

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K/A
AMENDMENT NO. 1 TO FORM 10-K**

(Mark one)

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

For the fiscal year ended December 31, 2004

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

For the transition period from _____ to _____

Commission file number 000-30941

AXCELIS TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

34-1818596

(IRS Employer Identification No.)

108 Cherry Hill Drive

Beverly, Massachusetts 01915

(Address of principal executive offices, including zip code)

(978) 787-4000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of class	Name of each exchange on which registered
None	None

Securities registered pursuant to Section 12(g) of the Act:

**Common Stock, \$0.001 par value
Preferred Share Purchase Rights**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

Aggregate market value of the voting stock held by nonaffiliates of the registrant as of June 30, 2004: **\$1,234,768,164**

Number of shares outstanding of the registrant's Common Stock, \$0.001 par value, as of March 4, 2005: **100,180,688**

Documents incorporated by reference:

Portions of the definitive Proxy Statement for Axcelis Technologies, Inc.'s Annual Meeting of Stockholders to be held on May 12, 2005 are incorporated by reference into Part III of this Form 10-K.

EXPLANTORY NOTE

We are filing this amendment to our Annual Report on Form 10-K for the fiscal year ended December 31, 2004, originally filed with the Securities and Exchange Commission on March 15, 2005, solely for the purpose of complying with Regulation S-X, Rule 3-09. Rule 3-09 requires that Form 10-K, but not the annual shareholders' report, contain separate financial statements for unconsolidated subsidiaries and investees accounted for by the equity method when such entities are individually significant.

We have determined that our 50% owned joint venture with Sumitomo Heavy Industries, Ltd., known as Sumitomo Eaton Nova Corporation ("SEN"), which is not consolidated in the Axcelis Technologies, Inc. financial statements (and is accounted for under the equity method) was significant under Rule 3-09 in relationship to the Axcelis Technologies, Inc. financial results for the year ended December 31, 2004. Since SEN's fiscal year ended after the date of the filing of our Form 10-K, Rule 3-09 provides that the SEN financial statements may be filed as an amendment to our Form 10-K within 90 days after the end of SEN's fiscal year ended March 31, 2005.

Therefore, this Form 10-K/A amends the following portions of the Axcelis Technologies Form 10-K filed on March 15, 2005:

- Item 8 is being amended by submitting the financial statements of SEN for the fiscal years ended March 31, 2005, 2004 and 2003 (the "SEN Financial Statements") as a separate section of this report immediately following Item 15;
- Item 15 is being amended to:
 - include the list of the SEN Financial statements being filed herewith as required by Item 15(a); and
 - add to the list of exhibits and exhibits filed in accordance with Item 601 of Regulation S-K an Exhibit 23.2,

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Consent of Ernst & Young - Independent Auditors relating to the SEN Financial Statements, as required by Item 15(c).

As required by Rule 3-09, we will determine with respect to each future fiscal year, whether SEN has been significant with respect to Axcelis' financial results for such year, and file SEN financial statements as necessary to comply with Rule 3-09.

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of the Company's Form 10-K, as originally filed on March 15, 2005, and as amended by this form 10-K/A:

(1)(A) Financial Statements of Axcelis Technologies, Inc.:

Report of Ernst & Young LLP - Independent Auditors

Consolidated Statements of Operations-For the years ended December 31, 2004, 2003 and 2002

Consolidated Balance Sheets-December 31, 2004 and 2003

Consolidated Statements of Stockholders' Equity-For the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Cash Flows-For the years ended December 31, 2004, 2003 and 2002

Notes to Consolidated Financial Statements

(1)(B) Financial Statements of Sumitomo Eaton Nova Corporation:

Report of Ernst & Young LLP - Independent Auditors

[Consolidated Statements of Operations-For the years ended March 31, 2005, 2004 and 2003](#)

[Consolidated Balance Sheets-March 31, 2005 and 2004](#)

[Consolidated Statements of Stockholders' Equity-For the years ended March 31, 2005, 2004 and 2003](#)

[Consolidated Statements of Cash Flows-For the years ended March 31, 2005, 2004 and 2003](#)

(2) Financial Statement Schedules:

Schedule II - Valuation and Qualifying Accounts for the years ended December 31, 2004, 2003 and 2002

All other schedules for which provision is made in the applicable regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

(b) Exhibits

The exhibits filed as part of this Form 10-K are listed on the Exhibit Index immediately preceding such Exhibits, which Exhibit Index is incorporated herein by reference.

(c) Financial Statement Schedules

The response to this portion of Item 15 is submitted as a separate section of this report.

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The Board of Directors
Sumitomo Eaton Nova Corporation

We have audited the accompanying consolidated balance sheets of Sumitomo Eaton Nova Corporation (the "Company") as of March 31, 2005 and 2004, and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ended March 31, 2005, all expressed in Japanese yen. Our audits also included the translation of these statements as of and for the year ended March 31, 2005 into U.S. dollars on the basis described in Note 1. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and 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 expressed in Japanese yen present fairly, in all material respects, the consolidated financial position of Sumitomo Eaton Nova Corporation at March 31, 2005 and 2004, and the consolidated results of its operations and its cash flows for each of the three years in the period ended March 31, 2005, in conformity with accounting principles generally accepted in the United States. Also, in our opinion, the financial statements expressed in U.S. dollars as of and for the year ended March 31, 2005, when considered in relation to the basic financial statements taken as a whole, have been properly translated on the basis described in Note 1.

As discussed in Note 1 to the Consolidated Financial Statements, effective July 1, 2003, the Company adopted the provisions of Emerging Issues Task Force Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables."

