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, 2007

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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
None
None
None
Name of each exchange on which registered
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 if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No x

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

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. o

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

Large accelerated filer o

Accelerated filer x

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

Smaller reporting company o

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

Aggregate market value of the voting stock held by non-affiliates of the registrant as of June 29, 2007: \$565,349,066.

Number of shares outstanding of the registrant's Common Stock, \$0.001 par value, as of March 13, 2008: 102,448,670.

Documents incorporated by reference:

Portions of the definitive Proxy Statement for Axcelis Technologies, Inc.'s Annual Meeting of Stockholders held on May 1, 2008 are incorporated by reference into Part III of this Form 10-K.

Table of Contents

AMENDMENT NO. 1

EXPLANATORY NOTE

We are filing this amendment to our Annual Report on Form 10-K for the fiscal year ended December 31, 2007, originally filed with the Securities and Exchange Commission on March 17, 2008, 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 SEN Corporation, an SHI and Axcelis Company ("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, 2007. 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 180 days after the end of SEN's fiscal year ended March 31, 2008. Certain portions of the notes to the SEN financial statements included in this amendment reflect the conclusions and opinions of SEN management and do not necessarily reflect the conclusions and opinions of Axcelis management.

Since 1983, we have exclusively licensed our Japanese joint venture, SEN Corporation, an SHI and Axcelis Company to manufacture and sell specific ion implanter systems using our technology in Japan. As of year end 2007, SEN had 541 employees and 238 temporary staff based in Tokyo and Saijo, Japan. We own 50% of the equity of SEN and our senior managers serve as half of the members of SEN's Board of Directors. Sumitomo Heavy Industries, Ltd., a Japanese corporation ("SHI"), holds the other 50% of the equity of SEN.

SEN has granted us a royalty-free worldwide (except for Japan) license to use any technology SEN develops that is an improvement to our technology. Axcelis has not licensed SEN to sell the Optima MD, Optima HD and Optima HE, which are available in Japan directly from Axcelis. SEN pays royalties on its net sales of licensed ion implantation products in accordance with the rates set forth in the license agreement between SEN and Axcelis. The royalty rates vary depending on the type of implanter sold. These royalty amounts were \$6.1 million, \$9.2 million and \$8.7 million in 2007, 2006 and 2005, respectively. The current license agreement between SEN and Axcelis will continue in effect until terminated. The license agreement may be terminated by Axcelis or by SEN, with the approval of the Axcelis representatives on the SEN Board, on twelve months' notice.

We have in the past allowed, and may in the future allow, SEN to sell implanters outside of Japan. We have allowed these sales when we believe that a SEN product, rather than an Axcelis product, is more likely to be successful at a particular customer. When these sales are allowed, we receive commissions in addition to royalties from SEN on these extra-territorial sales and assume most of the post-installation warranty responsibility. The financial benefit to Axcelis from the sale of a SEN implanter is less than the financial benefit of a sale of an Axcelis implanter, so such extra-territorial sales may have an adverse effect on our revenues. For this reason, Axcelis has, on occasion, denied permission to SEN to sell products to particular customers outside of Japan. In several instances, SEN has engaged in selling activities outside of Japan that have not been authorized by Axcelis. To date, these unauthorized sales by SEN have not had a material negative impact on Axcelis' results of operations. See our Form 10-K filed on March 17, 2008, Item 1A. Risk Factors—"Our inability to control our Japanese joint venture may adversely affect our results" for a discussion of a pending arbitration with SEN.

In January 2007, SEN made a dividend of 40% of its net earnings for the year ended March 31, 2006. In this dividend Axcelis received payment of approximately \$5.7 million, representing its 50% share. In June 2007, Axcelis and Sumitomo Heavy Industries, Ltd., the other shareholder of SEN, entered into a Memorandum of Understanding (the "MOU") that provided that SEN would also dividend to its shareholders 40% of SEN's net earnings for SEN's fiscal years ended March 31, 2007 and ending March 31, 2008. In July 2007, Axcelis received a dividend of approximately \$6.7 million for SEN's fiscal year ended March 31, 2007. In accordance with the MOU, Axcelis received a dividend of \$1.9 million in July 2008 for SEN's fiscal year ending March 31, 2008. The MOU provides that the two SEN shareholders will seek to re-negotiate the dividend rate for years after 2008 but, absent a new agreement, the MOU provides for continuing annual dividends at the level of 40% of SEN's net earnings.

Therefore, this Form 10-K/A amends the following portions of the Axcelis Technologies Form 10-K filed on March 17, 2008:

- · Item 8 is being amended by submitting the financial statements of SEN for the fiscal years ended March 31, 2006, 2007 and 2008 (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, 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.

Table of Contents

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of the Company's Form 10-K, as originally filed on March 17, 2008, and as amended by this form 10-K/A:

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

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Operations — For the years ended December 31, 2007, 2006 and 2005

Consolidated Balance Sheets — December 31, 2007 and 2006

Consolidated Statements of Stockholders' Equity — For the years ended December 31, 2007, 2006 and 2005

Consolidated Statements of Cash Flows — For the years ended December 31, 2007, 2006 and 2005

Notes to Consolidated Financial Statements

(1)(B) Financial Statements of SEN Corporation, an SHI and Axcelis Company:

Report of Independent Auditors

Consolidated Statements of Operations — For the years ended March 31, 2006, 2007 and 2008

Consolidated Balance Sheets — March 31, 2007 and 2008

Consolidated Statements of Stockholders' Equity — For the years ended March 31, 2006, 2007 and 2008

Consolidated Statements of Cash Flows — For the years ended March 31, 2006, 2007 and 2008

(2) Financial Statement Schedules:

Schedule II — Valuation and Qualifying Accounts for the years ended December 31, 2007, 2006 and 2005

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.

