	$ —	$ —	$187,718	$ —	$ —	$ —	$187,718
Senior borrowings	8,028	3,484	2,098	323	—	—	13,933
Capital lease obligations	571	157	87	22	5	—	842
Operating lease obligations	6,570	5,560	4,690	3,927	3,384	11,959	36,090
Inventory purchase obligations	13,263	—	—	—	—	—	13,263
Total obligations	$28,432	$9,201	$194,593	$4,272	$3,389	$11,959	$251,846

Management's Discussion and Analysis of Financial Condition and Results of Operations

Please refer to Footnote 7 Notes Payable, Footnote 8 Convertible Subordinated Notes Payable, Footnote 11 Commitments And Contingencies and Footnote 13 Related Party Transactions included in this annual report for further discussion regarding our significant off-balance sheet arrangements, long-term debt and capital lease obligations.

Our inventory purchase obligations consist of minimum purchase commitments we entered into with various suppliers to ensure we have an adequate supply of critical components to meet the demand of our customers. We believe that these purchase commitments will be consumed in our on-going operations during 2004.

We have also committed to advance up to $1.5 million to a privately held company in exchange for an exclusive intellectual property license. At December 31, 2003, approximately $500,000 has been advanced under this agreement and expensed as research and development costs. The amount and timing of this advance is dependent upon the privately held company achieving certain business development milestones.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2003, our principle sources of liquidity consisted of cash, cash equivalents and marketable securities of $135.2 million, and a credit facility consisting of a $25.0 million revolving line of credit, none of which was outstanding at December 31, 2003. Advances under the revolving line of credit would bear interest at the prime rate (4.00% at February 17, 2004) minus 1%. Any advances under this revolving line of credit will be due and payable in May 2004. We are subject to covenants on our line of credit that provide certain restrictions related to working capital, net worth, acquisitions and payment and declaration of dividends. We were in compliance with all such covenants at December 31, 2003.

During 2003, our cash, cash equivalents and marketable securities decreased $37.1 million from $172.3 million at December 31, 2002. In 2006, when our convertible subordinated notes become due, it is possible we may need substantial funds to repay such debt, which totaled $187.7 million at December 31, 2003. Our 5.00% convertible subordinated notes with a principal balance of $121.5 million are due September 1, 2006, and our 5.25% convertible subordinated notes with a principal balance of $66.2 million are due November 15, 2006. Payment would be required if our common stock price remains below approximately $30 per share for the 5.00% convertible subordinated notes and approximately $50 per share for the 5.25% convertible subordinated notes. In such a situation, there can be no assurance that we will be able to refinance the debt.

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

We have historically financed our operations and capital requirements through a combination of cash provided by operations, the issuance of long-term debt and common stock, bank loans, capital lease obligations and operating leases. However, we have not generated positive cash flow from operations since 2001.

Operating activities used cash of $13.0 million in 2003, reflecting our net loss of $44.2 million partially offset by non-cash items of $35.2 million and increased by net working capital changes of approximately $4.0 million. Non-cash items primarily consisted of the following:

- Depreciation of property and equipment of $12.7 million. We expect depreciation expense to increase to a range of $15.0 million to $16.0 million in 2004. This increase is primarily due to capital expenditures incurred in 2003 to launch our China-based manufacturing facility and information technology systems expenditures in 2003 and 2004;
- Amortization of intangible assets and demonstration and customer service equipment of $7.5 million;
- Amortization of deferred debt issuance costs of $1.1 million;
- Provision for excess and obsolete inventory of $3.0 million;
- Provision for deferred income taxes of $6.4 million. In 2003, we recorded valuation allowances against certain of our United States and foreign deferred income tax assets. We may generate taxable income in 2004, enabling us to reverse a portion of our valuation allowance. This reversal would create a use of cash from operations as the benefit from deferred income taxes is a non-cash item;
- A loss on the disposal of property and equipment of $2.8 million. During 2003, we closed multiple facilities resulting in the disposal of certain property and equipment. We plan to close our Voorhees, New Jersey manufacturing facility in the first half of 2004. Such closure may result in additional capital equipment disposals, if the related equipment cannot be utilized elsewhere in our organization; and
- Intangible asset impairment of $1.2 million. In the third quarter of 2003, the fair value of one of our intangible assets did not support its carrying value and an impairment loss was recognized. Based on our forecasts, we do not expect to incur additional intangible asset impairments in 2004.

However, our forecast is subject to numerous factors that are beyond our control, therefore we can provide no assurance regarding the future recoverability of our intangible assets.

Net working capital changes used cash of $5.3 million and primarily consisted of the following:

- Collection of $16.5 million of net income tax receivables during 2003;
- An increase in accounts receivable of $14.6 million. We expect our accounts receivable to remain high during 2004 if industry conditions continue to improve;
- An $11.3 million increase in inventory. Due to the establishment of our China-based manufacturing facility and increased sales orders we have built our inventory level to mitigate the risk of not being able to meet increasing customer demand for our products;
- A $5.9 million increase in trade accounts payable, which was primarily incurred to finance our inventory purchases;
- A $5.0 million increase in customer deposits and other accrued expenses;
- A $2.8 million decrease in accrued warranty; and
- A $2.8 million decrease in accrued restructuring.

Operating activities used cash of $15.3 million in 2002, reflecting our net loss of $41.4 million partially offset by non-cash items of $20.8 million and net working capital changes of approximately $5.3 million. Non-cash items primarily consisted of the following:

- A $4.2 million pretax gain on the retirement of a portion of our convertible notes, repurchased at a discount below face value;
- A $4.9 million gain on an intercompany foreign currency loan. We do not expect to realize significant gains from intercompany indebtedness in the future as a result of a change in our currency risk management policy;
- A $6.9 million benefit for deferred income taxes;
- Depreciation of property and equipment of $13.4 million;
- Amortization of intangible assets and demonstration and customer service equipment of $8.1 million;
- Provision for excess and obsolete inventory of $5.8 million;
- Provision for doubtful accounts of $1.9 million; and
- Impairments of $5.1 million consisting of intangible assets of $1.9 million, property and equipment of $1.6 million and marketable securities of $1.5 million.

Net working capital changes provided cash of $5.3 million and primarily consisted of the following:

- A $5.1 million increase in accounts receivable;
- A $2.9 million increase in demonstration and customer service equipment;
- A $4.9 million increase in accrued warranty costs; and
- A $4.6 million increase in accrued restructuring charges.

Operating activities generated cash of $7.9 million in 2001, reflecting our net loss of $31.4 million adjusted for non-cash items of $32.6 million and changes in working capital of $6.7 million. Non-cash items primarily consisted of the following:

- A $3.6 million benefit for deferred income taxes;
- Depreciation of property and equipment of $10.0 million;
- Amortization of intangible assets and demonstration equipment of $5.9 million;
- A provision for excess and obsolete inventory of $6.4 million; and
- Impairments of $12.3 million. Our impairments consisted of goodwill of $5.4 million and an investment of $6.8 million.

Net working capital changes provided cash of $6.7 million and primarily consisted of:

- A $45.0 million decrease in accounts receivable;
- A $5.5 million increase in inventory;
- A $5.5 million decrease in accounts payable;
- A $5.1 million decrease in accrued payroll and employee benefits; and
- A $22.0 million increase in net income taxes receivable.

Our near-term future operating activities may continue to use cash. Periods of rapidly increasing sales may cause increased working capital requirements, thereby requiring the use of cash to fund our operations.

Investing activities used cash of $8.6 million in 2003 and primarily consisted of the purchase of equipment for $20.5 million and the settlement of the escrow deposit liability related to our acquisition of Dressler in 2002 of $1.7 million, partially offset by proceeds from the sale of assets of $5.2 million and the net sale of marketable securities of $8.8 million. We expect to spend between $12.5 million and $14.0 million for the purchase of property and equipment in 2004. Our planned level of capital expenditures is subject to frequent revisions because our business experiences sudden changes as we move into industry upturns and downturns and expected sales levels change. In addition, changes in foreign currency exchange rates may significantly impact our capital expenditures and depreciation expense recognized in a particular period.

Investing activities provided cash of $24.3 million in 2002 and consisted of cash generated by the net sale of marketable securi-

Management's Discussion and Analysis of Financial Condition and Results of Operations

ties of $87.9 million; partially offset by cash used for the acquisition of Aera for $35.7 million net of $8.3 million of cash acquired; the acquisition of Dressler for $14.4 million net of $680,000 of cash acquired; the acquisition of the minority interest of Litmas for $400,000 in addition to our common stock valued at approximately $4.2 million; the purchase of property and equipment of $10.7 million and the purchase of other investments of $2.8 million. Although investing activities provided cash of $24.3 million in 2002, our total cash and marketable securities declined approximately $99.6 million during 2002. Our marketable securities are not considered cash equivalents, and a significant portion of these securities were sold during 2002, to finance the above transactions as well as to fund our operating activities.

Investing activities used cash of $81.2 million in 2001, and consisted of the acquisition of EMCO for $29.9 million net of $459,000 of cash acquired, the net purchase of marketable securities of $31.6 million, the purchase of investments and advances of $7.2 million and the purchase of property and equipment of $12.4 million.

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

Financing activities used cash of $8.6 million in 2003, and consisted of payments on our senior borrowings and capital lease obligations of $12.8 million, partially offset by proceeds from the exercise of employee stock options and sale of common stock through our employee stock purchase plan, or ESPP of $4.2 million.

We expect our financing activities to continue to fluctuate in the future. If market conditions and our financial position are deemed appropriate, we may repurchase additional convertible notes in the open market. Our payments under capital lease obligations and notes payable may also increase in the future if we enter into additional capital lease obligations or change the level of our bank financing. Our estimated payments under capital lease obligations and bank debt during 2004 will be approximately $8.6 million. However, a significant portion of these obligations are held in countries other than the United States; therefore, future foreign currency fluctuations, especially between the dollar and the yen, could cause significant fluctuations in our estimated 2004 payment obligations.

Financing activities used cash of $22.6 million in 2002, and consisted primarily of open market repurchases of our convertible notes of $14.5 million, the repayment of our senior borrowings and capital lease obligations of $10.2 million, partially offset by proceeds from the exercise of employee stock options and sale of common stock through our ESPP of $2.1 million.

Financing activities provided cash of $124.1 million in 2001, and consisted primarily of proceeds from convertible debt of $121.25 million and proceeds from the exercise of employee stock options and sale of common stock through our ESPP of $4.0 million.

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 December 31, 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 2003, the rates we earned on our marketable securities approximated 1.8% on a before tax equivalent basis. Because the Federal Reserve repeatedly lowered interest rates throughout 2001, 2002 and 2003, the interest rates we earned on our investments likewise decreased substantially. This, in conjunction with using our available cash and cash reserves to fund our operations and 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 $170,000 less interest income in 2003, $300,000 in 2002 and $700,000 in 2001.

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. Because these rates are fixed, we believe there is no risk of increased interest expense with regard to these instruments.