/s/ Ernst & Young ShinNihon

Tokyo, Japan
May 20, 2005

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Sumitomo Eaton Nova Corporation

Consolidated Statements of Income

	Years ended March 31,			Year ended March 31,
	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Net sales (Notes 1, 6 and 13):				
Systems	¥ 12,281,385	¥ 17,838,626	¥ 28,457,929	\$ 264,602
Services	5,579,160	5,630,836	6,987,942	64,974
Net sales	17,860,545	23,469,462	35,445,871	329,576
Cost of sales (Note 6)	10,320,596	12,946,966	19,319,808	179,636
Gross profit	7,539,949	10,522,496	16,126,063	149,940
Selling, general and administrative expenses (Note 1,4 and 6)				
	4,587,471	5,066,003	6,812,951	63,347
Income from operations	2,952,478	5,456,493	9,313,112	86,593
Other income (expense), net	(12,988)	(7,190)	10,444	97
Income before income taxes	2,939,490	5,449,303	9,323,556	86,690
Income taxes (benefit) (Note 8):				
Current	1,342,811	2,212,528	3,900,102	36,263
Deferred	(129,316)	(118,800)	(389,016)	(3,617)
	1,213,495	2,093,728	3,511,086	32,646
Net income	¥ 1,725,995	¥ 3,355,575	¥ 5,812,470	\$ 54,044

See accompanying notes to consolidated financial statements.

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Sumitomo Eaton Nova Corporation

Consolidated Balance Sheets

	March 31,		March 31,
	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Assets			
Current assets:			
Cash and cash equivalents	¥ 6,571,767	¥ 9,345,190	\$ 87,021
Trade receivables, net (Note 2 and 12)	10,178,713	14,910,846	138,848
Due from affiliates – current (Note 6)	80,720	99,759	929
Inventories (Note 3)	7,429,764	6,050,698	56,343
Deferred income taxes and other current assets (Note 8)	370,720	437,435	4,073
Total current assets	24,631,684	30,843,928	287,214
Property, plant and equipment, net (Note 4)	3,291,712	2,787,756	25,959
Deferred income taxes and other assets (Note 8)	405,557	756,647	7,046
	¥ 28,328,953	¥ 34,388,331	\$ 320,219
Liabilities and shareholders' equity			
Current liabilities:			
Trade payables:			
Notes	¥ 2,145,931	¥ 1,812,547	\$ 16,878
Accounts	3,842,233	2,962,956	27,591
	5,988,164	4,775,503	44,469
Due to affiliates (Note 6)	1,958,962	1,825,148	16,995
Income taxes payable	1,670,737	2,859,210	26,625
Other current liabilities (Note 5)	673,243	1,086,361	10,116
Total current liabilities	10,291,106	10,546,222	98,205
Accrued retirement benefits for employees and directors (Note 9)	83,165	74,957	698
Shareholders' equity (Note 10):			
Capital stock:			
Authorized – 20,000 shares			
Issued and outstanding – 12,000 shares	600,000	600,000	2,511
Retained earnings	17,354,682	23,167,152	207,541
Accumulated other comprehensive income	—	—	11,264
Total shareholders' equity	17,954,682	23,767,152	221,316
	¥ 28,328,953	¥ 34,388,331	\$ 320,219

See accompanying notes to consolidated financial statements.

Sumitomo Eaton Nova Corporation
Consolidated Statements of Shareholders' Equity

	Capital stock		Retained earnings (Note 10)	Accumulated other comprehensive income (loss)	Total
	(Thousands of yen)				
Balance at March 31, 2002	¥ 600,000	¥ 12,513,112	¥ —	¥ —	¥ 13,113,112
Net income	—	1,725,995	—	—	1,725,995
Minimum pension liability adjustment	—	—	(10,356)	—	(10,356)
Total comprehensive income	—	—	—	—	1,715,639
Cash dividends	—	(120,000)	—	—	(120,000)
Balance at March 31, 2003	600,000	14,119,107	(10,356)	¥ —	¥ 14,708,751
Net income	—	3,355,575	—	—	3,355,575
Minimum pension liability adjustment	—	—	10,356	—	10,356
Total comprehensive income	—	—	—	—	3,365,931
Cash dividends	—	(120,000)	—	—	(120,000)
Balance at March 31, 2004	600,000	17,354,682	—	¥ —	¥ 17,954,682
Net income and total comprehensive income	—	5,812,470	—	—	5,812,470
Balance at March 31, 2005	¥ 600,000	¥ 23,167,152	¥ —	¥ —	¥ 23,767,152

	Capital stock		Retained earnings (Note 10)	Accumulated other comprehensive income (loss)	Total
	(U.S. dollars in thousands)				
Balance at March 31, 2004	\$ 2,511	\$ 153,497	\$ 13,874	\$ —	\$ 169,882
Net income	—	54,044	—	—	54,044
Foreign currency translation adjustment	—	—	(2,610)	—	(2,610)
Total comprehensive income	—	—	—	—	51,434
Balance at March 31, 2005	\$ 2,511	\$ 207,541	\$ 11,264	\$ —	\$ 221,316