Table of Contents

Consolidated Financial Statements

As of March 31, 2007 and 2008 and for the years ended March 31, 2006, 2007 and 2008

Contents

1

6

Report of Independent Auditors

Audited Consolidated Financial Statements

Consolidated Statements of Income2Consolidated Balance Sheets3Consolidated Statements of Shareholders' Equity4Consolidated Statements of Cash Flows5

Notes to Consolidated Financial Statements

Table of Contents

Report of Independent Auditors

The Board of Directors SEN Corporation, an SHI and Axcelis Company

We have audited the accompanying consolidated balance sheets of SEN Corporation, an SHI and Axcelis Company (the "Company") as of March 31, 2008 and 2007, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended March 31, 2008, all expressed in Japanese yen. 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 present fairly, in all material respects, the consolidated financial position of the Company, at March 31, 2008 and 2007, and the consolidated results of its operations and cash flows for each of the three years in the period ended March 31, 2008, in conformity with generally accepted accounting principles in the United States.

As discussed in Note 10 to the consolidated financial statements, the Company adopted the recognition provisions of Statement of Financial Accounting Standards No. 158, Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans - An Amendment of FASB Statements No. 87, 88, 106 and 132(R) effective on March 31, 2008.

We also have recomputed the translation of the consolidated financial statements as of and for the year ended March 31, 2008 into United States dollars. In our opinion, the consolidated financial statements expressed in Japanese yen have been translated into United States dollars on the basis described in Note 2.

Tokyo, Japan September 19, 2008 /s/ Ernst & Young ShinNihon LLP

1

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Income

				Year ended March 31,				
		2006	-	2007		2008		2008
			(11	housands of yen)			(U.S. dollars in thousands)
Net sales:								,
Systems	¥	20,026,152	¥	24,261,306	¥	14,273,320	\$	142,462
Services		7,831,507		8,336,320		7,914,660		78,997
Total sales		27,857,659		32,597,626		22,187,980	-	221,459
Cost of sales		15,660,181		18,787,848		14,346,690		143,195
Gross profit		12,197,478		13,809,778		7,841,290		78,264
Research and development		2,271,112		2,683,775		2,548,820		25,440
Selling, general and administrative expenses		3,851,467		4,037,048		3,739,777		37,327
Income from operations		6,074,899		7,088,955		1,552,693		15,497
•								
Non-operating income		_		21,690		52,521		524
Non-operating expenses		11,002		10,391		2,869		28
Income before income taxes		6,063,897		7,100,254		1,602,345		15,993
Income taxes (benefit):								
Current		2,023,686		2,764,273		556,082		5,551
Deferred		184,847		(85,646)		(64,584)		(645)
		2,208,533		2,678,627		491,498		4,906
Net income	¥	3,855,364	¥	4,421,627	¥	1,110,847	\$	11,087
			_		_		<u> </u>	

 $See\ accompanying\ notes\ to\ consolidated\ financial\ statements.$

2

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Consolidated Balance Sheets

Marc	March 31,	
2007	2008	2008
(Thousand	ls of yen)	(U.S. dollars i
•		thousands)

Assets

Cash and cash equivalents	¥	6,136,016	¥	13,754,739	\$	137,287
Trade receivables, net		22,552,485		9,928,011		99,092
Due from SHI and affiliates		1,456		7,675		77
Due from Axcelis and affiliates		60,575		97,130		969
Inventories		8,186,374		8,633,492		86,171
Deferred tax assets		426,223		479,823		4,789
Other current assets		46,022		36,773		367
Total current assets		37,409,151		32,937,643		328,752
Property, plant and equipment, net		2,642,516		2,341,199		23,368
Deferred tax assets		275,988		377,023		3,763
Other assets	<u> </u>	366,350		272,594		2,720
Total assets	¥	40,694,005	¥	35,928,459	\$	358,603
			-			
Liabilities and shareholders' equity						
Current liabilities:						
Trade payables:						
Notes	¥	2,398,831	¥	1,613,993	\$	16,109
Accounts		3,232,634		2,484,181		24,795
Total trade payables		5,631,465		4,098,174		40,904
Due to SHI and affiliates		1,403,727		601,265		6,002
Due to Axcelis and affiliates		527,713		278,662		2,781
Income taxes payable		1,816,063		281,863		2,813
Accrued bonuses		480,918		458,234		4,574
Other current liabilities		285,397		149,879		1,496
Total current liabilities		10,145,283		5,868,077		58,570
Accrued retirement benefits		_		178,286		1,779
Total liabilities		10,145,283		6,046,363		60,349
Shareholders' equity:						
Capital stock:						
Authorized – 20,000 shares						
Issued and outstanding – 12,000 shares		600,000		600,000		5,989
Legal reserve		150,000		150,000		1,497
Retained earnings		29,798,722		29,264,722		292,091
Accumulated other comprehensive loss				(132,626)		(1,323)
Total shareholders' equity		30,548,722		29,882,096		298,254
					-	

See accompanying notes to consolidated financial statements.