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

FOREIGN CURRENCY EXCHANGE RATE RISK

We transact business in various foreign countries. Our primary foreign currency cash flows are generated in countries in Asia and Europe. During 2003, the U.S. dollar weakened approximately 10% against the Japanese yen and 17% against the euro. It is highly uncertain how currency exchange rates will fluctuate in the future. We have entered into various foreign currency forward exchange contracts to mitigate against currency fluctuations in the Japanese yen, euro, Taiwanese dollar and Chinese yuan. The notional amount of our foreign currency contracts at December 31, 2003 was $10.2 million. The potential fair value loss for a hypothetical 10% adverse change in foreign currency exchange rates at December 31, 2003, would be approximately $1.0 million, which would be essentially offset by corresponding gains related to the underlying assets. We will continue to evaluate various methods to minimize the effects of currency fluctuations when we translate the financial statements of our foreign subsidiaries into U.S. dollars. At December 31, 2003 we held foreign currency forward exchange contracts, maturing through March 2004, to purchase U.S. dollars and sell various foreign currencies. The following table summarizes our outstanding contracts as of December 31, 2003:

	Notional Amounts	Market Settlement Amounts	Unrealized (Loss)/Gain
Japanese yen contracts	$ 3,500,000	$ 3,650,000	$(150,000)
Euro contract	200,000	222,000	(22,000)
Taiwanese dollar contract	4,000,000	3,992,000	8,000
Chinese yuan contract	2,500,000	2,496,000	4,000
Balance at December 31, 2003	$10,200,000	$10,360,000	$(160,000)

Independent Auditor's Report

The Board of Directors and Stockholders of Advanced Energy Industries, Inc.:

We have audited the accompanying consolidated balance sheets of Advanced Energy Industries, Inc. (a Delaware corporation) and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for the years then ended. In connection with our audits of the 2003 and 2002 consolidated financial statements, we also have audited the 2003 and 2002 financial statement schedules as listed in the accompanying index. These consolidated financial statements and financial statement schedules are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedules based on our audits. The consolidated financial statements of Advanced Energy Industries, Inc. and subsidiaries for the year ended December 31, 2001 were audited by other auditors who have ceased operations. Those auditors expressed an unqualified opinion on those financial statements, before the revision described in Note 1 to the financial statements, in their report dated February 28, 2002.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the 2003 and 2002 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Advanced Energy Industries, Inc. and subsidiaries as of December 31, 2003 and 2002, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the related 2003 and 2002 financial statement schedules, when considered in relation to the basic 2003 and 2002 consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

As discussed in Notes 1 and 2 to the consolidated financial statements, Advanced Energy Industries, Inc. and subsidiaries adopted the provisions of Statements of Financial Accounting Standards No. 141, *Business Combinations*, and No. 142 *Goodwill and Other Intangible Assets*, effective January 1, 2002.

As discussed in Note 1 to the consolidated financial statements, Advanced Energy Industries, Inc. and subsidiaries adopted the provisions of Statement of Financial Accounting Standards No. 145, *Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections*, effective January 1, 2003.

As discussed above, the consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows of Advanced Energy Industries, Inc. and subsidiaries for the year ended December 31, 2001 were audited by other auditors who have ceased operations. As described in Note 1, the consolidated financial statements for the fiscal year ended December 31, 2001 have been revised to include the transitional disclosures required by Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*, which was adopted by the Company as of January 1, 2002. In our opinion, the disclosures for 2001 in Note 1 are appropriate. However, we were not engaged to audit, review, or apply any procedures to the 2001 financial statements of the Company other than with respect to such disclosures and, accordingly, we do not express an opinion or any other form of assurance on the 2001 consolidated financial statements taken as a whole.

KPMG LLP

Denver, Colorado
February 20, 2004

Report of Independent Public Accountants

To Advanced Energy Industries, Inc.:

We have audited the accompanying consolidated balance sheets of Advanced Energy Industries, Inc. (a Delaware corporation) and subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2001. These consolidated financial statements and the schedule referred to below are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and schedule based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Advanced Energy Industries, Inc. and subsidiaries as of December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001, in conformity with accounting principles generally accepted in the United States.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The schedule listed in the index to consolidated financial statements is presented for purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a whole.

ARTHUR ANDERSEN LLP

Denver, Colorado,
February 28, 2002.

The report of Arthur Andersen LLP (Andersen) is a copy of a report previously issued by Andersen on February 28, 2002. The report has not been reissued by Andersen nor has Andersen consented to its inclusion in this Annual Report on Form 10-K. The Andersen report refers to the consolidated balance sheets as of December 31, 2001 and 2000, and the consolidated statements of operations, stockholders' equity and cash flows for the years ended December 31, 2000 and 1999 which are no longer included in the accompanying financial statements.

Consolidated Balance Sheets

	December 31,	
(In thousands)	**2003**	2002
Assets		
Current assets:		
Cash and cash equivalents	**$ 41,522**	$ 70,188
Marketable securities — available-for-sale	**93,691**	102,159
Accounts receivable —		
Trade (less allowances for doubtful accounts of approximately $1,303 and $3,056 at December 31, 2003 and 2002, respectively)	**57,156**	40,797
Other	**4,771**	3,088
Income tax receivable	**151**	14,720
Inventories	**65,703**	57,306
Other current assets	**5,486**	6,828
Deferred income tax assets, net	**—**	17,510
Total current assets	**268,480**	312,596
Property and equipment, at cost, net of accumulated depreciation of $50,848 and $43,109 at December 31, 2003 and 2002, respectively	**44,725**	41,178
Other assets:		
Deposits and other	**5,630**	5,181
Goodwill and intangibles, net of accumulated amortization of $11,197 and $7,886 at December 31, 2003 and 2002, respectively	**88,943**	86,601
Demonstration and customer service equipment, net of accumulated amortization of $5,688 and $4,549 at December 31, 2003 and 2002, respectively	**3,934**	6,086
Deferred debt issuance costs, net	**3,019**	4,091
	101,526	101,959
Total assets	**$414,731**	$455,733

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

	December 31,	
(In thousands, except per share data)	**2003**	2002
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Trade accounts payable	**$ 23,066**	$ 16,055
Taxes payable	**445**	—
Accrued payroll and employee benefits	**7,953**	9,348
Accrued warranty expense	**6,612**	9,402
Accrued restructuring charges	**3,175**	5,989
Other accrued expenses	**7,079**	4,573
Acquisition related escrow	**—**	1,675
Customer deposits and deferred revenue	**2,952**	77
Capital lease obligations, current portion	**554**	691
Senior borrowings, current portion	**8,028**	14,506
Accrued interest payable on convertible subordinated notes	**2,460**	2,338
Total current liabilities	**62,324**	64,654
Long-term liabilities:		
Capital leases, net of current portion	**263**	669
Senior borrowings, net of current portion	**5,905**	9,996
Deferred income tax liabilities, net	**4,672**	8,663
Convertible subordinated notes payable	**187,718**	187,718
Other long-term liabilities	**2,015**	694
	200,573	207,740
Total liabilities	**262,897**	272,394
Commitments and contingencies		
Stockholders' Equity:		
Preferred stock, $0.001 par value, 1,000 shares authorized, none issued and outstanding	**—**	—
Common stock, $0.001 par value, 70,000 and 55,000 shares authorized; 32,573 and 32,140 shares issued and outstanding at December 31, 2003 and 2002, respectively	**33**	32
Additional paid-in capital	**142,667**	138,429
Retained (deficit) earnings	**(48)**	44,193
Deferred compensation	**(60)**	(542)
Unrealized holding gains (losses) on available-for-sale securities, net	**1,491**	(33)
Cumulative translation adjustments, net	**7,751**	1,260
Total stockholders' equity	**151,834**	183,339
Total liabilities and stockholders' equity	**$414,731**	$455,733

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

Consolidated Statements of Operations

	Years Ended December 31,		
(In thousands, except per share amounts)	**2003**	2002	2001
Sales	**$262,402**	$238,898	$193,600
Cost of sales	**174,455**	170,138	136,168
Gross profit	**87,947**	68,760	57,432
Operating expenses:			
Research and development	**51,647**	48,995	45,151
Sales and marketing	**31,015**	34,940	23,784
General and administrative	**22,936**	30,533	21,522
Litigation damages and expenses (recovery)	—	5,313	(1,500)
Restructuring charges	**4,306**	9,060	3,070
Impairment of goodwill and other intangible assets	**1,175**	1,904	5,446
Impairment of investments and advances	—	—	6,846
Total operating expenses	**111,079**	130,745	104,319
Loss from operations	**(23,132)**	(61,985)	(46,887)
Other income (expense):			
Interest income	**1,721**	3,314	6,581
Interest expense	**(11,254)**	(12,460)	(7,399)
Foreign currency gain (loss)	**869**	5,280	(235)
Gain on retirement of convertible subordinated notes	—	4,223	—
Other (expense) income, net	**(644)**	(2,064)	(1,025)
	(9,308)	(1,707)	(2,078)
Net loss before income taxes and minority interest	**(32,440)**	(63,692)	(48,965)
(Provision) benefit for income taxes	**(11,801)**	22,293	17,441
Minority interest in net loss	—	—	145
Net loss	**$(44,241)**	$(41,399)	$(31,379)
Basic and diluted net loss per share	**$ (1.37)**	$ (1.29)	$ (0.99)
Basic and diluted weighted-average common shares outstanding	**32,271**	32,026	31,712

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

Consolidated Statements of Stockholders' Equity and Comprehensive Loss

For the years ended December 31, 2003, 2002 and 2001

(In thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings (Deficit)	Deferred Compensation	Accumulated Other Comprenensive (Loss) Income	Total Stock-holders' Equity
BALANCES, December 31, 2000	31,537	$32	$124,930	$116,971	$(1,620)	$(1,515)	$238,798
Exercise of stock options for cash	273	—	3,342	—	—	—	3,342
Sale of common stock through employee stock purchase plan	38	—	628	—	—	—	628
Tax benefit related to shares acquired by employees under stock compensation plans	—	—	1,588	—	—	—	1,588
Fair value of stock options assumed in EMCO acquisition	—	—	1,126	—	—	—	1,126
Deferred compensation on stock options issued	—	—	84	—	(84)	—	—
Amortization of deferred compensation	—	—	—	—	610	—	610
Comprehensive loss:							
Equity adjustment from foreign currency translation, net of tax	—	—	—	—	—	(260)	—
Unrealized holding losses, net of tax	—	—	—	—	—	(108)	—
Net loss	—	—	—	(31,379)	—	—	—
Total comprehensive loss	—	—	—	—	—	—	(31,747)
BALANCES, December 31, 2001	31,848	32	131,698	85,592	(1,094)	(1,883)	214,345
Exercise of stock options for cash	118	—	1,389	—	—	—	1,389
Issuance of common stock for acquisition of minority interest of Litmas	120	—	4,219	—	—	—	4,219
Sale of common stock through employee stock purchase plan	54	—	689	—	—	—	689
Tax benefit related to shares acquired by employees under stock compensation plans	—	—	468	—	—	—	468
Amortization of deferred compensation	—	—	—	—	518	—	518
Adjustment for forfeited options	—	—	(34)	—	34	—	—
Comprehensive loss:							
Equity adjustment from foreign currency translation, net of tax	—	—	—	—	—	4,400	—
Unrealized holding losses, net of tax	—	—	—	—	—	(2,641)	—
Less: reclassification adjustment for amounts included in net loss	—	—	—	—	—	1,351	—
Net loss	—	—	—	(41,399)	—	—	—
Total comprehensive loss	—	—	—	—	—	—	(38,289)
BALANCES, December 31, 2002	32,140	32	138,429	44,193	(542)	1,227	183,339
Exercise of stock options for cash	360	1	3,499	—	—	—	3,500
Sale of common stock through employee stock purchase plan	73	—	739	—	—	—	739
Amortization of deferred compensation	—	—	—	—	482	—	482
Comprehensive loss:							
Equity adjustment from foreign currency translation, net of tax	—	—	—	—	—	6,491	—
Unrealized holding gains, net of tax	—	—	—	—	—	1,524	—
Net loss	—	—	—	(44,241)	—	—	—
Total comprehensive loss	—	—	—	—	—	—	(36,226)
BALANCES, December 31, 2003	**32,573**	**$ 33**	**$142,667**	**$ (48)**	**$ (60)**	**$ 9,242**	**$151,834**