Sumitomo Eaton Nova Corporation
Consolidated Statements of Cash Flows

	Year ended March 31,			Year ended
	2003	2004	2005	March 31, 2005
	(Thousands of yen)			(U.S. dollars in thousands)
Operating activities				
Net income	¥ 1,725,995	¥ 3,355,575	¥ 5,812,470	\$ 54,044
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation	948,038	592,877	428,129	3,980
Loss on fixed asset disposal	15,169	16,762	584,384	5,434
Deferred income taxes (benefit) provision	(129,316)	(118,800)	(389,016)	(3,617)
Changes in operating assets and liabilities:				
Trade receivables	(138,988)	(1,128,413)	(4,732,133)	(44,065)
Due from affiliates	9,183	(24,788)	(19,039)	(177)
Inventories	(294,216)	(3,580,547)	1,379,066	12,842
Trade payables	1,220,204	3,105,887	(1,212,661)	(11,292)
Due to affiliates	(511,245)	690,414	(133,814)	(1,246)
Income taxes payable	875,472	684,009	1,188,473	11,067
Other current liabilities	(41,329)	230,389	413,118	3,847
Other, net	(12,748)	267,344	(2,763)	(26)
Net cash provided by operating activities	3,666,219	4,090,709	3,316,214	30,791
Investing activities				
Purchases of property, plant and equipment, net of proceeds from sale	(204,247)	(474,019)	(508,557)	(4,736)
Other, net	11,663	31,959	(34,234)	(319)
Net cash used in investing activities	(192,584)	(442,060)	(542,791)	(5,055)
Financing activities				
Decrease in short-term borrowings, net	(800,000)	—	—	—
Cash dividends paid	(120,000)	(120,000)	—	—
Net cash used in financing activities	(920,000)	(120,000)	—	—
Effect of exchange rate changes on cash and cash equivalents	—	—	—	(895)
Net increase in cash and cash equivalents	2,553,635	3,528,649	2,773,423	24,841
Cash and cash equivalents at beginning of the year	489,483	3,043,118	6,571,767	62,180
Cash and cash equivalents at end of the year	¥ 3,043,118	¥ 6,571,767	¥ 9,345,190	\$ 87,021
Supplementary information				
Interest paid during the year	¥ 949	¥ —	¥ —	\$ —
Income taxes paid during the year	¥ 467,339	¥ 1,528,519	¥ 2,768,804	\$ 24,485

See accompanying notes to consolidated financial statements.

Sumitomo Eaton Nova Corporation
Notes to Consolidated Financial Statements

March 31, 2005

Note 1. Nature of Business and Significant Accounting Policies**General**

Sumitomo Eaton Nova Corporation (the "Company") was established on April 1, 1983 under the Commercial Code of Japan. The Company is owned equally by Sumitomo Heavy Industries, Ltd. ("SHI"), a Japanese corporation, and Axcelis Technologies, Inc. ("Axcelis"), a U.S. corporation. The Company designs, manufactures, sells and repairs ion implantation equipment and semiconductor equipment primarily for Japanese semiconductor manufacturing customers under a license agreement with Axcelis.

The Company and its wholly-owned subsidiary maintain their records and prepare their financial statements in accordance with accounting principles generally accepted in Japan. Certain adjustments and reclassifications have been incorporated in the accompanying consolidated financial statements to conform with accounting principles generally accepted in the United States of America. These adjustments were not recorded in the statutory books of account.

Basis of Financial Statements

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary. All significant intercompany balances and transactions are eliminated in consolidation.

Use of Estimates

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

Foreign Currency

The Company's functional currency is the Japanese yen. Transaction gains and losses, which arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency, are included in the results of operations as incurred. Transaction gains and losses in each of the years in the three year period ended March 31, 2005 were not material.

The accompanying consolidated financial statements expressed in U.S. dollars have been prepared for use in conjunction with the preparation of the consolidated financial statements of Axcelis and have been translated into U.S. dollars in accordance with Statement of Financial Accounting Standards No. 52, *Foreign Currency Translation*. Assets and liabilities are translated using the exchange rate in effect at year-end. Statement of income items are translated using the average rates for the year. The effects of these translation adjustments are accumulated and included in accumulated other comprehensive loss, a separate component of shareholders' equity.

Cash Equivalents

All highly liquid investments with a maturity of three months or less when purchased are considered to be cash equivalents.

Inventories

Inventories are stated at the lower of cost or market, cost being determined by the average method.

Long-Lived Assets

Property, plant and equipment is stated on the basis of cost. Depreciation is computed by the declining-balance method over the estimated useful lives of the respective assets (buildings – 6 to 40 years; machinery – 4 to 13 years; and furniture, fixtures and automobiles – 2 to 20 years) except for buildings purchased after April 1, 1998, which are depreciated on the straight-line basis over 31 years.

Long-lived assets are reviewed for impairment losses whenever events or changes in circumstances indicate the carrying amount may not be recoverable. The asset would be considered impaired when the future net undiscounted cash flows generated by the asset are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value of the asset exceeds its fair value.

Accumulated Other Comprehensive Income (Loss)

At March 31, 2003, accumulated other comprehensive income (loss) was comprised of a minimum pension liability of ¥(10,356) thousand.

At March 31, 2004 and 2005, accumulated other comprehensive income (loss) on a U.S. dollar basis was comprised of an accumulated foreign currency translation adjustment of U.S.\$13,874 thousand and U.S.\$11,264 thousand, respectively.

Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist primarily of trade notes and accounts receivable. These financial instruments are carried at cost less an allowance for doubtful accounts, which approximates fair value. Substantially all of the Company's notes and accounts receivable are due from companies in the semiconductor industry located in Japan. The Company performs ongoing credit evaluations of its customers' financial condition and provides an allowance for specific doubtful notes and accounts receivable and generally does not require collateral to secure the notes and accounts receivable.

For the year ended March 31, 2003, three customers accounted for net sales of 15%, 13% and 11%. Three customers accounted for net sales of 21%, 13% and 8% for the year ended March 31, 2004. For the year ended March 31, 2005, three customers accounted for net sales of 17%, 13%, and 10%, respectively.