Total liabilities and shareholders' equity

3

40,694,005

35,928,459

358,603

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Shareholders' Equity

	Cui	150110	iateu Statement	.5 01 3	ilarenoideis i	2qui	. y				
	Number of issued shares		Capital stock	(Tho	Legal reserve usands of yen, ex	cept	Retained earnings number of shares)		ccumulated other mprehensive loss		Total shareholders' Equity
Balance at March 31, 2005	12,000	¥	600,000	¥	150,000	¥	23,017,152	¥	_	¥	23,767,152
Comprehensive income:		_				_		_			
Net income	_		_		_		3,855,364		_		3,855,364
Comprehensive income											3,855,364
Cash dividends	_		_		_		(120,000)		_		(120,000)
					,						
Balance at March 31, 2006	12,000	¥	600,000	¥	150,000	¥	26,752,516	¥	_	¥	27,502,516
Comprehensive income:											
Net income	_		_		_		4,421,627		_		4,421,627
Comprehensive income										-	4,421,627
Cash dividends	_		_		_		(1,375,421)		_		(1,375,421)
Balance at March 31, 2007	12,000	¥	600,000	¥	150,000	¥	29,798,722	¥	_	¥	30,548,722
Comprehensive income:											
Net income	_		_		_		1,110,847		_		1,110,847
Adjustment to initially apply											
FASB Statement No. 158 (net											
of income tax of $\$$ 90,050)	_		_		_		_		(132,626)		<u> </u>
Comprehensive income											1,110,847
Cash dividends							(1,644,847)				(1,644,847)

Balance at March 31, 2008	12,000	¥	600,000	¥	150,000	¥	29,264,722	¥	(132,626)	¥	29,882,096
	Number of issued shares		Capital Stock		Legal reserve		Retained Earnings		Accumulated other omprehensive loss		Total shareholders' equity
			(U	.S. dol	lars in thousands	s, exc	cept number of sha	res)			
Balance at March 31, 2007	12,000	\$	5,989	\$	1,497	\$	297,421	\$	_	\$	304,907
Comprehensive income:		_				_					
Net income	_		_		_		11,087		_		11,087
Adjustment to initially apply FASB Statement No. 158 (net											
of income tax \$899)	_		_		_		_		(1,323)		
Comprehensive income											11,087
Cash dividends	_		_		_		(16,417)				(16,417)
Balance at March 31, 2008	12 000	\$	5 080	¢	1 /07	\$	202 001	¢	(1 323)	¢	208 254

See accompanying notes to consolidated financial statements.

4

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Consolidated Statements of Cash Flows

			Year	ended March 31,				Year ended March 31,
		2006	-	2007		2008		2008
			(Th	ousands of yen)				.S. dollars in thousands)
Operating activities	37	2.055.264	X 7	4 404 605	*7	1 110 045	ф	11.00
Net income	¥	3,855,364	¥	4,421,627	¥	1,110,847	\$	11,08
Adjustments to reconcile net income to net cash (used in) provided by								
operating activities:								
Depreciation and amortization		402,684		480,787		467,293		4,66
Loss on fixed asset disposal		6,699		10,391		2,869		2:
Deferred income taxes (benefit) provision		184,847		(85,646)		(64,585)		(64
Changes in operating assets and liabilities:								
Trade receivables		(1,497,284)		(6,144,355)		12,624,474		126,00
Due from/ to SHI and affiliates		133,902		95.021		(808,681)		(8,07
Due from/ to Axcelis and affiliates		(189,319)		104,416		(285,606)		(2,85
Inventories		(963,531)		(1,172,145)		(447,118)		(4,46
Trade accounts and notes payables		276,339		579,623		(1,533,291)		(15,30
Income taxes payable		(1,611,852)		568,705		(1,534,200)		(15,31)
Other, net		(587,765)		173,060		(151,827)		(64
Net cash (used in) provided by operating activities		10,084		(968,516)		9,380,175		93,62
Investing activities								
Purchases of property, plant and equipment		(398,440)		(356,881)		(116,605)		(1,16
Net cash used in investing activities		(398,440)		(356,881)		(116,605)		(1,16
Financing activities								
Cash dividends paid		(120,000)		(1,375,421)		(1,644,847)		(16,41
Net cash used in financing activities		(120,000)		(1,375,421)		(1,644,847)		(16,41)
Net (decrease) increase in cash and cash equivalents	_	(508,356)		(2,700,818)		7,618,723		76,04
Cash and cash equivalents at beginning of the year		9,345,190		8,836,834		6,136,016		61,24
Cash and cash equivalents at end of the year	¥	8,836,834	¥	6,136,016	¥	13,754,739	\$	137,28
Eurolamentam information	1							
Supplementary information	V	2 670 005	V	2.264.760	V	2.000.72.4	ď	20.00
ncome taxes paid during the year	¥	3,676,965	¥	2,264,769	¥	2,090,734	\$	20,86

5

Note 1. Nature of Business and Significant Accounting Policies

General

SEN Corporation, an SHI and Axcelis Company (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 semiconductor manufacturing customers.

On April 1, 2006, the Company changed its name from "Sumitomo Eaton Nova Corporation" to "SEN Corporation, an SHI and Axcelis Company."

Basis of Presentation

The Company and its subsidiary maintain their books of account in conformity with the accounting principles generally accepted in Japan. The consolidated financial statements of the Company and its subsidiary presented herein have been prepared in a manner and reflect the adjustments which are necessary to conform them with accounting principles generally accepted in the United States of America ("U.S.").

Principle of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary located in Japan. 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 U.S. 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.

6

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 1. Nature of Business and Significant Accounting Policies (continued)

Foreign Currency

Transaction gains and losses, which arise from transactions denominated in a currency other than the Japanese yen, are included in non-operating income (expenses). Transaction gains and losses in each of the years in the three year period ended March 31, 2008 were not material.