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

Consolidated Statements of Cash Flows

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Cash flows from operating activities:			
Net loss	**$(44,241)**	$(41,399)	$(31,379)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities -			
Depreciation of property and equipment	**12,718**	13,411	9,973
Amortization of intangibles and demonstration and customer service equipment	**7,529**	8,059	5,930
Amortization of deferred debt issuance costs	**1,100**	1,301	775
Amortization of deferred compensation	**482**	518	610
Minority interest	**—**	—	(145)
Provision (benefit) for deferred income taxes	**6,429**	(6,888)	(3,579)
Provision for excess and obsolete inventory	**3,016**	5,803	6,412
Impairment of goodwill and other intangible assets	**1,175**	1,904	5,446
Impairment of investment	**—**	—	6,846
Impairment of property and equipment	**—**	1,618	—
Impairment of marketable security	**175**	1,544	—
(Recovery of) provision for doubtful accounts	**(429)**	1,870	282
Unrealized loss on foreign currency forward contracts	**160**	388	—
Loss on disposal of property and equipment	**2,846**	359	13
Gain on retirement of convertible subordinated notes	**—**	(4,223)	—
Unrealized gain on intercompany foreign currency loan	**—**	(4,879)	—
Changes in operating assets and liabilities, net of assets and liabilities acquired -			
Accounts receivable-trade	**(14,556)**	(5,067)	44,972
Other receivables	**(1,464)**	1,386	(128)
Inventories	**(11,339)**	3,021	(5,484)
Other current assets	**1,402**	(2,232)	(1,752)
Deposits and other	**1,512**	(901)	(180)
Demonstration and customer service equipment	**(846)**	(2,859)	(2,754)
Trade accounts payable	**5,873**	2,366	(5,528)
Accrued payroll and employee benefits	**(439)**	(292)	(5,099)
Accrued warranty expense	**(2,775)**	4,896	496
Accrued restructuring charges	**(2,814)**	4,562	952
Customer deposits and other accrued expenses	**4,970**	(179)	3,134
Income taxes payable/receivable, net	**16,530**	608	(21,949)
Net cash (used in) provided by operating activities	**(12,986)**	(15,305)	7,864
Cash flows from investing activities:			
Purchase of marketable securities	**(1,308)**	(2,499)	(64,925)
Sale of marketable securities	**10,106**	90,439	33,312
Proceeds from sale of equipment	**5,196**	350	—
Purchase of property and equipment	**(20,509)**	(10,714)	(12,435)
Purchase of investments and advances	**(400)**	(2,781)	(7,186)
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 in Litmas, net of cash acquired	**—**	(400)	—
Acquisition of Engineering Measurements Company, net of cash acquired	**—**	—	(29,932)
Net cash (used in) provided by investing activities	**(8,590)**	24,311	(81,166)

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Cash flows from financing activities:			
Proceeds from notes payable	**—**	—	837
Repayment of notes payable and capital lease obligations	**(12,847)**	(10,190)	(1,973)
Proceeds from convertible debt, net	**—**	—	121,250
Repurchase of convertible debt, net	**—**	(14,522)	—
Sale of common stock through employee stock purchase plan	**739**	689	628
Proceeds from exercise of stock options	**3,500**	1,389	3,342
Net cash (used in) provided by financing activities	**(8,608)**	(22,634)	124,084
Effect of currency translation on cash	**1,518**	1,861	(543)
(Decrease) increase in cash and cash equivalents	**(28,666)**	(11,767)	50,239
Cash and cash equivalents, beginning of year	**70,188**	81,955	31,716
Cash and cash equivalents, end of year	**$ 41,522**	$ 70,188	$ 81,955
Supplemental disclosure of non-cash investing and financing activities:			
Tax benefit related to shares acquired by employees under stock option plans	**$ —**	$ 468	$ 1,588
Deferred compensation on stock options issued	**$ —**	$ —	$ 84
Supplemental disclosure of cash flow information:			
Cash paid for interest	**$ 10,521**	$ 11,517	$ 4,457
Cash (received) paid for income taxes, net	**$ (9,642)**	$(16,086)	$ 9,572

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

Notes to Consolidated Financial Statements

Note 1 COMPANY OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Advanced Energy Industries, Inc. (the "Company"), a Delaware corporation, is primarily engaged in the development and production of components and subsystems critical to plasma-based manufacturing processes, which are used by manufacturers of semiconductors and in industrial thin-film manufacturing processes. The Company owns 100% of each of the following subsidiaries: Advanced Energy Japan K.K. ("AE-Japan"), Advanced Energy Industries GmbH ("AE-Germany"), Advanced Energy Industries U.K. Limited ("AE-UK"), Advanced Energy Industries Korea, Inc. ("AE-Korea"), Advanced Energy Taiwan, Ltd. ("AE-Taiwan"), Advanced Energy Industries (ShenZhen) Co., Ltd. and Advanced Energy Industries (Shanghai) Co., Ltd., collectively ("AE-China"), Aera Corporation, Dressler HF Technik GmbH ("Dressler") and Sekidenko, Inc. ("Sekidenko").

On March 28, 2002, the Company acquired 100% of Dressler, a privately held Germany-based provider of power supplies and matching networks. On January 18, 2002, the Company acquired 100% of Aera Japan, Ltd. ("Aera"), a privately held Japanese corporation. Aera supplies digital, pressure-based and liquid mass flow controllers, ultrasonic liquid flow meters and liquid vapor delivery systems to the semiconductor capital equipment industry. Aera is 100% owned by various subsidiaries of Advanced Energy Industries, Inc. On January 2, 2001, the Company acquired 100% of Engineering Measurements Company ("EMCO"), a publicly held Longmont, Colorado based manufacturer of electronic and electromechanical precision instruments. The Company completed its acquisition of the 40.5% of Litmas that it did not previously own on April 2, 2002.

Prior to 2002, the Company also owned 100% of the following subsidiaries: Noah Holdings, Inc. ("Noah"), Advanced Energy Voorhees, Inc. ("AEV"), Tower Electronics, Inc. ("Tower") and EMCO, as well as 59.5% of Litmas.

During 2002, AEV, Tower, Noah, EMCO and Litmas were combined with and into the Company, and Aera was combined with and into AE-Japan.

The acquisitions of Litmas, Aera, Dressler and EMCO were accounted for under the purchase method of accounting and the results of operations of Litmas, Aera, Dressler and EMCO are included since their respective acquisition dates. These acquisitions are discussed in more detail in Note 2.

The Company is subject to many risks, some of which are similar to other companies in its industry. These risks include those which may be associated with the Company's strategy to reduce operating costs by establishing a new China-based manufacturing facility and transitioning a portion of its supply base to Tier 1 Asian suppliers, significant fluctuations of quarterly operating results, the volatility of the semiconductor and semiconductor capital equipment industries, customer concentration within the markets the Company serves, competition, recent and potential future acquisitions, international operating risks, supply constraints and dependencies, intellectual property rights, dependence on design wins, dependence on key personnel, unanticipated warranty costs, and governmental regulations. Any of these or other risk factors could have a material impact on the Company's business.

BASIS OF PRESENTATION — The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are stated in U.S. dollars and are prepared in accordance with accounting principles generally accepted in the United States of America.

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

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

In the fourth quarter of 2003, the Company performed its annual goodwill impairment test, and concluded that because the estimated fair value of the Company's reporting unit exceeded its carrying amount, 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 the impairment may be material to the Company.

Amortization expense and net loss for the Company for the year of initial application of Statement of Financial Accounting Standards ("SFAS") No. 142 "Goodwill and Other Intangible Assets" and the subsequent and prior year follow:

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Goodwill amortization	**$ —**	$ —	$ (3,900)
Impairment of goodwill	**—**	—	(5,446)
Net loss	**$(44,241)**	$(41,399)	$(31,379)

The following table presents adjusted net loss and loss per share data restated to include the retroactive impact of the adoption of SFAS No. 142:

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Net loss	**$(44,241)**	$(41,399)	$(31,379)
Add back: Impact of goodwill amortization, net of taxes	**—**	—	3,900
Adjusted net loss	**$(44,241)**	$(41,399)	$(27,479)
Net loss per share:			
Basic and diluted	**$ (1.37)**	$ (1.29)	$ (0.99)
Add back: Impact of goodwill amortization, net of taxes			
Basic and diluted	**$ —**	$ —	$ 0.12
Adjusted net loss per share:			
Basic and diluted	**$ (1.37)**	$ (1.29)	$ (0.87)

During 2003, the Company determined that one of its mass flow controller products would not conform to changing customer technology requirements, and as such would no longer be accepted by the Company's customers. As a result, the Company performed an assessment of the carrying value of the related intangible asset. This assessment consisted of estimating the intangible asset's fair value and comparing the estimated fair value to the carrying value of the asset. The Company estimated the intangible asset's fair value by applying a hypothetical royalty rate to the projected revenue stream and using a cash flow model discounted at discount rates consistent with the risk of the related cash flows. Based on this analysis the Company determined that the fair value of the intangible asset was minimal and recorded an impairment of the carrying value of approximately $1.2 million, which has been reported as an intangible asset impairment in the accompanying consolidated financial statements.

During 2000 and 2001, the Company made periodic advances and investments totaling approximately $9.5 million to Symphony Systems, Inc., ("Symphony") a privately held, early-stage developer of equipment productivity management software. In addition, Symphony received investments of approximately $7.0 million from other parties. In 2001, the Company received an exclusive license and a security interest in all of Symphony's intellectual and proprietary property.

During 2001, Symphony's financial situation began to deteriorate significantly, and the Company determined that due to Symphony's need for immediate liquidity, its declining business prospects, including the indefinite postponement of a significant order for its products from a major semiconductor capital equipment manufacturer, the value of the Company's investment in and advances to Symphony had substantially declined. The Company valued its investments in and advances to Symphony at December 31, 2001, at approximately $1 million, which reflected the Company's assessment of the value of the Symphony technology license, which was believed to have continuing value to the Company. The amount of the impairment related to Symphony was $6.8 million, all of which was recorded as an operating expense in 2001.

