
**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) May 4, 2004

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona
(State or other jurisdiction
of incorporation)

0-11412
(Commission File Number)

86-0411215
(IRS Employer
Identification No.)

131 South Clark Drive, Tempe, Arizona
(Address of principal executive offices)

85281
(Zip Code)

Registrant's telephone number, including area code: (480) 967-5146

Not Applicable
(Former name or former address, if changed since last report.)

Item 5. Other Events and Regulation FD Disclosure.

On May 4, 2004, we issued a press release announcing that we have entered into a definitive agreement with a Japanese-owned company, Kokusai Semiconductor Equipment Corporation (“KSEC”), to acquire KSEC’s BTI semiconductor horizontal diffusion furnace operations and assets in the United States and Europe. This press release is attached as exhibit 99.1 hereto.

Item 7. Financial Statements and Exhibits.

<u>Exhibit No</u>	<u>Description</u>
99.1	Text of press release dated May 4, 2004, titled “Amtech Systems, Inc. Agrees to Acquire KSEC’s BTI Horizontal Diffusion Furnace Operations.”

SIGNATURES

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

AMTECH SYSTEMS, INC.

Date: May 4, 2004

By: /s/ Robert T. Hass

Robert T. Hass, Vice President – Finance

EXHIBIT INDEX

Exhibit Number

Description

99.1

Text of press release dated May 4, 2004, titled "Amtech Systems, Inc. Agrees to Acquire KSEC's BTI Horizontal Diffusion Furnace Operations."

FOR IMMEDIATE RELEASE
Contact: Robert T. Hass, CFO
(480) 967-5146

**AMTECH SYSTEMS, INC. AGREES TO ACQUIRE
KSEC'S BTI HORIZONTAL DIFFUSION FURNACE OPERATIONS**

Tempe, AZ — May 4, 2004 — AMTECH SYSTEMS, INC. (NASDAQ_NM: ASYS) ("Amtech") today announced that it has entered into a definitive agreement with a Japanese-owned company, Kokusai Semiconductor Equipment Corporation ("KSEC"), to acquire KSEC's BTI semiconductor horizontal diffusion furnace operations and assets in the United States and Europe. Amtech estimates the transaction value to be an approximately \$4.6 million, including an estimated \$3.3 million to be paid at closing, \$0.3 million of assumed liabilities, and up to \$1 million to be paid as certain inventories are consumed.

Amtech will be acquiring, either through transfer of title or licensing agreements, all of the tangible and intellectual property assets used in the KSEC's horizontal diffusion furnace business. However, excluded from the transaction will be those assets used by KSEC's selling, general and administrative functions. The acquired operations have historically been known as Bruce Technology, Inc., BTI and Bruce, all well-known names in the industry. Amtech will acquire all rights to those names currently owned by KSEC. This line of horizontal furnaces represents one of, if not the, largest installed bases of such equipment in the world. Amtech's Tempress line of horizontal diffusion furnaces and BTI, represent two of the three best-known horizontal diffusion furnace brands in the industry.

As a part of the transaction Amtech will acquire approximately 14 of KSEC's employees, including three that reside in Europe. Amtech intends to continue to operate KSEC's horizontal furnace business out of its current location in Billerica, Massachusetts and through Tempress Systems, Inc. a wholly owned subsidiary, in Europe. The transaction will contribute to Amtech increasing its share of the horizontal furnace market and its brand recognition. For KSEC's fiscal years ended March 31, 2003 and 2004, the operations being acquired had estimated sales to non-affiliates of approximately \$9 million and \$11 million, respectively.

Mr. J.S. Whang, President and CEO of Amtech, stated that, "in keeping with our growth strategy, the acquisition of KSEC's horizontal business will further improve and complement our existing horizontal diffusion furnace business and immediately expand our overall market share. We expect the addition of this product line of highly reliable horizontal furnaces will result in increased profit for Amtech and the opportunity to produce stronger marketing synergies in the future. We anticipate closing this transaction by the end of June 2004."

Mr. Masakazu Ozawa, Chief Executive Officer of Kokusai Semiconductor Equipment Corporation, added, "I believe that with Amtech's world-wide distribution channel and service organization, their being the only horizontal company with significant international manufacturing presence and their passion for meeting the horizontal furnace requirements of the semiconductor industry, this transaction will be great success, and will be especially beneficial for our horizontal customers."

KSEC, a subsidiary of Hitachi Kokusai Electric, Inc, is a leader in the design and manufacture of vertical and single-wafer diffusion and LPCVD systems. For over three decades KSEC has been providing the semiconductor industry with advanced process technologies, high system reliability and world-class customer service.

Amtech Systems, Inc. manufactures capital equipment and related consumables for the semiconductor industry, including producers of the silicon wafers used in the production of semiconductor devices, MEMS and solar cells. Products include horizontal diffusion furnaces and related automation, polishing supplies and related polishing equipment.

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements. Certain information included in this press release (as well as information included in oral statements or other written statements made or to be made by Amtech Systems, Inc.) contains statements that are forward-looking. All statements other than statements of historical fact are hereby identified as "forward-looking statements," as such term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such forward looking information involves a number of known and unknown risks and uncertainties that could cause actual results to differ materially from those discussed or anticipated by management. Potential risks and uncertainties include, among other factors, the inability to complete the announced acquisition or to integrate the acquisition due to unforeseen circumstances, industry specific and general business conditions, competitive market conditions, success of Amtech's growth and sales strategies, the possibility of customer changes in delivery schedules, cancellation of orders, potential delays in product shipments, delays in obtaining inventory parts from suppliers and failure to satisfy customer acceptance requirements.

This release should be read in conjunction with the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2003 and its Quarterly Report on Form 10-Q for the quarter ended December 31, 2003 and the Form 8-K filed on this date.