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. The cost of raw material inventories is determined on the average cost method. The cost for work in process inventories are determined based on the specific identification method.

Property, Plant and Equipment

Property, plant and equipment is carried at cost less accumulated depreciation. Depreciation is computed using the declining-balance method over the estimated useful lives of the respective assets (buildings – 6 to 40 years; machinery – 5 to 15 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.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment losses whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Recoverability of assets to be held and used would be considered impaired when the net undiscounted future cash flows generated by the assets are less than their carrying value. An impairment loss would be recognized based on the amount by which the carrying value of the asset exceeds its fair value. Assets to be disposed of by sale are reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated.

7

Note 1. Nature of Business and Significant Accounting Policies (continued)

Income Taxes

Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates are recognized in the period in which they are enacted. The Company records a valuation allowance to reduce the deferred tax assets to the amount that is more likely than not realizable.

The Company adopted the provisions of Financial Accounting Standards Board ("FASB") Interpretation No. 48, Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement No. 109 on April 1, 2007. Upon adoption, the Company recognizes the financial statement effects of tax positions when it is more likely than not, based on the technical merits, that the tax positions will be sustained upon examination by the tax authorities. Benefits from tax positions that meet the more-likely-than-not recognition threshold are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement. Interest and penalties accrued related to unrecognized tax benefits are included in income taxes in the consolidated statements of income.

Revenue Recognition

In general, the Company recognizes revenue when there is persuasive evidence of an arrangement, delivery has occurred or the services have been rendered, the sales price is fixed or determinable and collection of the related receivable is reasonably assured.

When a sales arrangement involves multiple elements, the items included in the arrangement (deliverables) are evaluated to determine whether they represent separate units of accounting. The arrangement consideration is allocated to the individual items based on their relative fair values. If there is objective and reliable evidence of fair value of the undelivered item in an arrangement, but no such evidence for the delivered item, the residual method to allocate the arrangement consideration is used.

Absent objective and reliable evidence of fair value for the undelivered item in a multiple-element arrangement, the Company combines all deliverables into a single unit of accounting, and recognizes revenue when the last item has been delivered and all revenue recognition criteria applicable to the last delivered item has been met.

8

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 1. Nature of Business and Significant Accounting Policies (continued)

Revenue Recognition (continued)

For domestic equipment sales that require installation services, the Company recognizes revenue upon customers' acceptance. For export equipment sales, revenue is recognized when title and risk of loss transfers to the customer, generally upon shipment. When the final payment is subject to customer acceptance, a portion of revenue for the final payment is deferred until an enforceable claim has become effective.

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 services and equipment overhauls is recognized upon completion and acceptance 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.

Taxes collected from customers and remitted to governmental authorities are excluded from revenues in the consolidated statements of income.

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.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current year presentation.

9

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Recent Accounting Pronouncements

In September 2006, the FASB issued Statement of Financial Accounting Standard ("SFAS") No. 157, Fair Value Measurements ("SFAS 157"). SFAS 157 defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS 157 is effective for fiscal years beginning after November 15, 2007 and is required to be adopted by the Company in the fiscal year beginning after April 1, 2008. In February 2008, the FASB issued Staff Positions No. FAS 157-1, Application of FASB Statement No. 157 to FASB Statement No. 13 and Other Accounting Pronouncements That Address Fair Value Measurements for Purposes of Lease Classification or Measurement under Statement 13 and No. FAS 157-2, Effective Date of FASB Statement No. 157, which partially delay the effective date of SFAS 157 for one year for certain nonfinancial assets and liabilities and remove certain leasing transactions from its scope. The adoption of SFAS 157 will not have a material impact on the Company's consolidated results of operations and financial condition.

In September 2006, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standard No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans-An Amendment of FASB Statements No. 87, 88, 106, and 132R* ("SFAS 158"). SFAS 158 requires an employer to recognize the funded status of pension and other postretirement benefit plans on sponsoring employers' balance sheets and to recognize changes in the funded status in comprehensive income in the year the changes occur. It also requires the measurement date of plan assets and obligations to be at the end of the employers' fiscal year. The Company adopted the requirement to recognize the funded status of its benefit plan and the disclosure requirements in its financial statement as of and for the year ending March 31, 2008, as described in Note 10 Employees' and Directors' Retirement Benefits. However, the requirement to measure plan assets and benefit obligations as of the date of the employer's fiscal year-end statement of financial position shall be effective for the Company's fiscal year ending March 31, 2009. Adoption of the measurement date provisions of SFAS 158 will require the Company to record adjustments to retained earnings and accumulated other comprehensive income for the effect of net periodic benefit costs incurred in the period January 1, 2008 to March 31, 2008. The Company is currently evaluating whether to re-measure plan assets and benefit obligations as or March 31, 2008 to determine the effects of the measurement date change at March 31, 2008 (re-measurement method) or to continue to use the measurements as of December 31, 2007 and report the estimated effects of the measurement date change by allocating three-fifteenths of the net periodic benefit cost determined for the period from December 31, 2007 to March 31, 2009 (alternative method). As a result, the impact of applying the measurement date provisions has yet to be determined.

10

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 2. Basis of Financial Statement Translation

The accompanying consolidated financial statements expressed in yen, solely for the convenience of the reader, have been translated into United States dollars at the rate of \\$100.19 per US\\$1, the approximate exchange rate prevailing on the Tokyo Foreign Exchange Market as of March 31, 2008. This translation should not be construed as a representation that all amounts shown could be converted into U.S. dollars.