Symphony effectively ceased operations in February 2002. The Company hired Symphony's key employees, and acquired Symphony's remaining assets in a foreclosure and liquidation sale of such assets in April 2002. At no time prior to the foreclosure and liquidation sale did the Company's percentage ownership in the voting stock of Symphony exceed 1.7%, and the Company did not have the ability to exercise significant influence over Symphony. The Company recorded the assets acquired at their estimated fair values. The excess purchase price over the estimated fair value of tangible assets acquired of approximately $2.5 million was allocated to amortizable intangibles, with a weighted-average estimated useful life of approximately 5 years.

In the fourth quarter of 2002, the Company's sales to the semiconductor capital equipment industry declined substantially from the third quarter of 2002. As a result the Company evaluated the carrying amount of assets acquired from Symphony by comparing its estimated future cash flows to its carrying value. This analysis indicated that the Company's investment was impaired by approximately $1.9 million, which has been reflected as impairment of goodwill and other intangible assets in the accompanying financial statements.

During 2001, the Company reviewed certain amounts recorded as goodwill for impairment under the SFAS No. 121 model. Due to declines in the related businesses and changes in the Company's strategy, it was determined that the related expected future cash flows no longer supported the recorded amounts of goodwill, and the Company recorded an impairment in the amount of approximately $5.4 million. Approximately $3.6 million of this was related to impairment of goodwill associated with Tower and approximately $1.8 million was related to impairment of goodwill associated with the Company's Fourth State Technology product line.

Notes to Consolidated Financial Statements

The Company's goodwill and identifiable intangible assets have primarily resulted from purchases of Japanese and German companies, and accordingly, carrying amounts for these assets are impacted by changes in foreign currency exchange rates.

Goodwill and identifiable intangible assets consisted of the following as of December 31, 2002:

(In thousands, except weighted-average useful life)	Gross Carrying Amount	Accumulated Amortization	Effect of Changes in Exchange Rates	Net Carrying Amount	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	58,629	—	5,599	64,228	
Total goodwill and intangibles	$85,717	$ (7,886)	$ 8,770	$86,601	

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

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

Aggregate amortization expense related to goodwill and other intangibles for the years ended December 31, 2003, 2002 and 2001, was $4.6 million, $5.5 million and $4.9 million, respectively. Estimated amortization expense related to the Company's acquired intangibles fluctuates with changes in foreign currency exchange rates between the U.S. dollar and the Japanese yen and the euro. Estimated amortization expense related to acquired intangibles for each of the five years 2004 through 2008 is as follows:

(In thousands)	
2004	$4,766
2005	4,766
2006	2,385
2007	1,018
2008	825

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

In certain instances, the Company requires its customers to pay for a portion or all of their purchases prior to the Company building or shipping these products. Cash payments received prior to shipment are recorded as customer deposits and deferred revenue in the accompanying balance sheets, and then recognized as revenue upon shipment of the products. The

Company does not offer price protections to its customers or allow returns, unless covered by its normal policy for repair of defective products.

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

INCOME TAXES — The Company accounts for income taxes in accordance with SFAS No. 109, "Accounting for Income Taxes." SFAS No. 109 requires deferred tax assets and liabilities to be recognized for temporary differences between the tax basis and financial reporting basis of assets and liabilities, computed at current tax rates, as well as for the expected tax benefit of net operating loss and tax credit carryforwards. During 2003, the Company recorded valuation allowances against certain of its United States and foreign net deferred tax assets in jurisdictions where the Company has incurred significant losses in 2001, 2002 and 2003. Given such experience, the Company's management could not conclude that it was more likely than not that these net deferred tax assets would be realized. While there are indications that the markets in which the Company operates may improve in 2004 and 2005, these indications have not yet resulted in substantial taxable income. Accordingly, the Company's management, in accordance with SFAS No. 109, in evaluating the recoverability of these net deferred tax assets, was required to place greater weight on the Company's historical results as compared to projections regarding future taxable income. If the Company generates future taxable income, or should the Company be able to conclude that sufficient taxable income is reasonably assured based on profitable operations, in the appropriate tax jurisdictions, against which these tax attributes may be applied, some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity.

When recording acquisitions, the Company has recorded valuation allowances due to the uncertainty related to the realization of certain deferred tax assets existing at the acquisition dates. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Any reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

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

Had compensation cost for the Company's plans been determined consistent with the fair value-based method prescribed by SFAS No. 123, "Accounting for Stock-Based Compensation," the Company's net loss would have increased to the following adjusted amounts:

(In thousands, except per share data)	**2003**	2002	2001
Net loss:			
As reported	**$ (44,241)**	$ (41,399)	$ (31,379)
Adjustment for stock-based compensation determined under fair value-based method for all awards, net of related tax effects in 2002 and 2001	**(12,410)**	(9,794)	(6,975)
Less: Compensation expense recognized in net loss, net of related tax effects in 2002 and 2001	**482**	324	329
As adjusted	**$ (56,169)**	$(50,869)	$(38,025)
Basic and diluted loss per share:			
As reported	**$ (1.37)**	$ (1.29)	$ (0.99)
As adjusted	**(1.74)**	(1.59)	(1.20)

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

Notes to Consolidated Financial Statements

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

	2003	2002	2001
OPTIONS:			
Risk-free interest rates	**2.96%**	3.89%	4.51%
Expected dividend yield rates	**0.0%**	0.0%	0.0%
Expected lives	**2.9 years**	2.9 years	7.0 years
Expected volatility	**85.64%**	88.05%	87.94%
ESPP:			
Risk-free interest rates	**1.34%**	1.91%	5.68%
Expected dividend yield rates	**0.0%**	0.0%	0.0%
Expected lives	**0.5 years**	0.5 years	0.5 years
Expected volatility	**83.82%**	76.62%	107.11%

During 2003, the Company reassessed the estimated expected lives of its option grants. This assessment was based on a study of historical experience that indicated that such lives were substantially less than had previously been estimated. As a result of this assessment, the Company revised its estimated expected lives for the Company's 2003 and 2002 option grants. Based on the Black-Scholes option pricing model, the weighted-average estimated fair value of employee stock option grants was $7.88, $12.54 and $25.60 for the years ended December 31, 2003, 2002 and 2001, respectively. The weighted-average estimated fair value of purchase rights granted under the ESPP was $4.99, $8.92 and $8.47 for the years ended December 31, 2003, 2002 and 2001, respectively.

WARRANTY POLICY — The Company offers warranty coverage for its products for periods ranging from 12 to 60 months after shipment, with the majority of its products ranging from 18 to 24 months. The Company estimates the anticipated costs of repairing products under warranty based on the historical cost of the repairs and expected failure rates. The assumptions used to estimate warranty accruals are reevaluated periodically in light of actual experience and, when appropriate, the accruals are adjusted. The Company's determination of the appropriate level of warranty accrual is subjective and based on estimates. The industries in which the Company operates are subject to rapid technological change and, as a result, the Company periodically introduces newer, more complex products, which tend to result in increased warranty costs. Estimated warranty costs are recorded at the time of sale of the related product, and are considered a cost of sales. The Company recorded warranty charges of $8.1 million, $13.2 million and $7.6 million for the years ended December 31, 2003, 2002 and 2001, respectively.

The following summarizes the activity in the Company's warranty reserves during 2003 and 2002:

(In thousands)	Balance at Beginning of Period	Additions Charged To Expense	Deductions	Balance at End of Period
2003	**$9,402**	**$ 8,105**	**$(10,895)**	**$6,612**
2002	$4,471	$13,150	$ (8,219)	$9,402

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

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 was 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 reported in later periods under SFAS No. 146 than would have been the case under EITF Issue No. 94-3.

At the end of 2002, the Company announced major changes in its operations to occur through the end of 2003. These included establishing a new manufacturing facility in China, consolidating worldwide sales forces, a move to Tier 1 suppliers, primarily in Asia, and the intention to close or sell certain facilities.

Associated with the above plan, the Company recognized charges during 2003 as follows:

- In the fourth quarter of 2003, the Company recognized approximately $1.0 million that consisted primarily of the recognition of expense for involuntary employee termination benefits associated with the Company's second quarter 2003 headcount reduction and involuntary employee termination benefits of 34 manufacturing and administrative personnel in the Company's U.S. operations.
- In the third quarter of 2003, the Company recognized charges of approximately $1.0 million that consisted primarily of the recognition of expense for involuntary employee termination benefits associated with the Company's second quarter 2003

headcount reduction, asset impairments incurred as a result of exiting its Longmont, Colorado manufacturing facilities, and the involuntary termination of 20 employees in this period.

- In the second quarter of 2003, the Company recognized charges that consisted primarily of the involuntary termination of 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. In addition, certain employees were 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 $170,000 was recognized as expense during the third quarter of 2003, and approximately $170,000 was recognized as expense in the fourth quarter of 2003 as these employees completed their service requirement.
- The Company recorded charges totaling approximately $1.5 million in the first quarter of 2003 primarily associated with manufacturing and administrative personnel headcount reductions in the Company's Japanese operations. In accordance with Japanese labor regulations the Company offered voluntary termination benefits to all of its Japanese employees. The voluntary termination benefits were accepted by 36 employees, with termination dates in the second quarter of 2003.

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.

The employee termination costs of $3.1 million included 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.

Included in the 2002 expense are charges for the closure of a portion of the Company's Voorhees, New Jersey manufacturing facilities, due to the transfer of the manufacturing of these products to Fort Collins, Colorado; the closure of a manufacturing facility in Fort Collins; the closure of EMCO's manufacturing facilities due to the transfer of the manufacturing of these products to Fort Collins, Colorado and Shenzhen, China; and the closure of Litmas. 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, due to the transfer of the manufacturing of these products to Hachioji, Japan, to be co-located with Aera Japan Limited. These costs consisted primarily of payments required under operating lease contracts and costs for writing down related leasehold improvements.

At December 31, 2003, outstanding liabilities related to the 2003 and 2002 restructuring charges were approximately $3.2 million. At December 31, 2002, outstanding liabilities related to the 2002 restructuring charges were approximately $6.0 million.

The Company recorded approximately $3.1 million of restructuring charges in 2001. The Company's restructuring plans and associated costs consisted of $2.1 million to terminate 330 employees and $946,000 to close three facilities.

The employee termination costs of $2.1 million included severance benefits. All terminations and termination benefits were communicated to the affected employees prior to December 31, 2001, and the Company paid the severance benefits in full in 2002. 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.

The facility related costs of $946,000 resulted from the phase out of the Company's Austin, Texas manufacturing facility to begin outsourcing the assembly of certain DC power products; the transition of its Voorhees, New Jersey facility from a manufacturing site to a design center; and the closure of Noah's manufacturing and office facilities in San Jose, California, due to the transfer of Noah's manufacturing to Vancouver, Washington, to be co-located with Sekidenko. These accrued costs reflect payments required under operating lease contracts and costs for writing down related leasehold improvements of facilities.