At March 31, 2004 and 2005 accounts receivables from one customer approximated 15% and 14% of consolidated trade receivables, respectively.

Revenue Recognition

For revenue arrangements prior to July 1, 2003, the Company recognized sales at the later of the time of shipment to the customer or the transfer of risk of ownership (which is generally upon customer inspection for machinery sales to domestic customers). The cost of system installation at the customer's site was accrued at the time of shipment for installation and acceptance testing performance obligations incurred at the time of sales. Management believes the

customer's post delivery acceptance provisions and the installation process have been established to be routine, commercially inconsequential and perfunctory because the process is a replication of the pre-shipment procedures. The majority of the Company's systems are designed and tailored to meet the customer's specifications as outlined in the contract between the customer and the Company. To ensure that the customer's specifications are satisfied, per contract terms, the systems are tested at the Company's facilities prior to shipment, normally with the customer present, under conditions that substantially replicate the customer's production environment and the customer's criteria are confirmed to have been met. The Company has never failed to successfully complete a system installation. The Company has a demonstrated history of customer acceptance subsequent to shipment and installation of these systems.

In November 2002, the Financial Accounting Standards Board's Emerging Issues Task Force reached a consensus on Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables" ("EITF 00-21"). This issue addresses the determination of whether an arrangement involving more than one deliverable contains more than one unit of accounting and how the arrangement consideration should be measured and allocated to the separate units of accounting. EITF 00-21 became effective for revenue arrangements entered into in periods beginning after June 15, 2003.

For revenue arrangements occurring on or after July 1, 2003, the Company has revised its revenue recognition policy to comply with the provisions of EITF 00-21. The Company's revenue transactions include sales of systems under multiple element arrangements. Revenue under these arrangements is allocated to all elements, except systems, based upon their estimated fair market value. The amount of revenue allocated to systems is calculated on a residual method. Under this method, the total value of the arrangement is allocated first to the undelivered elements based on the greater of the fair value of the undelivered elements or the portion of the sales price that will not be received until the elements are delivered, with the residual amount being allocated to systems revenue. The amount allocated to installation is based upon hourly rates and the estimated time to complete the service. The fair value of all other elements is based upon the price charged when these elements are sold separately. System revenue and installation revenue are generally recognized at the time of customer acceptance.

Service revenue includes revenue from spare parts, maintenance services and equipment overhaul services. Revenue related to maintenance service contracts is recognized ratably over the duration of the contracts. Revenue related to equipment overhauls is recognized upon completion of the service. Revenue related to spare parts is recognized upon the later of shipment or when title and risk of loss passes to the customer.

Under the provisions of EITF 00-21, the Company has accounted for this change in accounting principle on a prospective basis for revenue arrangements occurring on or after July 1, 2003. The impact of this change for the year ended March 31, 2004 was to decrease net income by ¥642,631. The pro-forma effect of this accounting change, had it been applied consistently for the years ended March 31, 2003 and 2004 is as follows:

	2003		2004
	(Thousands of yen)		
Reported net income	¥	1,725,995	¥ 3,355,575
Pro-forma effect of EITF 00-21		(24,780)	642,631
Pro-forma net income	¥	1,701,215	¥ 3,998,206

Shipping and Handling Costs

Shipping and handling costs are included in cost of products sold.

Research and Development Costs

Research and development costs are expensed in the year in which such costs are incurred, except for costs relating to equipment that is acquired or constructed for research and development activities and have alternative future uses. Research and development expense for the years ended March 31, 2003, 2004 and 2005 was ¥1,528,782 thousand, ¥1,665,889 thousand and ¥3,002,413 thousand (U.S.\$27,916 thousand), respectively, and was included in selling, general and administrative expenses in the accompanying consolidated statements of income.

Retirement Benefits

The cost of retirement benefits for seconded employees is incurred by and reimbursed to SHI (see Note 6). The provision for accrued employees' retirement benefits represents the cost for employees who have been employed directly by the Company (see Note 9).

Recent Accounting Pronouncements

In January 2003, the Financial Accounting Standards Board ("FASB") issued Interpretation No. 46 "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51" ("FIN 46"). FIN 46 provides a new consolidation model, which determines control and consolidation based on potential variability in gains and losses. The adoption of FIN 46 did not have any impact on the Company's consolidated financial statements.

In November 2004 the FASB issued Statement of Financial Accounting Standards No. 151 ("SFAS 151") "Inventory Costs, an amendment of ARB 43, Chapter 4." SFAS 151 amends the guidance in ARB 43, Chapter 4, "Inventory Pricing" to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). SFAS 151 requires that idle facility expense, excessive spoilage, double freight, and rehandling costs be recognized as current period charges. In addition, SFAS 151 requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15 2005, however early adoption is permitted for inventory costs incurred during fiscal years beginning after November 2004. The Company plans to adopt SFAS 151 on January 1, 2006. The Company is assessing what effect, if any, adopting SFAS 151 will have on its financial position or results of operations.

