

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

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

Date of Report (Date of earliest event reported): **August 2, 2006**

Axcelis Technologies, Inc.
(Exact name of registrant as specified in charter)

Delaware
(State or other jurisdiction of
incorporation)

000-30941
(Commission File Number)

34-1818596
(IRS Employer Identification No.)

108 Cherry Hill Drive, Beverly, Massachusetts
(Address of principal executive offices)

01915
(Zip Code)

Registrant's telephone number, including area code: **(978) 787-4000**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition

On August 2, 2006, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended June 30, 2006. The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

The information under this Item in this Current Report on Form 8-K and Exhibit 99.1 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits

(c) Exhibits

Exhibit No.	Description
99.1	Press Release dated August 2, 2006

SIGNATURE

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

Date: August 2, 2006

Axcelis Technologies, Inc.

By: /s/ STEPHEN G. BASSETT
Stephen G. Bassett
Executive Vice President and Chief Financial Officer

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Exhibit No.

Exhibit Index

99.1 Press Release dated August 2, 2006

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AXCELIS ANNOUNCES FINANCIAL RESULTS FOR THE SECOND QUARTER OF 2006

Experiences broad-based demand across product portfolio and significant momentum with new product introductions

BEVERLY, Mass. — August 2, 2006 — Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for its second quarter ended June 30, 2006. The Company reported revenues of \$117.6 million, compared to \$97.9 million for the first quarter of 2006. Worldwide revenues for the second quarter, which include revenues of SEN Corporation, an SHI and Axcelis Company, the Company's 50% owned joint venture in Japan, were \$198.2 million, compared to \$145.8 million for the preceding quarter. Net income for the second quarter was \$12.1 million, or \$0.12 per share, compared to net income for the first quarter of 2006 of \$0.5 million, or \$0.01 per share. In the corresponding quarter for the previous year, the Company reported net revenues of \$92.2 million, worldwide revenues of \$191.4 million, and net income of \$0.7 million, or \$0.01 per share, which included restructuring and related costs of \$3.8 million, or \$0.04 per diluted share.

Commenting on the Company's performance, Chairman and CEO Mary Puma said, "We achieved positive financial results in the second quarter, driven by broad-based demand across our product portfolio. New products continued to gather momentum as our Optima single wafer platform gained traction in the market. The platform's significant productivity and yield advantages are generating significant customer interest. During the quarter, we secured two key penetrations for our new single wafer Optima HD high dose system and multiple follow-on orders for our single wafer Optima MD mid dose implanter. We also landed a major order for our dry strip system from a significant memory device manufacturer, as well as several strategic placements of our film curing system."

"During the quarter we introduced the Optima HD Imax, the industry's first implanter to deliver the power of molecular implants for advanced memory and logic devices," continued Puma. "This highly enabling technology allows customers to dramatically boost productivity and reduce low energy, high dose implant process times by implanting clusters of boron, instead of individual atoms. The design builds on traditional, proven implant technology, and can be easily integrated into production — a compelling benefit for customers. We're very excited about the additional productivity and process advantages this new version of the Optima HD will provide to customers."

Axcelis believes that reporting the combined revenues of SEN, a 50% owned unconsolidated subsidiary of Axcelis, with Axcelis' own revenues, is useful to investors. SEN's ion implant products are covered by a license from Axcelis and therefore the combined revenue of the two companies indicates the full market penetration of Axcelis' technology.

Second Quarter Detail

Shipments and Margins

Shipments before provision for deferred revenue for the second quarter totaled \$116.6 million with worldwide shipments, including SEN, totaling \$195.7 million. Axcelis shipments, excluding SEN, were up 18.4% from the first quarter of 2006 and worldwide shipments, including SEN, were up 31.6%.

Geographically, Axcelis systems shipments, excluding SEN, were to: Asia 57%, North America 27% and Europe 16%.

The ion implantation business (excluding SEN) accounted for 77% of total shipments in the second quarter while other products (RTP, Dry Strip and Curing) accounted for 23%.

Service revenue (service labor, spare parts and consumables), excluding SEN, was \$46.9 million for the quarter, up 6.3% from the first quarter of 2006.

Gross margin for the second quarter was 40.8%, up from 39.9% in the preceding quarter.

Orders and Backlog

Orders (new systems bookings and service excluding SEN) received for the second quarter totaled \$159.1 million, compared to \$96.9 million for the first quarter of 2006. New system bookings, excluding service, amounted to \$112.2 million compared to \$52.8 million for the preceding quarter. Worldwide orders, including SEN, were \$260.3 million, compared to \$178.7 million for the first quarter of 2006.

Backlog plus deferred systems revenue at quarter end was \$128.9 million. Backlog consists of systems only (i.e., excluding service contracts) that are generally scheduled to ship within six months.

Balance Sheet

Cash, cash equivalents and short-term investments increased by \$25.4 million (of which \$24.2 million was received from the sale of convertible debentures) to \$176.2 million at June 30, 2006. The Company ended the quarter with working capital of \$265.1 million.

Business Outlook

Axcelis' financial outlook for the third quarter of 2006 assumes no material change in the semiconductor spending environment. Revenues in the third quarter are expected to be in a range of \$117.0 million to \$127.0 million. Worldwide revenues, including SEN, are expected to be in a

range of \$187.0 million to \$202.0 million. The Company anticipates gross margins to be 42%-43% and results of operations to provide earnings per share in the range of \$0.11 to \$0.15 per share.

Axcelis assumes no responsibility to update guidance. Axcelis will only confirm or update guidance via a press release.