The following table summarizes the components of the restructuring charges, the payments and non-cash charges, and the remaining accrual as of December 31, 2003, 2002 and 2001:

Notes to Consolidated Financial Statements

(In thousands)	Employee Severance and Termination Costs	Facility Closure Costs	Total Restructuring Charges
Accrual balance December 31, 2000	$ 301	$ 174	$ 475
Second quarter 2001 restructuring charge	614	—	614
Fourth quarter 2001 restructuring charge	1,510	946	2,456
Total restructuring charges 2001	2,124	946	3,070
Payments in 2001	(1,460)	(658)	(2,118)
Accrual balance December 31, 2001	965	462	1,427
Third quarter 2002 restructuring charge	1,033	2,187	3,220
Fourth quarter 2002 restructuring charge	2,021	3,819	5,840
Total restructuring charges 2002	3,054	6,006	9,060
Payments in 2002	(2,412)	(2,086)	(4,498)
Accrual balance December 31, 2002	1,607	4,382	5,989
First quarter 2003 restructuring charge	**1,509**	—	**1,509**
Second quarter 2003 restructuring charge	**670**	**98**	**768**
Third quarter 2003 restructuring charge	**704**	**307**	**1,011**
Fourth quarter 2003 restructuring charge	**994**	**24**	**1,018**
Total restructuring charges 2003	**3,877**	**429**	**4,306**
Payments in 2003	**(4,924)**	**(2,196)**	**(7,120)**
Accrual balance December 31, 2003	**$ 560**	**$ 2,615**	**$ 3,175**

CASH AND CASH EQUIVALENTS — For purposes of reporting cash flows, 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 SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," the 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 in the accompanying 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 fourth quarter of 2002, the fair value of one of these securities continued a substantial decline, and the Company determined the decline was other than temporary as defined by the Financial Accounting Standards Board. As a result the Company recorded an impairment of approximately $1.5 million. In the first quarter of 2003, this security continued to decline in value, and the Company recorded an impairment of $175,000. Since the first quarter of 2003, the value of this security has appreciated from $1.8 million to $3.3 million at December 31, 2003. In accordance with SFAS No. 115, this increase in value has been reflected as a component of other comprehensive income.

INVENTORIES — 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 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 equip-

ment in its customer service function as replacement and loaner equipment to existing customers.

The Company amortizes this equipment based on its estimated useful life. Amortization is computed based on a two-year life.

CONCENTRATIONS OF CREDIT RISK — Financial instruments, which potentially subject the Company to credit risk include cash and trade accounts receivable. 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 standing 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 United States dollar. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information.

FOREIGN CURRENCY TRANSLATION — The functional currency of the Company's foreign subsidiaries is their local currency. Assets and liabilities of international subsidiaries are translated to United States dollars at yearend exchange rates, and statement of operations activity and cash flows are translated at average exchange rates during the year. 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 of $869,000 and $5.3 million during 2003 and 2002, respectively, and losses of $235,000 in 2001 on foreign currency transactions.

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 subordinated notes payable and options) had been converted to such common shares, and if such assumed conversion is dilutive. Due to the Company's net loss for the years ended December 31, 2003, 2002 and 2001, 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 for common stock at December 31, 2003, 2002 and 2001 were approximately 4.0 million, 3.6 million and 2.2 million, respectively. Potential shares of common stock issuable upon conversion of the Company's convertible subordinated notes payable was 5.4 million at December 31, 2003 and 2002, and 5.8 million at December 31, 2001.

COMPREHENSIVE LOSS — Comprehensive loss for the Company consists of net loss, foreign currency translation adjustments and net unrealized holding gains (losses) on available-for-sale marketable investment securities and is presented in the consolidated statement of stockholders' equity.

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 revenues 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 consolidated financial statements.

Notes to Consolidated Financial Statements

LONG-LIVED ASSETS — In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of." SFAS No. 121 did not address the accounting for a segment of a business accounted for as a discontinued operation, which resulted in two accounting models for long-lived assets to be disposed of. SFAS No. 144 establishes a single accounting model for long-lived assets to be disposed of by sale, and requires that those long-lived assets be measured at the lower of carrying amount or fair value less cost to sell, whether reported in continuing operations or in discontinued operations. SFAS No. 144 is effective for fiscal years beginning after December 15, 2001. The Company adopted SFAS No. 144 on January 1, 2002. In the fourth quarter of 2002, in conjunction with the restructuring of its operations discussed above, the Company determined that its EMCO facilities would be closed. As a result the Company performed an analysis of the fair value of EMCO's long-lived assets. This analysis included an appraisal of EMCO's land and building, which indicated an impairment of approximately $560,000, which has been reflected as restructuring charges in the accompanying statement of operations.

ESTIMATES AND ASSUMPTIONS — The preparation of the Company's consolidated financial statements in conformity with accounting principles generally accepted in the United States requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Significant estimates are used when establishing allowances for doubtful accounts, determining useful lives for depreciation and amortization, assessing the need for impairment charges, establishing restructuring accruals and warranty reserves, allocating purchase price among the fair values of assets acquired and liabilities assumed, accounting for income taxes, and assessing excess and obsolete inventory and various 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 is 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 adoption of SFAS No. 150 did not have an impact on the Company's financial position 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. SFAS No. 149 is effective for contracts entered into or modified after June 30, 2003. The adoption of SFAS No. 149 did not have an impact on the Company's financial position 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. FIN No. 46 is effective immediately for all variable interest entities created after January 31, 2003, and is effective for all variable interest entities created prior to that date beginning January 1, 2004. The adoption of FIN No. 46 did not, nor is it expected to, have a material impact on the Company's financial position or results of operations.

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, and addressing the allocation of consideration among determined separate units of accounting. EITF Issue No. 00-21 is effective

for revenue arrangements entered into by the Company after June 30, 2003. The adoption of EITF Issue No. 00-21 did not have a material impact on the Company's 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 a 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.

In April 2002 the FASB issued 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 required the Company to reclassify its pretax extraordinary gain of $4,223,000 recorded during 2002 to other (expense) income in these financial statements.

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

Note 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 financial statements from the date the controlling interest of 56.5% was acquired. In October 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%. In April 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 $5.0 million of additional goodwill. In the fourth quarter of 2003, the Company reviewed this asset for impairment under the provisions of SFAS No. 142. Based on this evaluation, an impairment was not indicated. The Company will continue to review this asset in the future for impairment.

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 $15.0 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 expands 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 radio frequencies. In addition, with inroads already made into the laser and medical markets, Dressler is used to explore new market opportunities for the Company. Dressler also strengthens 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 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

Notes to Consolidated Financial Statements

and other intangible assets were recorded at estimated fair values based upon independent appraisals.

The purchase price 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
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 2003, 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 $2.5 million and $769,000 of amortization expense related to these amortizable intangibles acquired from Dressler in the years ended December 31, 2003 and 2002, respectively.

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 $2.0 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 $44.0 million, based upon an exchange rate of 130:1), which the Company funded from its available cash. In connection with the acquisition, AE-Japan assumed approximately $34.0 million of Aera's debt. 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 and the operating results of Aera are reflected in the accompanying 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.

The purchase price 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 2003, 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 $1.4 million and $3.0 million of amortization expense related to the amortizable intangibles acquired from Aera for the years ended December 31, 2003 and 2002, respectively.

Had the acquisitions of Aera and Dressler occurred on January 1, 2001, the pro forma, unaudited, combined results of opera-

tions for the Company, Aera and Dressler for the year ended December 31, 2001 would have generated revenue of approximately $267.8 million, net loss of approximately $50.1 million and basic and diluted loss per share of $1.58. However, pro forma results are not necessarily indicative of future results. Pro forma results for the year ended December 31, 2002 are not presented, as the difference between the pro forma results and actual results are not material.

EMCO — On January 2, 2001, EMCO, a publicly held, Longmont, Colorado-based manufacturer of electronic and electromechanical precision instruments for measuring and controlling the flow of liquids, steam and gases, was merged with a wholly owned subsidiary of the Company. The Company paid the EMCO shareholders cash in an aggregate amount of approximately $30.0 million. In connection with the acquisition, the Company issued stock options to purchase approximately 71,000 shares of its common stock for the assumption of outstanding, fully vested options for EMCO common stock. The fair value of the options granted was estimated by the Company (using the Black-Scholes option pricing model) to be approximately $1.1 million.

The acquisition was accounted for using the purchase method of accounting, and the operating results of EMCO are reflected in the accompanying consolidated financial statements prospectively from the date of acquisition. The assets acquired and liabilities assumed were recorded based upon independent appraisals of the fair values of the acquired property, plant and equipment, identified intangible assets and goodwill.

The purchase price was allocated to the net assets of EMCO as summarized below:

(In thousands)	
Cash and cash equivalents	$ 459
Marketable securities	674
Accounts receivable	1,167
Inventories	1,678
Deferred income tax assets, current	584
Other current assets	88
Fixed assets	4,596
Goodwill	20,878
Other intangibles	3,400
Accounts payable	(355)
Accrued payroll	(405)
Other accrued expenses	(391)
Deferred tax liability	(856)
	$31,517

There were no transactions between the Company and EMCO prior to the combination. The excess purchase price over the estimated fair value of tangible net assets acquired was allocated to goodwill and intangibles, which were amortized in 2001 over an average of a seven-year life. In accordance with SFAS Nos. 141 and 142, the Company ceased amortization of goodwill on January 1, 2002. In the fourth quarter of 2003, 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 amount of annual goodwill amortization, which will no longer be recorded, is approximately $3.3 million.

Note 3 MARKETABLE SECURITIES

Marketable securities consisted of the following:

	December 31,	
(In thousands)	**2003**	2002
Commercial paper	**$41,113**	$ 65,250
Municipal bonds and notes	**46,762**	34,100
Institutional money markets	**5,816**	2,809
	$93,691	$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 120 days or less.

Note 4 ACCOUNTS RECEIVABLE — TRADE

Accounts receivable - trade consisted of the following:

	December 31,	
(In thousands)	**2003**	2002
Domestic	**$17,100**	$16,475
Foreign	**41,359**	27,378
Allowance for doubtful accounts	**(1,303)**	(3,056)
Total accounts receivable	**$57,156**	$40,797

Note 5 INVENTORIES

Inventories consisted of the following:

	December 31,	
(In thousands)	**2003**	2002
Parts and raw materials	**$47,120**	$40,147
Work in process	**4,385**	4,435
Finished goods	**14,198**	12,724
Total inventories	**$65,703**	$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 recognition of revenue.