Note 2. Trade Receivable

The components of trade receivables, net follow:

	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Notes	¥ 5,189	¥ 180,923	\$ 1,685
Accounts	10,184,876	14,748,183	137,333
	10,190,065	14,929,106	139,018
Allowance for doubtful accounts	(11,352)	(18,260)	(170)
	¥ 10,178,713	¥ 14,910,846	\$ 138,848

Note 3. Inventories

The components of inventories follow:

	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Work in process	¥ 5,583,318	¥ 4,188,363	\$ 39,001
Raw materials and parts	1,846,446	1,862,335	17,342
	¥ 7,429,764	¥ 6,050,698	\$ 56,343

Note 4. Property, Plant and Equipment, Net

The components of property, plant and equipment, net follow:

	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Land	¥ 299,485	¥ 299,485	\$ 2,789
Building and land improvements	4,369,429	4,434,825	41,296
Machinery	4,415,740	869,008	8,092
Furniture, fixtures and automobiles	1,901,901	1,944,412	18,106
Construction in process	17,485	70,988	661
	11,004,040	7,618,718	70,944
Accumulated depreciation	(7,712,328)	(4,830,962)	(44,985)
	¥ 3,291,712	¥ 2,787,756	\$ 25,959

In 2005, the Company determined that certain machinery used in its research and development activities had no current or future and was disposed of. As a result, the Company recorded a loss on disposal of ¥584 million, which was included in selling, general and administrative expenses in the accompanying consolidated statements of income.

Note 5. Product Warranty

The Company offers a one year warranty for all of its products, the terms and conditions of which vary depending upon the product sold. The Company estimates the costs that may be incurred under its warranty and records a liability in the amount of such costs at the time product revenue is recognized.

Factors that affect the Company's warranty include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded warranty and adjusts the amount as necessary.

Changes in the Company's product warranty (included in other current liabilities on the consolidated balance sheets) for the years ended March 31, 2004 and 2005 are as follows:

	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Beginning balance	¥ 21,200	¥ 23,300	¥ 36,700	\$ 347
Warranties issued during the period	35,192	78,640	125,874	1,172
Settlements made during the period	(33,092)	(65,240)	(107,674)	(1,008)
Balance as of March 31	¥ 23,300	¥ 36,700	¥ 54,900	\$ 511

Note 6. Transactions with Affiliates

Transactions with affiliates for the years ended March 31, 2003, 2004 and 2005 were as follows:

	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Revenues:				
Axcelis and affiliates	¥ 612,738	¥ 1,219,911	¥ 533,601	\$ 4,961
	¥ 612,738	¥ 1,219,911	¥ 533,601	\$ 4,961
Inventories purchased:				

SHI and affiliates	¥	1,161,380	¥	1,877,370	¥	1,655,123	\$	15,389
Axcelis and affiliates		599,863		410,708		288,191		2,679
	¥	<u>1,761,243</u>	¥	<u>2,288,078</u>	¥	<u>1,943,314</u>	\$	<u>18,068</u>

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	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Other income from affiliates :				
Territory commission and sales assistance fees from Axcelis	—	—	¥ 25,253	\$ 234
	—	—	¥ 25,253	\$ 234
Other expenses to affiliates:				
Royalties to Axcelis	¥ 452,874	¥ 682,681	¥ 1,025,965	\$ 9,539
Commissions to Axcelis and affiliates	403,412	263,183	315,584	2,934
Other expenses to Axcelis and affiliates	—	—	92	1
Management fees and royalties to SHI	101,761	149,297	226,059	2,102
Subcontract charges to SHI affiliates	335,773	316,826	291,618	2,711
Other expenses to SHI and affiliates	30,065	198,723	186,691	1,736
	¥ <u>1,323,885</u>	¥ <u>1,610,710</u>	¥ <u>2,046,009</u>	\$ <u>19,023</u>

Balances due from and to affiliates at March 31, 2004 and 2005 were as follows:

	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Due from affiliates:			
Axcelis and affiliates	¥ 80,720	¥ 99,759	\$ 929
	¥ <u>80,720</u>	¥ <u>99,759</u>	\$ <u>929</u>
Due to:			
SHI	¥ 1,306,569	¥ 1,096,284	\$ 10,208
Axcelis	602,368	623,150	5,803
SHI affiliates	32,573	77,064	717
Axcelis affiliates	17,452	28,650	267
	¥ <u>1,958,962</u>	¥ <u>1,825,148</u>	\$ <u>16,995</u>

Pension funding for the seconded employees (employees on temporary assignment) is provided through a plan administered by SHI. Under this arrangement, the Company is billed monthly for the pension costs attributable to those individuals. Under the terms of the pension agreement with SHI, no additional costs related to earned benefits are to be borne by the Company. Pension contributions paid to SHI for the years ended March 31, 2003, 2004 and 2005 were ¥155,201 thousand, ¥158,155 thousand and ¥138,227 thousand (U.S.\$1,285 thousand), respectively.

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Note 7. Financing Arrangements

Leases

Rental expenses for equipment, land and office space for the years ended March 31, 2003, 2004 and 2005 amounted to ¥331,178 thousand, ¥278,315 thousand and ¥268,802 thousand (U.S.\$2,499 thousand), respectively. Future minimum non-cancelable rental commitments at March 31, 2005 under operating leases are as follows:

Year ended March 31	(Thousands of yen)	(U.S. dollars in thousands)
2006	¥ 127,880	\$ 1,191
2007	64,615	601
2008	60,780	566
2009	60,780	566
2010	58,827	548
Later years	814,464	7,584
	¥ <u>1,187,346</u>	\$ <u>11,056</u>

Note 8. Income Taxes

Income taxes include corporation, enterprise, and inhabitants' taxes which, in the aggregate, resulted in a statutory tax rate of approximately 41.74% in 2003 and 2004 and 40.44% in 2005. The difference between income tax expense and the amount computed by applying the statutory income tax rate to income before income taxes is summarized as follows:

	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Tax at statutory rate	¥ 1,226,943	¥ 2,279,147	¥ 3,766,717	\$ 35,023
Tax effect of:				
Nondeductible expenses	6,198	12,757	12,675	118

Change in future statutory tax rate	1,776	—	—	—
Tax credit for costs of information technologies and research and development activities	—	(211,432)	(286,765)	(2,666)
Other items, net	(21,422)	13,256	18,459	171
Income tax expense	¥ 1,213,495	¥ 2,093,728	¥ 3,511,086	\$ 32,646

In March 2003, the Japanese government enacted a tax law change that resulted in a decrease in the aggregate statutory tax rate for the Company's fiscal year beginning on April 1, 2004. The effect of this change on the Company's 2003 income tax expense is included in the above table as the change in future statutory tax rate.