Note 3. Trade Receivables

The components of trade receivables at March 31, 2007 and 2008 were as follows:

		2007 (Thousand	ds of yen)	2008	 2008 (U.S. dollars in thousands)
Notes	¥	284,277	¥	188,038	\$ 1,877
Accounts		22,293,689		9,739,973	97,215
		22,577,966		9,928,011	99,092
Allowance for doubtful accounts		(25,481)		_	_
	¥	22,552,485	¥	9,928,011	\$ 99,092

Note 4. Inventories

The components of inventories at March 31, 2007 and 2008 were as follows:

	2007		2008			2008
		(Thousan	ds of yen)	_	((U.S. dollars in thousands)
Work in process	¥	5,755,442	¥	6,301,577	\$	62,896
Raw materials and parts		2,430,932		2,331,915		23,275
	¥	8,186,374	¥	8,633,492	\$	86,171

11

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

The components of property, plant and equipment at March 31, 2007 and 2008 were as follows:

		2007 (Thousand	ds of yen	2008		2008 (U.S. dollars in thousands)
Land	¥	299,485	¥	299,485	\$	2,989
Building and land improvements		4,611,371		4,632,692		46,239
Machinery		932,455		945,379		9,436
Furniture, fixtures and automobiles		2,158,992		2,166,912		21,628
Construction in process		11,278		11,510		115
		8,013,581		8,055,978	-	80,407
Accumulated depreciation		(5,371,065)		(5,714,779)		(57,039)
	¥	2,642,516	¥	2,341,199	\$	23,368

Note 6. Product Warranty

The Company offers a one year warranty for all 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, 2006, 2007 and 2008 are as follows:

		2006	(Tho	2007 usands of yen)		2008	 2008 (U.S. dollars in thousands)
Balance at April 1 (beginning of year)	¥	54,900	¥	39,200	¥	51,000	\$ 509
Warranties issued during the period		49,896		93,464		66,276	661
Settlements made during the period		(65,596)		(81,664)		(87,476)	(873)
Balance at March 31 (end of year)	¥	39,200	¥	51,000	¥	29,800	\$ 297
		12					

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 7. Transactions with Affiliates

Transactions with affiliates for the years ended March 31, 2006, 2007 and 2008 were as follows:

		2006	(Tł	2007 nousands of yen)		2008		2008 U.S. dollars in thousands)
Revenues:								·
SHI and affiliates	¥	_	¥	2,400	¥	_	\$	_
Axcelis and affiliates		375,464		512,490		343,824		3,432
	¥	375,464	¥	514,890	¥	343,824	\$	3,432
Inventories purchased:								
SHI and affiliates	¥	1,923,477	¥	2,074,908	¥	1,386,874	\$	13,842
Axcelis and affiliates	•	281,357	-	461,452	-	205,217	Ψ	2,049
Theelo and diffiacto	¥	2,204,834	¥	2,536,360	¥	1,592,091	\$	15,891
Other income from affiliates, none of which have been eliminated:								
Territory commission and sales assistance fees from Axcelis	¥	_	¥	8,185	¥	_	\$	_
	¥		¥	8,185	¥	_	\$	_
Other expenses to affiliates, none of which have been eliminated:								
Royalties to Axcelis	¥	706,531	¥	715,136	¥	454,849	\$	4,540
Commissions to Axcelis and affiliates		218,390		327,039		126,449		1,262
Other expenses to Axcelis and affiliates		390		1,394		1,475		15
Management fees and royalties to SHI		164,301		174,295		112,591		1,124
Subcontract charges to SHI affiliates		3,594		4,977		4,344		43
Other expenses to SHI and affiliates		229,028		196,587		182,301		1,819
	¥	1,322,234	¥	1,419,428	¥	882,009	\$	8,803

The sales and purchase transactions with SHI, Axcelis, and their affiliates have been conducted at cost plus a fixed rate of 12%-25%.

The royalties to Axcelis were charged to the Company at 3.5% - 5.5% of net sales. The sales commissions to Axcelis were charged to the Company at 10% of net sales. The rates for both royalty and sales commission are specified in the master license agreement entered into between the Company and Axcelis.

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 7. Transactions with Affiliates (continued)

The management fees and royalties to SHI were charged to the Company at 1% of net sales, which is specified in the management fee agreement.

The Company earned profits of ¥58,617 thousand, ¥80,009 thousand, and ¥53,677 thousand (US\$ 535 thousand) in 2006, 2007 and 2008, respectively, on revenue recognized from sales to Axcelis and affiliates, none of which have been eliminated in consolidation.

Balances due from and to affiliates at March 31, 2007 and 2008 were as follows:

		2007		2008		2008
		(Thousan		(U.S. dollars in thousands)		
Due from affiliates:						·
SHI and affiliates	¥	1,456	¥	7,675	\$	77
Axcelis and affiliates		60,575		97,130		969
	¥	62,031	¥	104,805	\$	1,046
Due to affiliates:					_	
SHI and affiliates	¥	1,403,727		601,265	\$	6,002
Axcelis and affiliates		527,713		278,662		2,781
	¥	1,931,440		879,927	\$	8,783
					_	

Pension funding for 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, 2006, 2007 and 2008 were \times 126,977 thousand, \times 91,026 thousand and \times 78,236 thousand (US\$ 781 thousand), respectively.