Notes to Consolidated Financial Statements

Note 6 PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	December 31,	
(In thousands)	**2003**	2002
Land	**$ 5,663**	$ 5,946
Buildings	**4,293**	7,123
Machinery and equipment	**36,039**	35,432
Computers and communication equipment	**24,324**	18,872
Furniture and fixtures	**6,268**	5,666
Vehicles	**1,368**	159
Leasehold improvements	**17,618**	11,089
	95,573	84,287
Less — accumulated depreciation	**(50,848)**	(43,109)
Total property and equipment	**$44,725**	$41,178

Note 7 NOTES PAYABLE

Notes payable consisted of the following:

	December 31,	
(In thousands)	**2003**	2002
Revolving line of credit of $25,000,000, expiring May 2004, interest at bank's prime rate minus 1%, (3.00% at December 31, 2003). Loan covenants provide certain financial restrictions related to working capital, leverage, net worth, payment and declaration of dividends and profitability.	**$ —**	$ —
Senior borrowings (assumed in the acquisition of Aera), maturing serially through May 2007, interest at 1.5% to 3.1% at December 31, 2003	**13,933**	24,502
Less — current portion	**(8,028)**	(14,506)
	$ 5,905	$ 9,996

Scheduled maturities of the Company's senior borrowings and convertible subordinated notes payable (see Note 8) are as follows at December 31, 2003:

(In thousands)	Bank Loans	Convertible Subordinated Notes	Total
2004	$ 8,028	$ —	$ 8,028
2005	3,484	—	3,484
2006	2,098	187,718	189,816
2007	323	—	323
Total	$ 13,933	$ 187,718	$ 201,651

The Company is subject to covenants on its line of credit that provide certain restrictions related to working capital, leverage, net worth, and payment and declaration of dividends. The Company was in compliance with these covenants at December 31, 2003.

Note 8 CONVERTIBLE SUBORDINATED NOTES PAYABLE

In August 2001, the Company issued $125 million of 5.00% convertible subordinated 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 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 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 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 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 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 December 31, 2003, approximately $2.0 million of interest expense related to these notes was accrued as a current liability.

In November 1999, the Company issued $135 million of 5.25% convertible subordinated 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 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 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 December 31, 2003, approximately $400,000 of interest expense related to these notes was accrued as a current liability.

In October and November 2000, the Company repurchased an aggregate of approximately $53.4 million principal amount of its 5.25% convertible subordinated notes in the open market, for a cost of approximately $40.8 million.

In October and November 2002, the Company repurchased approximately $15.4 million and $3.5 million principal amounts of its 5.25% and 5.00% convertible subordinated notes, respectively. These purchases were made in the open market, for a cost of approximately $14.5 million, resulting in a pre-tax gain of $4.2 million. At December 31, 2003 and 2002, approximately $66.2 million and $121.5 million principal amounts of the 5.25% and 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.

Note 9 INCOME TAXES

The income tax provision of $11.8 million in 2003 million represents an effective rate of negative 36%. This effective income tax rate reflects the establishment of a valuation allowance against the Company's deferred tax assets as discussed below. The income tax benefit of $22.3 million for 2002 represents an effective rate of 35%. The income tax benefit of $17.4 million for 2001 represented an effective rate of 36%. The provision (benefit) for income taxes for the years ended December 31, 2003, 2002 and 2001 were as follows:

	December 31,		
(In thousands)	**2003**	2002	2001
Federal	**$ 8,437**	$(18,575)	$(17,468)
State and local	**784**	(2,178)	(469)
Foreign taxes	**2,580**	(1,540)	496
	$11,801	$(22,293)	$(17,441)
Current	**$ 5,372**	$(15,405)	$(13,462)
Deferred	**6,429**	(6,888)	(3,979)
	$11,801	$(22,293)	$(17,441)

The following reconciles the Company's effective tax rate to the federal statutory rate for the years ended December 31, 2003, 2002 and 2001:

	December 31,		
(In thousands)	**2003**	2002	2001
Income tax benefit per federal statutory rate	**$(11,354)**	$(22,293)	$(17,138)
State income taxes, net of federal deduction	**(1,328)**	(1,414)	(1,259)
Foreign sales corporation	**(350)**	(262)	(688)
Nondeductible intangible and goodwill amortization	**98**	183	2,818
Other permanent items, net	**(456)**	760	(1,716)
Effect of foreign taxes	**(333)**	(272)	2
Change in valuation allowance	**29,130**	1,255	790
Tax credits and other items	**(3,606)**	(250)	(250)
	$ 11,801	$(22,293)	$(17,441)

The Company's deferred income tax assets and liabilities are summarized as follows:

	December 31,	
(In thousands)	**2003**	2002
Current:		
Employee bonuses and commissions	**$ 314**	$ 401
Warranty reserve	**2,463**	3,291
Bad debt reserve	**533**	1,131
Vacation accrual	**806**	1,077
Restructuring accrual	**1,222**	2,096
Obsolete and excess inventory	**4,093**	8,168
Net operating loss and tax credit carryforward	—	6,670
Other	**988**	401
Valuation allowance	**(10,419)**	(5,725)
Net Current	—	17,510
Long-term:		
Net operating loss and tax credit carryforward	**38,246**	—
Accumulated other comprehensive income	**(5,464)**	(756)
Depreciation and amortization	**(7,898)**	(6,777)
Other, net	**3,340**	5,675
Valuation allowance	**(32,896)**	(6,805)
	$ (4,672)	$ (8,663)

The following reconciles the change in the net deferred income tax asset from December 31, 2002 to December 31, 2003, to the deferred income tax benefit:

(In thousands)	**2003**
Net change in deferred income tax asset from the preceding table	**$13,519**
Net change in deferred tax liabilities associated with foreign currency fluctuation	**(2,382)**
Increase in deferred tax liability associated with other comprehensive income	**(4,708)**
Deferred income tax provision for the period	**$ 6,429**

Notes to Consolidated Financial Statements

During 2003, the Company recorded valuation allowances against certain of its United States and foreign net deferred tax assets in jurisdictions where the Company has incurred significant losses (see Note 1). If the Company generates future taxable income, or should the Company be able to conclude that sufficient taxable income is reasonably assured based on profitable operations, in the appropriate tax jurisdictions, against which these tax attributes may be applied, some portion or all of the valuation allowance will be reversed and a corresponding reduction in income tax expense will be reported in future periods. A portion of the valuation allowance relates to the benefit from stock-based compensation. Any reversal of valuation allowance from this item will be reflected as a component of stockholders' equity. When recording acquisitions, the Company has recorded valuation allowances against certain deferred tax assets due to the uncertainty related to the realization of those deferred tax assets. The amount of deferred tax assets considered realizable is subject to adjustment in future periods if estimates of future taxable income are changed. Reversals of valuation allowances recorded in purchase accounting will be reflected as a reduction of goodwill in the period of reversal.

As of December 31, 2003, the Company had a gross federal net operating loss, alternative minimum tax credit and research and development credit carryforwards of approximately $65 million, $2 million and $4 million, respectively, which may be available to offset future federal income tax liabilities. The federal net operating loss and research and development credit carryforwards expire at various dates through December 31, 2023, the alternative minimum tax credit carryforward has no expiration date. In addition, as of December 31, 2003, the Company had a gross foreign net operating loss carryforward of $11 million, which may be available to offset future foreign income tax liabilities and expire at various dates through December 31, 2008.

The domestic versus foreign component of the Company's net loss before income taxes for the years ended December 31, 2003, 2002 and 2001, was as follows:

	December 31,		
(In thousands)	**2003**	2002	2001
Domestic	**$(35,137)**	$(60,070)	$(50,377)
Foreign	**2,697**	(3,622)	1,412
	$(32,440)	$(63,692)	$(48,965)

Note 10 RETIREMENT PLANS

The Company has 401(k) profit sharing plans which cover most full-time employees age eighteen or older. Participants may defer up to the maximum amount allowed as determined by law. Participants are immediately vested in their contributions. The Company may make discretionary contributions based on corporate financial results. In 2001, the Company's contributions for participants in its 401(k) Plans was 50% matching on contributions by employees up to 6% of the employee's compensation. In 2002, as part of its cost reduction measures, the Company reduced its contributions to 10% matching on contributions by employees up to 6% of the employee's compensation. In 2003, the Company increased its matching contributions to 25% matching on contributions by employees up to 6% of the employee's compensation. The Company's total contributions to the plans were approximately $635,000, $272,000 and $1,433,000 for the years ended December 31, 2003, 2002 and 2001, respectively. Vesting in the profit sharing contribution account is based on years of service, with most participants fully vested after four years of credited service.

Note 11 COMMITMENTS AND CONTINGENCIES

The Company has committed to advance up to $1.5 million to a privately held company in exchange for an exclusive intellectual property license. At December 31, 2003, approximately $500,000 has been advanced under this agreement and has been recorded as research and development costs. The amount and timing of this advance is dependent upon the privately held company achieving certain business development milestones.

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

DISPUTES AND LEGAL ACTIONS

The Company is involved in disputes and legal actions arising in the normal course of its business. Historically, the Company's most significant legal actions have involved the application of patent law to complex technologies and intellectual property. The determination of whether such technologies infringe upon the Company's or other's patents is highly subjective. This high level of subjectivity introduces substantial additional risk with regard to the outcome of the Company's disputes and legal actions related to intellectual property. While the Company currently believes that the amount of any ultimate potential loss would not be material to the Company's financial position, the outcome of these actions is inherently difficult to predict. In the event of an adverse outcome, the ultimate potential loss could have a material adverse effect on the Company's financial position or reported results of operations in a particular period. An unfavorable decision, particularly in patent litigation, could

require material changes in production processes and products or result in the Company's inability to ship products or components found to have violated third-party patent rights. The Company accrues loss contingencies in connection with its litigation when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

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

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 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 related product were not material in any of the periods presented.

On September 17, 2001, Sierra Applied Sciences, Inc. filed for declaratory judgment asking the U.S. District Court for the District of Colorado to rule that their products did not infringe the Company's U.S. patent no. 5,718,813 and that the patent was invalid. On March 24, 2003, the Court granted the Company's motion to dismiss the case for lack of subject matter jurisdiction. Sierra has appealed the ruling of dismissal, and the decision on Sierra's appeal from the Court of Appeals for the Federal Circuit is pending. The Company believes that, were the ruling of dismissal to be reversed and Sierra's claim reinstated and tried, the validity of the Company's patent will be upheld and Sierra's products would be adjudged to infringe.

CAPITAL LEASES

The Company finances a portion of its property and equipment under capital lease obligations at interest rates of approximately 3%. The future minimum lease payments under capitalized lease obligations as of December 31, 2003 are as follows:

(In thousands)	
2004	$ 571
2005	157
2006	87
2007	22
2008	5
Total minimum lease payments	842
Less — amount representing interest	(25)
Less — current portion	(554)
	$ 263

OPERATING LEASES

The Company has various operating leases for automobiles, equipment, and office and production facilities (see Note 13). Lease expense under operating leases was approximately $6,277,000, $6,493,000 and $5,770,000 for the years ended December 31, 2003, 2002 and 2001, respectively.