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Deferred income taxes reflect the net tax effect of the temporary differences between the amounts of the assets and liabilities recorded for financial and income tax purposes. Significant components of the Company's deferred tax assets as of March 31, 2004 and 2005 were as follows:

	2004 (Thousands of yen)		2005 (U.S. dollars in thousands)	
Current assets:				
Accrued enterprise tax	¥ 170,551	¥ 205,468	\$ 1,913	
Loss on disposal of inventory	7,311	2,105	20	
Warranty reserve	14,841	22,202	207	
Bonus payment reserve	165,735	187,201	1,743	
Other	1,337	14,959	139	
	¥ 359,775	¥ 431,935	\$ 4,022	
Non current assets:				
Accrued retirement benefits	¥ 33,631	¥ 30,312	\$ 282	
Depreciation	12,057	43,393	404	
Research and development tax credit	—	286,581	2,669	
Other	6,934	9,193	86	
	¥ 52,622	¥ 369,479	\$ 3,441	

Note 9. Employees' and Directors' Retirement Benefits

The Company has a defined benefit pension plan that covers substantially all employees. Benefits under the plan are based on the employees' compensation as of the date of retirement and years of service. The Company's policy is to fund amounts which are actuarially determined to provide the plan with sufficient assets to meet future benefit payment requirements. Assets of the plan are invested in equity securities, debt securities, money market instruments, and insured products.

The Company also provides certain defined benefits to its statutory auditors and directors who are not statutory auditors, directors or employees of SHI, Axcelis or one of their affiliates. Their benefits are based on years of service, compensation at retirement and position. This plan is unfunded.

The measurement date used to determine the pension obligation for the benefit plan is December 31.

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The reconciliation of beginning and ending balances of the projected benefit obligation and plan assets, and the funded status of the Company's plans are as follows:

	2004 (Thousands of yen)		2005 (U.S. dollars in thousands)	
Change in benefit obligation				
Benefit obligation at beginning of year	¥ 647,050	¥ 769,551	\$ 7,281	
Service cost	59,578	64,331	598	
Interest cost	11,847	10,842	101	
Actuarial losses	73,601	33,460	311	
Foreign currency exchange rate changes	—	—	(114)	
Change in additional minimum liability	(17,388)	—	—	
Benefits paid	(5,137)	(1,988)	(18)	
Benefit obligation at end of year	769,551	876,196	8,159	
Change in plan assets				
Fair value of plan assets at beginning of year	344,161	484,651	4,586	
Actual gain on plan assets	65,488	29,680	276	
Foreign currency exchange rate changes	—	—	(72)	
Contributions	77,939	78,922	734	
Benefits paid	(2,937)	(1,988)	(18)	
Fair value of plan assets at end of year	484,651	591,265	5,506	
Funded status	(284,900)	(284,931)	(2,653)	
Unrecognized transition obligation	64,621	53,851	501	
Unrecognized net loss	137,114	156,123	1,454	
Net amount recognized in the consolidated Balance sheets	¥ (83,165)	¥ (74,957)	\$ (698)	

The components of net pension expense of the Company's plans for the years ended March 31, 2003, 2004 and 2005 were as follows:

	2003	2004	2005	2005
	(Thousands of yen)			(U.S. dollars in thousands)
Service cost	¥ 52,628	¥ 59,578	¥ 64,331	\$ 598
Interest cost	13,449	11,847	10,842	101
Expected return on plan assets	(13,171)	(13,766)	(19,386)	(180)
Net amortization and deferrals	10,994	14,555	14,927	138
Net pension expense	¥ 63,900	¥ 72,214	¥ 70,714	\$ 657

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The aggregate accumulated benefit obligation of this plan was as follows:

	2004	2005	2005
	(Thousands of yen)		(U.S. dollars in thousands)
Aggregate accumulated benefit obligation	¥ 519,506	¥ 601,983	\$ 5,605

The discount rates and weighted average rates of increases in future salary levels used in determining the actuarial present value of the projected benefit obligation as of March 31, 2004 and 2005 were as follows:

	2004	2005
Discount rate	1.5%	1.5%
Weighted average rates of increases in future salary levels	2.67%	2.67%

The discount rates, weighted average rates of increases in future salary levels and the expected long-term rates of return on plan assets used in determining net pension expense for the years ended March 31, 2003, 2004 and 2005 were as follows:

	2003	2004	2005
Discount rate	2.5%	2.0%	1.5%
Weighted average rates of increases in future salary levels	2.67%	2.67%	2.67%
Expected long-term rates of return on plan assets	4.0%	4.0%	4.0%

The expected long-term rate of return on plan assets assumption is determined from the plan's asset allocation using forward-looking assumptions in the context of historical returns.