14

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 8. Leases

Rental expenses for equipment, land and office space for the years ended March 31, 2006, 2007 and 2008 amounted to \(\xi\$266,976 thousand, \(\xi\$257,467 thousand and \(\xi\$253,515 thousand (US\\$ 2,530 thousand), respectively. Future minimum non-cancelable rental commitments at March 31, 2008 under operating leases are as follows:

Year ended March 31		(Thousands of yen)		(U.S. dollars in thousands)
2009	¥	140,414	\$	1,401
2010		59,176		591
2011		54,292		542
2012		49,504		494
2013		45,022		449
Thereafter		539,510		5,385
	¥	887,918	\$	8,862

Note 9. Income Taxes

Income taxes include corporation, enterprise, and inhabitants' taxes which, in the aggregate, resulted in a statutory tax rate of approximately 40.44% in 2006, 2007 and 2008. The difference between the provision for income tax and the amount computed by applying the statutory income tax rate in effect for the year ended March 31, 2006, 2007 and 2008 resulted from nondeductible expenses, tax credits for costs of information technologies, research and development activities, and other miscellaneous items. The 2008 provision for income taxes also includes a credit related to the true up of 2007 income taxes.

15

Note 9. Income Taxes (continued)

Deferred income taxes reflect the net tax effect of the temporary differences between the amounts of the assets and liabilities recorded for financial reporting and income tax purposes. Net deferred income tax assets are included in the balance sheets under the following captions: ¥480 thousand in other current assets, and ¥377 thousand in other assets. Significant components of the Company's deferred tax assets as of March 31, 2007 and 2008 were as follows:

		2007 (Thousands of year			2008 (U.S. dollars in thousands)	
Deferred tax assets:						
Accrued enterprise tax	¥	183,806	¥	26,469	\$	264
Bonus payment reserve		194,939		185,799		1,854
Inventory valuation		1,359		138,766		1,385
Deferred revenue		_		57,471		574
Property, plant and equipment		285,742		302,482		3,019
Accrued pension and severance cost		8,980		98,567		984
Other		45,793		73,760		736
Total gross deferred tax assets	¥	720,619	¥	883,314	_	8,816
				<u> </u>		
Deferred tax liabilities:						
Pension asset	¥	(18,407)	¥	(26,468)	\$	(264)
Total gross deferred tax liabilities		(18,407)	-	(26,468)		(264)
Net deferred tax asset	¥	702,212	¥	856,846	\$	8,552

Realization of the Company's net deferred tax assets is dependent on the Company generating sufficient taxable income or the Company executing certain available tax strategies. Although realization is not assured, management believes it is more likely than not that the net deferred tax assets will be realized.

The Company files income tax returns in Japan. The Company is subject to regular income tax examinations by tax authorities. Japanese tax authorities have completed examinations of the Company through the year ended March 31, 2003. Fiscal years subsequent to 2003 are open and subject to tax examination. The Company believes that it has appropriate support for income tax positions taken on its returns based on an assessment of many factors including past experience and interpretations of tax law.

16

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 10. Employees' and Directors' Retirement Benefits

The Company has a defined benefit pension plan that covers substantially all employees, except for the seconded employees described in Note 7. 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 measurement date used to calculate the pension obligation for the benefit plan is December 31.

In September 2006, FASB issued SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans-An Amendment of FASB Statements No. 87*, 88, 106, and 132R ("SFAS 158"). SFAS 158 requires an employer to recognize the funded status of pension and other postretirement benefit plans on sponsoring employers' balance sheets and to recognize changes in the funded status in comprehensive income in the year the changes occur. It also requires the measurement date of plan assets and obligations to be as of the date of the Company's year-end, March 31. The Company adopted the requirement to recognize the funded status of its benefit plan and the disclosure requirements in its financial statement as of and for the year ending March 31, 2008. Pursuant to the adoption of those requirements, the net after-tax adjustment to accumulated other comprehensive loss at March 31, 2008 was \mathbb{1}32,626 thousand, which principally represents the impact of recognizing previously unrecognized actuarial losses and transition obligation. The incremental effects of adopting the provisions of SFAS 158 on the accompanying consolidated balance sheet at March 31, 2008 are presented in the following table.

	(Thousands of year) Before Application of SFAS 158 Adjustments			· ·		After Application of SFAS 158
Other assets	¥	44,390	¥	(44,390)	¥	_
Accrued retirement liabilities		_		(178,286)		(178,286)
Deferred tax liabilities		(17,951)		17,951		_
Deferred tax assets		_		72,099		72,099
Accumulated other comprehensive loss		_		132,626		132,626
	17					

Notes to Consolidated Financial Statements (continued)

Note 10. Employees' and Directors' Retirement Benefits (continued)

	Before Application of SFAS 158 Adjustments				After Application of SFAS 158	
Other assets	\$	443	\$	(443)	\$	_
Accrued retirement liabilities		_		(1,779)		(1,779)
Deferred tax liabilities		(179)		179		_
Deferred tax assets		_		720		720
Accumulated other comprehensive loss		_		1,323		1,323

Benefit obligation, plan assets, the funded status and amounts recognized as of and for the years ended March 31, 2007 and 2008 (measured at December 31, 2006 and 2007) are as follows:

		2007	2008			2008
	(Thousands of yen)				(U.S. dollars in thousands)	
Benefit obligation at end of year	¥	1,085,430	¥	1,197,170	\$	11,949
Fair value of plan assets at end of year		959,778		1,018,884		10,170
Funded status	¥	(125,652)	¥	(178,286)	\$	(1,779)
Contributions	¥	128,785	¥	104,915	\$	1,047
Benefits paid		(7,954)		(7,052)		(70)

Upon adoption of the recognition provision of SFAS 158, the Company recognized a net actuarial loss and transition obligation of \$119,797 thousand (US\$ 1,196 thousand) and \$12,829 thousand (US\$ 127 thousand), respectively.