The future minimum rental payments required under noncancelable operating leases as of December 31, 2003 are as follows:

(In thousands)	
2004	$ 6,570
2005	5,560
2006	4,690
2007	3,927
2008	3,384
Thereafter	11,959
	$36,090

Notes to Consolidated Financial Statements

Note 12 INDUSTRY SEGMENT, FOREIGN OPERATIONS AND MAJOR CUSTOMER

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

	Years Ended December 31,		
(In thousands)	**2003**	2002	2001
Sales:			
Originating in U.S. and sold to domestic customers	**$124,128**	$141,637	$124,746
Originating in U.S. and sold to foreign customers	**35,509**	24,607	19,687
Originating in Europe and sold to domestic customers	**57**	2,108	—
Originating in Europe and sold to foreign customers	**24,492**	18,672	18,239
Originating in Asia Pacific and sold to foreign customers	**78,216**	51,874	30,928
	$262,402	$238,898	$193,600
Loss from operations:			
U.S.	**$(27,639)**	$(57,305)	$(47,532)
Europe	**559**	(725)	1,517
Asia Pacific	**4,811**	1,865	1,157
Intercompany eliminations	**(863)**	(5,820)	(2,029)
	$(23,132)	$(61,985)	$(46,887)
Identifiable assets:			
U.S.	**$424,661**	$498,906	
Europe	**48,150**	41,485	
Asia Pacific	**210,585**	137,295	
Intercompany eliminations	**(268,665)**	(221,953)	
	$414,731	$455,733	

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

The Company has a major customer (sales in excess of 10% of total sales) that is a manufacturer of semiconductor capital equipment. Sales to this customer accounted for the following percentages of sales for the years ended December 31, 2003, 2002 and 2001:

	December 31,		
	2003	2002	2001
Applied Materials, Inc.	**20%**	27%	24%

The Company had trade accounts receivable from this customer of approximately $6.1 million as of December 31, 2003, which was approximately 11% of the Company's total trade accounts receivable. The Company had no other trade accounts receivable from any customers in excess of 10% of its total trade accounts receivable as of December 31, 2003.

Note 13 RELATED PARTY TRANSACTIONS

The Company leases its executive offices and manufacturing facilities in Fort Collins, Colorado from two limited liability partnerships. The ownership of these limited liability partnerships consists of a director of the Company who is also an officer and other individuals unrelated to the Company. The leases relating to these spaces expire in 2009, 2011 and 2016, and contain monthly payments of approximately $85,000, $67,000 and $83,000, respectively.

Approximately $2,779,000, $2,660,000 and $2,229,000 was paid and charged to rent expense attributable to these leases for the years ended December 31, 2003, 2002 and 2001, respectively.

The Company also has an agreement whereby monthly payments of approximately $12,000 are made to one of the above mentioned limited liability partnerships, which secures future leasing rights on a parcel of land in Colorado. Approximately $156,000 was paid and charged to operating expense attributable to this agreement for each of the years ended December 31, 2003 and 2002.

The Company leases, for business purposes, a condominium owned by a partnership of certain stockholders. The Company paid the partnership $60,000, $67,000 and $47,000 in 2003, 2002 and 2001, respectively. In February 2004, this lease agreement was terminated.

The Company charters aircraft from time to time from companies owned by a certain stockholder and officer. Aggregate payments for the use of such aircraft were $6,000, $103,000 and $0 in 2003, 2002 and 2001, respectively.

Note 14 CONCENTRATIONS OF CREDIT RISK

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 trade purchases and intercompany receivables and payables. 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 December 31, 2003 maturing through March 2004. The Company did not seek specific hedge accounting treatment for its foreign currency forward contracts.

At December 31, 2003, the Company held the following foreign currency forward contracts to buy U.S. dollars and sell various foreign currencies:

	Notional Amounts	Market Settlement Amounts	Unrealized (Loss)/Gain
Japanese yen contracts	$ 3,500,000	$ 3,650,000	$(150,000)
Euro contract	200,000	222,000	(22,000)
Taiwanese dollar contract	4,000,000	3,992,000	8,000
Chinese yuan contract	2,500,000	2,496,000	4,000
Balance at December 31, 2003	$10,200,000	$10,360,000	$(160,000)

OTHER CONCENTRATIONS OF CREDIT RISK — The Company uses financial instruments that potentially subject it to concentrations of credit risk. Such instruments include cash equivalents, short-term investments, accounts receivable, and foreign currency forward contracts. The Company invests its cash in cash deposits, money market funds, commercial paper, certificates of deposit and readily marketable debt securities. The Company places its investments with high credit quality financial institutions and limits the credit exposure from any one financial institution or instrument. To date, the Company has not experienced significant losses on these investments. The Company performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral. Because the Company's receivables are primarily related to companies in the semiconductor capital equipment industry, the Company is exposed to credit risk generally related to this cyclical industry.

Note 15 STOCK PLANS

Prior to May 7, 2003 the Company had five stock-based compensation plans. 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 may not 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 December 31, 2003, approximately 2.4 million shares of common stock were available for grant under this plan.

The 2003 Directors' Plan provides for the issuance of up to 150,000 shares of common stock upon the exercise of non-qualified stock options granted under the 2003 Directors' Plan. The exercise price of options granted under the 2003 Directors' Plan may not 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 December 31, 2003, 125,000 shares of common stock were available for grant under this plan.

1995 EMPLOYEE STOCK OPTION PLAN — The Company's 1995 Employee Stock Option Plan terminated upon stockholder approval of the 2003 Plan, however existing stock options outstanding under the 1995 Employee Stock Option Plan remain outstanding according to their original terms. At December 31, 2003, options to purchase approximately 2.1 million shares of common stock remained outstanding under this plan.

NON-EMPLOYEE DIRECTORS STOCK OPTION PLAN — The Company's Non-Employee Directors Stock Option Plan terminated upon stockholder approval of the 2003 Directors' Plan, however existing stock options outstanding under the Non-Employee Directors Stock Option Plan remain outstanding according to their original terms. At December 31, 2003, options to purchase approximately 80,000 shares of common stock remained outstanding under this plan.

2002 EMPLOYEE STOCK OPTION PLAN — In 2002, the Company adopted the 2002 Employee Stock Option Plan (the "2002 Option Plan"). The 2002 Option Plan is a broad-based plan for employees and consultants in which executive officers and directors of the Company are not allowed to participate. The board of directors currently administers the plan, and makes all decisions concerning which employees and consultants are granted options, how many to grant to each optionee,

Notes to Consolidated Financial Statements

when options are granted, how the plan should be properly interpreted, whether to amend or terminate the plan, and whether to delegate administration of the plan to a committee. The 2002 Option Plan allows issuance of only non-qualified options. The exercise price of the options shall not be less than 100% of the stock's fair market value on the date of grant, and the options vest over four years. The options are exercisable for ten years from the date of grant. The Company has reserved up to 600,000 shares of common stock under the plan. The 2002 Option Plan will expire in January 2012, unless the administrator of the plan terminates it earlier. At December 31, 2003, approximately 142,000 shares of common stock were available for grant under this plan.

2001 EMPLOYEE STOCK OPTION PLAN — In 2001, the Company adopted the 2001 Employee Stock Option Plan (the "2001 Option Plan"). The 2001 Option Plan is a broad-based plan for employees and consultants in which executive officers and directors of the Company are not allowed to participate. The board of directors currently administers the plan, and makes all decisions concerning which employees and consultants are granted options, how many to grant to each optionee, when options are granted, how the plan should be properly interpreted, whether to amend or terminate the plan, and whether to delegate administration of the plan to a committee. The 2001 Option Plan allows issuance of only non-qualified options. The exercise price of the options shall not be less than 100% of the stock's fair market value on the date of grant, and the options vest over four years. The options are exercisable for ten years from the date of grant. The Company has reserved up to 600,000 shares of common stock under the plan. The 2001 Option Plan will expire in January 2011, unless the administrator of the plan terminates it earlier. At December 31, 2003, approximately 137,000 shares of common stock were available for grant under this plan.

EMPLOYEE STOCK PURCHASE PLAN — In September 1995, stockholders approved an employee stock purchase plan (the "ESPP") covering an aggregate of 200,000 shares of common stock. On May 7, 2003, the Company's stockholders' approved an amendment to increase the number of common shares reserved for issuance under the plan from 200,000 shares to 400,000 shares. Employees are eligible to participate in the ESPP if employed by the Company for at least 20 hours per week during at least five months per calendar year. Participating employees may have up to 15% (subject to a 5% limitation set by the Company) of their earnings or a maximum of $1,250 per six-month period withheld pursuant to the ESPP. The purchase price of common stock purchased under the ESPP is equal to 85% of the lower of the fair value on the commencement date of each offering period or the relevant purchase date. During 2003, 2002 and 2001, employees purchased an aggregate of approximately 73,000, 54,000 and 38,000 shares of common stock under the ESPP, respectively. At December 31, 2003, approximately 155,000 shares remained available for future issuance.

During 1999, prior to its acquisition by the Company, a shareholder of Sekidenko 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 approximately $2.1 million as compensation expense over the four-year vesting period of the options. Compensation expense of $482,000, $518,000 and $526,000 was recognized in 2003, 2002 and 2001, respectively. These amounts are presented as a reduction of stockholders' equity. At December 31, 2003, approximately $60,000 of deferred compensation remained outstanding and will be recognized as expense in the first quarter of 2004. During 2002, options to purchase approximately 15,000 shares under this plan were forfeited as a result of terminations, and the related deferred compensation of $34,000 was reversed.

The following summarizes the activity relating to options for the years ended December 31, 2003, 2002 and 2001:

	2003		2002		2001	
(In thousands, except share prices)	**Shares**	**Weighted-average Exercise Price**	Shares	Weighted-average Exercise Price	Shares	Weighted-average Exercise Price
Stock options:						
Employee stock options —						
Options outstanding at beginning of period	**3,475**	**$ 23.18**	2,108	$ 25.07	1,719	$ 23.39
Granted	**1,790**	**14.66**	1,920	21.73	845	25.64
Exercised	**(352)**	**9.89**	(118)	11.70	(273)	12.13
Terminated	**(993)**	**25.28**	(435)	29.02	(183)	31.22
Options outstanding at end of period	**3,920**	**19.95**	3,475	23.18	2,108	25.07
Options exercisable at end of period	**1,230**	**25.50**	1,239	23.25	938	20.45
Weighted-average fair value of options granted during the period	**$7.88**		$12.55		$25.61	
Price range of outstanding options	**$0.67 - $60.75**		$0.67 - $60.75		$0.67 - $60.75	
Price range of options terminated	**$0.83 - $60.75**		$0.83 - $60.75		$7.50 - $60.75	
Non-employee directors stock options—						
Options outstanding at beginning of period	**112**	**$ 22.64**	90	$26.92	75	$27.25
Granted	**25**	**10.67**	22	15.58	15	24.44
Exercised	**(8)**	**6.75**	—	—	—	—
Terminated	**(25)**	**30.90**	—	—	—	—
Options outstanding at end of period	**104**	**19.00**	112	22.64	90	26.92
Options exercisable at end of period	**80**	**21.91**	62	22.24	45	16.97
Weighted-average fair value of options granted during the period	**$ 7.84**		$11.33		$24.85	
Price range of outstanding options	**$6.13 - $60.75**		$6.13 - $64.94		$6.13 - $64.94	
Price range of options terminated	**$6.13 - $64.94**		$ —		$ —	

SFAS No. 123 defines a fair value based method of accounting for employee stock options or similar equity instruments. However, SFAS No. 123 allows the continued measurement of compensation cost for such plans using the intrinsic value based method prescribed by APB No. 25, provided that pro forma disclosures are made of net income or loss and net income or loss per share, assuming the fair value based method of SFAS No. 123 had been applied. The Company has elected to account for employee stock-based compensation plans under APB No. 25, under which compensation expense, if any, is recognized based on the intrinsic value of stock options and other stock awards, generally measured at the date of grant (see Note 1).