The following benefit payments, which reflected expected future service, as appropriate, are expected to be paid:

Year ended March 31	(Thousands of yen)	(U.S. dollars in thousands)
2006	¥ 9,095	\$ 85
2007	10,147	94
2008	11,109	103
2009	12,198	114
2010	13,118	122
2011 – 2015	175,393	1,633

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The investment strategy is to manage the assets of the plan to meet the long-term liabilities while maintaining sufficient liquidity to pay current benefits. This is primarily achieved by holding equity-like investments while investing a portion of the assets in long duration bonds in order to match the long-term nature of the liabilities. The Company will periodically undertake an asset and liability modeling study if a material shift in the plan's liability profile or changes in the capital markets call for such a study. The Company's weighted-average asset allocations for its defined benefit plan at March 31, 2004 and 2005, by asset category, are as follows:

Asset Category	2004	2005	Target
Equity securities	38.6%	36.9%	31 – 45%
Debt securities	26.5	28.2	21 – 35
Foreign currency securities investment fund	28.7	30.4	19 – 43
Loan receivables	6.2	4.5	0 – 7
	100.0%	100.0%	

The Company expects to contribute approximately ¥80,895 thousand (U.S.\$753 thousand) to its defined benefit plan for the year ending March 31, 2006.

Note 10. Shareholders' Equity

The Commercial Code of Japan ("Code") provides that an amount equal to at least 10% of the amount to be disbursed as a distribution of earnings be appropriated to the legal reserve until the total of such reserve and the additional paid-in capital account equals 25% of the common stock account. The Code also provides to the extent that the sum of additional paid-in capital account and the legal reserve account exceed 25% of the common stock account then the amount of the excess (if any) is available for appropriations by resolution of the shareholders.

Retained earnings available for dividends under the Code are based on the amount presented in the Company's non-consolidated financial statements, which are prepared in accordance with accounting principles and practices generally accepted in Japan. Under the Code, the amount of retained earnings available for dividends as of March 31, 2005 amounted to ¥19,746,179 thousand (U.S.\$183 million).

Note 11. Financial Instruments

The total carrying amount reported in the balance sheets for financial instruments, cash and cash equivalents, notes and accounts receivables, short-term debt, notes and accounts payables approximates their respective fair value.

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Note 12. Supplemental Balance Sheet Information

Changes in allowance for doubtful accounts:

	2003		2004		2005		2005
			(Thousands of yen)				(U.S. dollars in thousands)
Balance at beginning of year	¥	23,958	¥	9,632	¥	11,352	\$ 107
Addition		—		1,720		6,908	64
Reversal		(14,326)		—		—	—
Foreign currency exchange rate changes		—		—		—	(1)
Balance at end of year	¥	9,632	¥	11,352	¥	18,260	\$ 170

Note 13. Sales to Foreign Customers

The Company's sales to foreign customers amounted to ¥4,878,493 thousand, ¥3,303,006 thousand and ¥4,802,513 thousand (U.S.\$44,653 thousand) for the years ended March 31, 2003, 2004 and 2005, respectively.

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SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AXCELIS TECHNOLOGIES, INC.

/s/ Mary G. Puma

DATED: JUNE 28, 2005

By: Mary G. Puma, Chairman and Chief Executive Officer

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EXHIBIT INDEX

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
3.2	Bylaws of the registrant, as amended as of January 23, 2002. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-K for the year ended December 31, 2001, filed with the Commission on March 12, 2002.
3.3	Certificate of Designation of Series A Participating Preferred Stock, filed with the Secretary of State of Delaware on July 5, 2000. Incorporated by reference to Exhibit 3.3 of the Company's Form 10-K for the year ended December 31, 2000, filed with the Commission on March 30, 2001.
4.1	Specimen Stock Certificate. Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.2	Rights Agreement between the Company and EquiServe Trust Company, N.A. Incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
4.3	Indenture between the Company and State Street Bank and Trust Company, as trustee, including the form of note, dated as of January 15, 2002. Incorporated by reference to Exhibit 4.1 of the Company's Report on Form 8-K filed with the Commission on January 15, 2002.
4.4	Registration Rights Agreement by and among the Company, Morgan Stanley & Co., Incorporated, Salomon Smith Barney Inc. and SG Cowen Securities Corporation, dated as of January 15, 2002. Incorporated by reference to Exhibit 4.2 of the Company's Report on Form 8-K filed with the Commission on January 15, 2002.

- 4.5 Revolving Credit Agreement dated as of October 3, 2003, among the Company, ABN Amro Bank N.V. and the other lenders named therein, as amended. Pursuant to Regulation S-K, Item 601(b)(4)(iii), this exhibit has not been filed, since the total amount of the facility does not exceed 10% of the Company's total assets at this time. The Company will furnish a copy of the Credit Agreement to the Commission on request.
- 10.1* 2000 Stock Plan, as amended on December 18, 2003. Incorporated by reference to Exhibit 10.1 of the Company's Report on Form 10-K for the year ended December 31, 2003 filed with the Commission on March 8, 2004.
- 10.2* Employee Stock Purchase Plan, adopted by the Board of Directors on June 9, 2000. Incorporated by reference to Exhibit 10.2 of the Company's report on Form 10-Q for the quarter ended September 30, 2000 filed with the Commission on November 14, 2000.
- 10.3 Form of Indemnification Agreement entered into by the Company with each of its directors

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and executive officers. Incorporated by reference to Exhibit 10.2 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).