18

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 10. Employees' and Directors' Retirement Benefits (continued)

The estimated net actuarial loss and net transition obligation that will be amortized from accumulated other comprehensive income into net periodic benefit cost over the year ended March 31, 2009 are summarized as follows:

	(Th	ousands of yen)	(U.S. dollars in thousands)		
Net actuarial loss	¥	3,797	\$	38	
Net transition obligation		10,770		107	
Accrued retirement liabilities	¥	14,567	\$	145	

The aggregate accumulated benefit obligation of this plan as of March 31 (measured at December 31) was as follows:

	_	2007 2008			800		2008
	_	(Thousands of yen)					(U.S. dollars in thousands)
Aggregate accumulated benefit obligation	¥		768,665	¥	865,919	\$	8,643

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, 2007 and 2008 (measured at December 31, 2006 and 2007) were as follows:

	2007	2008
Discount rate	2.0%	2.0%
Weighted average rates of increases in future salary levels	3.4%	3.5%

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, 2006, 2007 and 2008 (measured at December 31, 2005, 2006 and 2007) were as follows:

	2006	2007	2008
Discount rate	1.5%	2.0%	2.0%
Weighted average rates of increases in future salary levels	2.7%	3.4%	3.4%
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.

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 10. Employees' and Directors' Retirement Benefits (continued)

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

Year ended March 31	T)	housands of yen)	(U.S. dollar thousan	
2009	¥	4,712	\$	47
2010		5,377		54
2011		6,672		67
2012		13,666		136
2013		41,605		415
2014 – 2018		245.822		2.454

The Company's investment strategy is to manage the assets of the plan to meet its long-term obligations 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, 2007 and 2008, by asset category, are as follows:

Asset Category	2007	2008
	24.404	DO 00/
Equity securities	34.4%	39.0%
Debt securities	28.2	24.0
Foreign currency securities investment fund	30.6	33.7
Loan receivables	6.8	3.3
	100.0%	100.0%

The Company expects to contribute ¥113,138 thousand (US\$ 1,129 thousand) to its defined benefit plan for the year ending March 31, 2009.

The Company previously had provided certain defined benefits to its statutory auditors and directors who were not statutory auditors, directors or employees of SHI, Axcelis or one of their affiliates. Such benefits were based on years of service, compensation at retirement and position. This plan was unfunded. In July 2005, the company terminated this plan. The benefit relating to the service period through July 2005 will be paid when the director or statutory auditor terminates employment. The Company has accrued \(\frac{\pmathbf{2}}{2}\)1,060 thousand (US\(\frac{\pmathbf{2}}{2}\)10 thousand) for payment of such benefits.

20

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 11. 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, 2008 amounted to \(\frac{1}{2}\)7,220,699 thousand (US\(\frac{1}{2}\)7 27 million).

Note 12. Financial Instruments

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

Note 13. Supplemental Balance Sheet Information

Changes in allowance for doubtful accounts:

		2006		2007	2008		2008
			(The	ousands of yen)		<u> </u>	(U.S. dollars in thousands)
Balance at April 1	¥	18,260	¥	18,535	¥	25,481	\$ 254

Addition	275	6,946	_	_
Deduction			(25,481)	(254)
Balance at March 31	¥ 18,535	¥ 25,481	¥ —	\$ —

Note 14. Sales to Foreign Customers

The Company's sales to foreign customers amounted to \$3,407,516 thousand, \$5,060,620 thousand and \$2,111,803 thousand (US\$ 21,078 thousand) for the years ended March 31, 2006, 2007 and 2008, respectively.

21

Table of Contents

SEN Corporation, an SHI and Axcelis Company

Notes to Consolidated Financial Statements (continued)

Note 15. Concentration of Credit Risk

Financial instruments, which potentially expose the Company to concentrations of credit risk, consist primarily of trade notes and accounts receivable. 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 trade notes and accounts receivable and generally does not require collateral to secure the trade notes and accounts receivable.

For the year ended March 31, 2006, three customers accounted for net sales of 19%, 14% and 13%. Three customers accounted for net sales of 22%, 13% and 13% for the year ended March 31, 2007. For the year ended March 31, 2008, three customers accounted for net sales of 26%, 14%, and 9%, respectively.

At March 31, 2007 and 2008 accounts receivable from one customer accounted for approximated 26% and 29% of total consolidated Trade receivables, respectively.

Note 16. Contingencies

Axcelis, one of the Company's shareholders, filed for arbitration to the Japan Commercial Arbitration Association on September 8, 2006, seeking, among others, royalty payments from the Company for the sale of the Company's single-wafer high-current ion implanter SHX ("SHX"). The Company disputes the entirety of Axcelis' claims, arguing that SHX is a product which was wholly developed by SEN based on its own technologies, and there is no reason for the Company to pay any royalties to Axcelis on the sales of SHX products. In addition, the Company filed counter claims against Axcelis on October 30, 2006, seeking, among others, a remedy for damages, the refund of royalties paid to Axcelis and a permanent injunction prohibiting Axcelis from infringing the Company's U.S. and Japanese patents. The arbitration is scheduled in the first half of 2010. Management believes the ultimate resolution of this matter will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

22

Table of Contents

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.