The total fair value of options granted was computed to be approximately $14.3 million, $24.4 million and $17.7 million for the years ended December 31, 2003, 2002 and 2001, respectively. These amounts are amortized ratably over the vesting period of the options. During the fourth quarter of 2003, the Company revised its estimated expected lives for options granted in 2003 and 2002.

Notes to Consolidated Financial Statements

The following table summarizes information about the stock options outstanding at December 31, 2003:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted-average Remaining Contractual Life	Weighted-average Exercise Price	Number Exercisable	Weighted-average Exercise Price
$ 0.67 to $ 2.19	1,000	0.4 years	$ 1.43	1,000	$ 1.42
$ 2.53 to $ 7.61	439,000	8.7 years	$ 7.32	41,000	$ 4.55
$ 7.62 to $ 9.12	721,000	8.1 years	$ 8.48	149,000	$ 8.20
$ 9.53 to $17.85	675,000	7.5 years	$15.98	310,000	$15.15
$18.00 to $18.38	122,000	7.8 years	$18.01	58,000	$18.00
$19.24 to $19.24	495,000	9.6 years	$19.24	—	—
$21.16 to $22.52	401,000	9.6 years	$22.49	8,000	$21.74
$23.67 to $28.16	432,000	7.3 years	$25.83	262,000	$26.32
$28.55 to $38.55	555,000	7.7 years	$35.14	314,000	$34.53
$40.00 to $60.75	183,000	6.2 years	$48.49	167,000	$48.13
	4,024,000	8.2 years	$19.98	1,310,000	$25.28

Note 16 FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company's financial instruments include cash, trade receivables, trade payables, marketable securities, short-term and long-term debt, and foreign currency forward exchange contracts (see Note 14). The fair values of cash, trade receivables, trade payables and short-term debt approximate the carrying values due to the short-term nature of these instruments. Marketable securities are stated at fair value (see Note 3). At December 31, 2003 and 2002, the carrying value of long-term debt was $201.7 million and $212.2 million, respectively. The carrying value of senior borrowings approximates their fair value due to the variable interest rates associated with the borrowings. At December 31, 2003, the estimated fair value of the Company's 5.25% convertible subordinated notes that are due November 15, 2006, was approximately $65.7 million, compared to a book value of $66.2 million. The estimated fair value of the Company's 5.00% convertible subordinated notes that are due September 1, 2006, was approximately $139.3 million, compared to a book value of $121.5 million.

Note 17 QUARTERLY FINANCIAL DATA— UNAUDITED

The following table presents unaudited quarterly financial data for each of the eight quarters in the period ended December 31, 2003. The Company believes that all necessary adjustments have been included in the amounts stated below to present fairly such quarterly information. The operating results for any quarter are not necessarily indicative of results for any subsequent period.

	Quarters Ended							
(In thousands, except per share data)	Mar. 31, 2002	June 30, 2002	Sept. 30, 2002	Dec. 31, 2002	**Mar. 31, 2003**	**June 30, 2003**	**Sept. 30, 2003**	**Dec. 31, 2003**
Sales	$ 42,887	$ 67,893	$ 70,674	$ 57,444	**$ 56,158**	**$ 62,946**	**$ 68,567**	**$ 74,731**
Gross profit	13,374	24,312	26,600	4,474	**17,950**	**20,273**	**23,093**	**26,631**
(Loss) income from operations	(11,423)	(9,330)	(5,788)	(35,444)	**(10,885)**	**(6,825)**	**(5,741)**	**319**
Net loss	$ (8,723)	$ (5,139)	$ (5,580)	$ (21,957)	**$ (8,590)**	**$ (5,774)**	**$ (27,438)**	**$ (2,439)**
Basic and diluted loss per share	$ (0.27)	$ (0.16)	$ (0.17)	$ (0.68)	**$ (0.27)**	**$ (0.18)**	**$ (0.85)**	**$ (0.08)**

The Company had a loss in the fourth quarter of 2002 of $22.0 million. Pretax charges recorded to cost of sales for excess and obsolete inventory of $4.6 million and warranty costs of $6.9 million contributed significantly to the Company's fourth quarter results. The Company increased its reserve for excess and obsolete inventory in the fourth quarter of 2002, as a result of the Company's sales declining substantially from the third quarter of 2002 to the fourth quarter of 2002, and the Company's fourth quarter strategic management decision to discontinue certain product offerings. The Company increased its warranty reserve to reflect higher than expected repair costs on certain products. The Company also recorded charges for uncollectible accounts receivable of $1.6 million, restructuring of $5.8 million and an impairment of marketable securities of $1.6 million (see Note 1). The Company had a loss of $27.4 million in the third quarter of 2003. During this quarter the Company recorded a valuation allowance against certain of its U.S. and foreign net deferred tax assets in jurisdictions where significant losses have been recognized.

Schedule II — Valuation and Qualifying Accounts

(In thousands)	Balance at Beginning of Period	Additions Due to Acquisitions	Additions Charged to Expense	Deductions	Balance at End of Period
Year ended December 31, 2001:					
Inventory obsolescence reserve	$ 2,253	$ 180	$6,412	$3,214	$ 5,631
Allowance for doubtful accounts	784	100	282	117	1,049
	$ 3,037	$ 280	$6,694	$3,331	$ 6,680
Year ended December 31, 2002:					
Inventory obsolescence reserve	$ 5,631	$13,704	$5,803	$4,719	$20,419
Allowance for doubtful accounts	1,049	416	1,870	279	3,056
	$ 6,680	$14,120	$7,673	$4,998	$23,475
Year ended December 31, 2003:					
Inventory obsolescence reserve	**$20,419**	**$ —**	**$3,016**	**$13,944**	**$ 9,491**
Allowance for doubtful accounts	**3,056**	**—**	**(429)**	**1,324**	**1,303**
	$23,475	**$ —**	**$2,587**	**$15,268**	**$10,794**

Corporate Management

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

Michael El-Hillow
Executive Vice President of Finance and Administration and Chief Financial Officer

D. Craig Jeffries
Executive Vice President and Chief Marketing Officer

Scott B. Burton
Senior Vice President of Worldwide Operations

James Guilmart
Senior Vice President of Global Customer Operations

Larry McCulloch
Senior Vice President and Chief Quality Officer

LuAnn Piccard
Senior Vice President and General Manager, Power

Stephen Rhoades
Senior Vice President and General Manager, CSI

Brenda M. Scholl
Senior Vice President and General Manager, Power

Richard A. Scholl
Senior Vice President and Chief Technical Officer

Board of Directors

Douglas S. Schatz, 58, is a co-founder of Advanced Energy and has been its chairman, chief executive officer and a director since its incorporation in 1981. Until July 1999, he also served as president. In March 2001, Mr. Schatz was reappointed as president. Since December 1995, Mr. Schatz has also served as a director of Advanced Power Technology, Inc., a publicly held company that provides high power, high voltage and high performance semiconductors and power modules, and is a member of its compensation committee. Mr Schatz is also a member of the CEO Committee of the Mountain States Council of the American Electronics Association and serves on the Engineering Advisory Board of Colorado State University.

Richard P. Beck, 70, joined Advanced Energy in March 1992 as vice president and chief financial officer and became senior vice president in February 1998. In October 2001, Mr. Beck retired from the position of chief financial officer, but remained a senior vice president until May 2002. Mr. Beck is chairman of the board of Applied Films Corporation, a publicly held manufacturer of flat panel display equipment, and serves on its audit, compensation and nominating committees. He is also a director of Photon Dynamics, Inc., a publicly held manufacturer of flat panel display test equipment, and is chairman of its audit committee. Additionally, Mr. Beck is a director of TTM Technologies, Inc., a publicly held manufacturer of printed circuit boards, and serves as chairman of its audit committee.

Robert L. Bratter, 59, joined the board of directors of Advanced Energy in February 2004. Mr. Bratter also serves on the boards of directors for Primarion, Inc., Magfusion, Inc. and Canyon Broadband, Inc., all privately held companies. He serves as a member of the audit and control committee at Primarion, Inc., and as a member of the compensation committee at Magfusion, Inc. Mr. Bratter was chief executive officer of Cronos Integrated Microsystems, a technology company focusing on MEMS design and manufacturing, from 1998 to 2000.(1)

Arthur A. Noeth, 68, retired in 1998. From 1993 to 1998, Mr. Noeth was president of the Implant Center, a provider of ion implant services to the electronics industry.(1,2,3)

Elwood Spedden, 66, retired in October 2003 after serving as the chief executive officer of Photon Dynamics, Inc., a publicly held manufacturer of flat panel display test equipment, since January 2003. Mr. Spedden continues to serve on the board of directors of Photon, which he joined in January 2002, and currently serves on its compensation and nominating committees. From July 1996 to June 1997, he was a vice president of KLA-Tencor Semiconductor, a manufacturer of automatic test equipment used in the fabrication of semiconductors.(1,2,3)

Gerald Starek, 62, joined the board of directors of Advanced Energy following its acquisition of RF Power Products. Mr. Starek had been a non-employee director of RF Power Products since February 1994. Mr. Starek founded Silicon Valley Group, Inc., a supplier of automated wafer processing equipment for the semiconductor industry. He served as Silicon Valley Group's chairman from September 1984 to September 1991 and as vice chairman from September 1991 to April 1993. Mr. Starek is a director and serves on the audit and compensation committee of AML Communications, Inc., a publicly held manufacturer of components for wireless communications systems.(1,2,3)

(1) Member of the Corporate Governance and Nominations Committee
(2) Member of the Audit and Finance Committee
(3) Member of the Compensation Committee

Contact and Stockholder Information

CORPORATE HEADQUARTERS

Advanced Energy Industries, Inc.
1625 Sharp Point Drive
Fort Collins, CO 80525
T: 970-221-4670
F: 970-221-5583
www.advanced-energy.com

WORLDWIDE OPERATIONS CENTERS

Fort Collins, CO
Voorhees, NJ
Vancouver, WA
Shenzhen, China
Stolberg, Germany
Hachioji, Japan
Bundang, South Korea

WORLDWIDE SALES AND SUPPORT OFFICES

San Jose, CA
Concord, MA
Austin, TX
Dallas, TX
Shanghai, China
Bicester, England
Dresden, Germany
Filderstadt, Germany
Tokyo, Japan
Hsinchu, Taiwan
Taipei, Taiwan

DISTRIBUTORS

Australia, China, Finland, France, India, Israel, Italy, Mexico, New Zealand, Singapore, Sweden, Turkey

STOCKHOLDER INFORMATION

Stock Listing
The Company's common stock is traded on the Nasdaq National Market under the symbol AEIS.

Annual Meeting
The Year 2004 annual meeting of AE stockholders will be held at 10:00 a.m. Mountain Time on May 5, 2004 at the Company's headquarters, 1625 Sharp Point Drive, Fort Collins, Colorado.

Independent Auditors
KPMG LLP
707 17th Street, Suite 2700
Denver, CO 80202

General Counsel
Thelen, Reid, and Priest LLP
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