- 10.4* Form of Change in Control Agreement between the registrant and each of its executive officers, updated as of May 1, 2002. Filed with the original Form 10-K for the year ended December 31, 2004 ("the Original Form 10-K") on March 15, 2005.
- 10.5* Executive Separation Agreement between the Company and Jan Paul van Maaren. Incorporated by reference to Exhibit 10.1 of the Company's Report on Form 8-K filed with the Commission on February 3, 2005.
- 10.6* Form of Employee non-qualified stock option grant under the 2000 Stock Plan, updated as of April 5, 2002. Incorporated by reference to Exhibit 10.1 of the Company's report on Form 10-Q filed with the Commission on November 9, 2004.
- 10.7* Form of Non-Employee Director stock non-qualified stock option grant under the 2000 Stock Plan, updated as of July 12, 2004. Incorporated by reference to Exhibit 10.2 of the Company's report on Form 10-Q filed with the Commission on November 9, 2004.
- 10.8* Employment Agreement between the Company and Mary G. Puma. Incorporated by reference to Exhibit 10.5 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
- 10.9** Organization Agreement dated December 3, 1982 between Eaton Corporation and Sumitomo Heavy Industries, Ltd. relating to Sumitomo Eaton Nova Corporation, as amended. Incorporated by reference to Exhibit 10.6 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
- 10.10** Master License Agreement dated January 16, 1996 between Eaton Corporation and Sumitomo Eaton Nova Corporation. Incorporated by reference to Exhibit 10.7 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
- 10.11* Executive Officer Agreement dated as of December 18, 2003 between the Company and Stephen G. Bassett. Incorporated by reference to Exhibit 10.2 of the Company's report on Form 10-K filed with the Commission on March 8, 2004.
- 10.12* Axcelis Team Incentive Plan for executive officers, adopted by the Compensation Committee of the Board of Directors on January 26, 2005. Incorporated by reference to Exhibit 10.1 of the Company's Report on Form 8-K filed with the Commission on January 31, 2005.
- 10.13* Employee Stock Purchase Plan, as amended by the Board of Directors on January 27, 2005, effective July 1, 2005. Filed with the Original Form 10-K on March 15, 2005.
- 10.14* Executive Officer Cash Compensation at March 1, 2005. Filed with the Original Form 10-K on March 15, 2005.
- 10.15* Director Compensation at March 1, 2005. Filed with the Original Form 10-K on March 15, 2005.

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- 14.1 Ethical Business Conduct at Axcelis, revised through January 2003. Incorporated by reference to Exhibit 14.1 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.
- 21.1 Subsidiaries of the Company. Filed with the Original Form 10-K on March 15, 2005.
- 23.1 Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm. Filed with the Original Form 10-K on March 15, 2005.
- 23.2 Consent of Ernst & Young ShinNihon, Independent Auditors, relating to the financial statements of Sumitomo Eaton Nova Corporation. Filed herewith.
- 31.1 Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated June 28, 2005. Filed herewith.
- 31.2 Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated June 28, 2005. Filed herewith.

- 32.1 Certification of the Principal Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated June 28, 2005. Filed herewith.
- 32.2 Certification of the Principal Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated June 28, 2005. Filed herewith.
- 99.1 Factors affecting future operating results as of December 31, 2004. Filed with the Original Form 10-K on March 15, 2005.
- 99.2 Charter of the Audit Committee of the Board of Directors of Axcelis, as adopted on April 29, 2004. Incorporated by reference to Exhibit 99.2 of the Company's report on Form 10-Q filed with the Commission on August 6, 2004.
- 99.3 Governance Policies adopted by the Board of Directors of Axcelis on September 26, 2002 and amended on October 22, 2003. Incorporated by reference to Exhibit 99.3 of the Company's report on Form 10-K filed with the Commission on March 8, 2004.
- 99.4 Charter of the Nominating and Governance Committee of the Board of Directors, as adopted on September 26, 2002. Incorporated by reference to Exhibit 99.6 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.
- 99.5 Charter of the Compensation Committee of the Board of Directors of Axcelis, as adopted on January 23, 2003. Incorporated by reference to Exhibit 99.7 of the Company's report on Form 10-K filed with the Commission on March 28, 2003.

* Indicates a management contract or compensatory plan.

**Certain confidential information contained in the document has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended, or Rule 24b-2 promulgated under the Securities and Exchange Act of 1934, as amended

Consent of Ernst & Young ShinNihon, Independent Auditors

We consent to the incorporation by reference in the Registration Statement (Form S-3 No.333-85214) of Axcelis Technologies, Inc., the Registration Statement (Form S-8 No.333-49726) pertaining to the Axcelis Technologies, Inc. Employee Stock Purchase Plan and the Registration Statement (Form S-8 No.333-49768) pertaining to the Axcelis Technologies, Inc. 2000 Stock Plan, of our report dated May 20, 2005, with respect to the consolidated financial statements of Sumitomo Eaton Nova Corporation included in the Axcelis Technologies, Inc. amended Annual Report (Form 10-K/A) for the year ended December 31, 2004.

/s/ Ernst & Young ShinNihon

Tokyo, Japan
June 24, 2005

CERTIFICATION**of the Principal Executive Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Mary G. Puma, certify that:

1. I have reviewed this annual report on Form 10-K/A of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal

quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 28, 2005

/s/ Mary G. Puma
Mary G. Puma, Chairman and Chief
Executive Officer

CERTIFICATION**of the Principal Financial Officer****Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Stephen G. Bassett, certify that:

1. I have reviewed this annual report on Form 10-K/A of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal

quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 28, 2005

/s/ Stephen G. Bassett
Stephen G. Bassett, Chief Financial Officer
and Senior Vice President

AXCELIS TECHNOLOGIES, INC.

Certification of the Principal Executive Officer

Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-K/A annual report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of June 28, 2005.

/s/ Mary G. Puma

Mary G. Puma
Chairman and Chief Executive Officer of Axcelis Technologies,
Inc.

AXCELIS TECHNOLOGIES, INC.

Certification of the Principal Financial Officer**Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code**

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-K/A annual report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of June 28, 2005.

/s/ Stephen G. Bassett

Stephen G. Bassett

Senior Vice President and Chief Financial Officer of Axcelis
Technologies, Inc.