DATED: September 29, 2008

By: /s/ Mary G. Puma

Mary G. Puma,

Chairman of the Board, Chief Executive Officer

and President

Table of Contents

Exhibit Index

Exhibit No.	
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 Company, as amended as of August 8, 2007. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-Q for the quarter ended June 30, 2007, filed with the Commission on August 9, 2007.
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 U.S. Bank National Association, as trustee, including the form of note, dated as of May 2, 2006. Incorporated by reference to Exhibit 4.12 of the Company's Report on Form 8-K filed with the Commission on May 4, 2006.		
10.1*	Axcelis Technologies, Inc. 2000 Stock Plan, as amended through June 23, 2005. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.		
10.2*	Axcelis Team Incentive Plan for executive officers, adopted by the Compensation Committee of the Board of Directors on January 20, 2005. Incorporated by reference to Exhibit 10.1 to the Company's Report on Form 8-K filed with the Commission on January 31, 2005.		
10.3	Form of Indemnification Agreement entered into by the Company with each of its directors 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, as approved by the Board of Directors on October 16, 2007 and first effective on November 6, 2007, between the Company and each of its executive officers. Incorporated by reference to Exhibit 10.4 of the Company's report on Form 10-Q for the quarter ended September 30, 2007 filed with the Commission on November 8, 2007.		
10.5*	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.		
10.6*	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.		
10.7*	Form of Restricted Stock Agreement for use under the 2000 Stock Plan. Incorporated by reference to		
Table of Contents			
	Exhibit 10.4 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.		
10.8*	Form of Restricted Stock Unit Award Agreement for use under the 2000 Stock Plan. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed with the Commission on June 28, 2005.		
10.9*	Form of Lock-Up Agreement dated October 26, 2005 between the registrant and each of its executive officers. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Commission on October 26, 2005.		
10.10*	Named Executive Officer Base Compensation at March 1, 2008. Filed with the Original Form 10-K on March 17, 2008.		
10.11*	Non-Employee Director Cash Compensation at March 1, 2008. Filed with the Original Form 10-K on March 17, 2008.		
10.12*	Amended and Restated Employment Agreement between the Company and Mary G. Puma dated November 6, 2007. Incorporated by reference to Exhibit 10.3 of the Company's report on Form 10-Q for the quarter ended September 30, 2007 filed with the Commission on November 8, 2007.		
10.13**	Organization Agreement dated December 3, 1982 between Eaton Corporation and Sumitomo Heavy Industries, Ltd. relating to SEN Corporation, an SHI and Axcelis Company formerly known as 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).		
10.14**	Master License Agreement dated January 16, 1996 between Eaton Corporation and SEN Corporation, an SHI and Axcelis Company formerly known as 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).		
10.15	Registration Rights Agreement between the Company and Quantum Partners LDC, dated as of May 2, 2006. Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the Commission on May 4, 2006.		
10.16*	Executive Separation Agreement between the Company and Marc S. Levine dated as of August 22, 2007. Incorporated by reference to Exhibit 10.1 of the Company's report on Form 10-Q for the quarter ended September 30, 2007 filed with the Commission on November 8, 2007.		
10.17*	Executive Separation Agreement between the Company and Mark Namaroff dated as of October 18, 2007. Filed with the Original Form 10-K on March 17, 2008.		
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 17, 2008.		

Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm. Filed with the Original Form 10-K on March 17, 2008.

23.1

- 23.2 Consent of Ernst & Young LLP ShinNihon, Independent Auditors, relating to the financial statements of SEN Corporation, an SHI and Axcelis Company. Filed herewith.
- 31.1 Certification of the Chief Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated September 29, 2008. Filed herewith.

Table of Contents

- 31.2 Certification of the Chief Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated September 29, 2008. Filed herewith.
- 32.1 Certification of the Chief 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 September 29, 2008. Filed herewith.
- 32.2 Certification of the Chief 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 September 29, 2008. Filed herewith.

^{*} 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 Independent Auditors

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-3 No.333-134920) of Axcelis Technologies, Inc.,
- (2) Registration Statement (Form S-8 No. 333-49726) pertaining to the Employee Stock Purchase Plan of Axcelis Technologies, Inc.
- (3) Registration Statement (Form S-8 No. 333-49768) pertaining to the 2000 Stock Plan of Axcelis Technologies, Inc. and
- (4) Registration Statement (Form S-8 No. 333-120356) pertaining to the 2000 Stock Plan of Axcelis Technologies, Inc.;

of our report dated September 19, 2008, with respect to the consolidated financial statements of SEN Corporation, an SHI and Axcelis Company, incorporated herein by reference, included in this amended Annual Report (Form 10-K/A) of Axcelis Technologies, Inc. for the year ended December 31, 2007.

Tokyo, Japan September 26, 2008 /s/ Ernst & Young ShinNihon LLP

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: September 29, 2008

/s/ Mary G. Puma

Mary G. Puma,

Chairman of the Board, Chief Executive Officer and

President

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: September 29, 2008

/s/ Stephen G. Bassett

Stephen G. Bassett,

Executive Vice President and Chief Financial Officer

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief 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 September 29, 2008.

/s/ Mary G. Puma

Mary G. Puma

Chairman of the Board, Chief Executive Officer and President

AXCELIS TECHNOLOGIES, INC.

Certification of the Chief 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 September 29, 2008.

/s/ Stephen G. Bassett

Stephen G. Bassett

Executive Vice President and Chief Financial Officer