Second Quarter 2006 Conference Call

The Company will be hosting a conference call today, Wednesday, August 2, 2006, beginning at 5:00 pm ET. The purpose of the call is to discuss second quarter results and to provide guidance for the third quarter of 2006. The call will be available to interested listeners via an audio webcast that can be accessed through Axcelis' home page at www.axcelis.com, or by dialing 1-800-479-1628 (1-719-457-2729 outside North America). Participants calling into the conference call will be requested to provide the company name: Axcelis Technologies, the conference leader: Maureen Hart, and pass code: #5745391. A webcast replay will be available from 8:00 pm ET on August 2, 2006 until 5:00 pm ET September 1, 2006.

Safe Harbor Statement

This document contains forward-looking statements under the SEC safe harbor provisions. These statements, which include those relating to the company developing new products, building its position in the ion implant market, and its guidance for future financial performance, are based on management's current expectations and should be viewed with caution. They are subject to various risks and uncertainties, many of which are outside the control of the Company, including the timing of orders and shipments, the conversion of orders to revenue in any particular quarter, or at all, our ability to implement successfully our profit plans, the continuing demand for semiconductor equipment, relative market growth, continuity of business relationships with and purchases by major customers, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions. These risks and other risk factors relating to Axcelis are described more fully in the most recent Form 10-K filed by Axcelis and in other documents filed from time to time with the Securities and Exchange Commission.

About Axcelis Technologies, Inc.

Axcelis Technologies, Inc., headquartered in Beverly, Massachusetts, provides innovative, high-productivity solutions for the semiconductor industry. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation, rapid thermal processing, and cleaning and curing systems. Axcelis Technologies has key product development centers in Beverly, Massachusetts, as well as in Saijo, Japan through its joint venture, SEN Corporation, an SHI and Axcelis Company. The company's Internet address is: www.axcelis.com.



Axcelis Technologies, Inc. Consolidated Statements of Operations In thousands, except per share amounts (Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2006	2005	2006	2005
Revenue				
Systems	\$ 67,734	\$ 48,947	\$ 120,138	\$ 108,640
Services	46,863	39,003	90,944	77,444
Royalties, primarily from SEN	3,043	4,228	4,479	6,130
	<u>117,640</u>	<u>92,178</u>	<u>215,561</u>	<u>192,214</u>
Cost of Revenue	<u>69,698</u>	<u>53,238</u>	<u>128,577</u>	<u>111,477</u>
Gross profit	47,942	38,940	86,984	80,737
Operating expenses				
Research & development	18,191	17,543	36,403	33,410
Sales and marketing	11,569	12,004	22,176	23,874
General and administrative	11,419	11,819	22,272	23,002
Amortization of intangible assets	627	612	1,239	1,224
Restructuring charges	399	2,083	94	3,882
	<u>42,205</u>	<u>44,061</u>	<u>82,184</u>	<u>85,392</u>
Income (loss) from operations	5,737	(5,121)	4,800	(4,655)
Other income (expense)				
Equity income of SEN	6,146	7,626	8,362	9,965
Interest income	1,915	1,284	3,566	2,294
Interest expense	(2,446)	(1,656)	(4,087)	(3,310)
Other-net	1,339	(423)	684	(437)
	<u>6,954</u>	<u>6,831</u>	<u>8,525</u>	<u>8,512</u>
Income before income taxes	12,691	1,710	13,325	3,857
Income taxes	<u>547</u>	<u>961</u>	<u>636</u>	<u>1,210</u>

Net income	\$	<u>12,144</u>	\$	<u>749</u>	\$	<u>12,689</u>	\$	<u>2,647</u>
Net income per share								
Basic	\$	0.12	\$	0.01	\$	0.13	\$	0.03
Diluted	\$	0.12	\$	0.01	\$	0.13	\$	0.03
Shares used in computing net income per share								
Basic		100,958		100,199		100,921		100,169
Diluted		101,080		100,604		101,098		100,737



Axcelis Technologies, Inc.
Consolidated Balance Sheets
In thousands
(Unaudited)

	June 30, 2006	December 31, 2005
Assets		
Current assets		
Cash and cash equivalents	\$ 69,347	\$ 71,417
Marketable securities	94,880	93,797
Restricted cash	9,225	8,037
Accounts receivable, net	103,636	79,379
Inventories, net	130,583	109,972
Prepaid expenses and other current assets	35,816	32,767
Total current assets	<u>443,487</u>	<u>395,369</u>
Property, plant & equipment, net	66,777	71,443
Investment in SEN	120,604	108,815
Goodwill	46,773	46,773
Intangible assets	14,861	16,100
Restricted cash, long-term portion	2,718	3,195
Other assets	21,704	19,748
	<u>\$ 716,924</u>	<u>\$ 661,443</u>
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 30,656	\$ 25,556
Accrued compensation	18,424	18,437
Warranty	5,276	5,739
Income taxes	2,478	3,021
Deferred revenue	34,728	30,140
Other current liabilities	12,627	11,333
Current portion, long term debt	74,217	—
Total current liabilities	<u>178,406</u>	<u>94,226</u>
Long-term debt	75,457	125,000
Long-term deferred revenue	8,932	11,177
Other long-term liabilities	4,543	4,999
Commitments and contingencies	—	—
Stockholders' equity		
Preferred Stock	—	—
Common stock	101	101
Additional paid-in capital	466,020	466,454
Deferred compensation	—	(5,385)
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(18,498)	(31,187)
Accumulated other comprehensive income (loss)	3,181	(2,724)
	<u>449,586</u>	<u>426,041</u>
	<u>\$ 716,924</u>	<u>\$ 661,443</u>

