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

January 2, 2009

Date of Report (Date of earliest event reported)

Amtech Systems, Inc. (Exact name of registrant as specified in its charter)

Arizona	000-11412	86-0411215
(State or other jurisdiction	(Commission	(IRS Employer
of incorporation)	File Number)	Identification No.)
131 South Clark Drive, Tempe, Arizona		85281
(Address of principal executive offices)		(Zip Code)
Registrant's telephone number, including area code	(480) 967-5146

Not applicable.

(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 (*see* General Instruction A.2. below):

□ Written communications pursuant to Rule 425 under 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 8.01 Other Events.

On December 31, 2008, the Board of Directors of Amtech Systems, Inc. (the "Company") approved a stock repurchase program, pursuant to which the Company may purchase up to \$4,000,000 of its common stock over a one-year period commencing on January 2, 2009.

On January 5, 2009, the Company issued a press release announcing its stock repurchase program. A copy of the press release is furnished as Exhibit 99.1 to this Report.

Item 9.01 Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Press Release dated January 5, 2009, announcing stock repurchase program.

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: January 5, 2009

By: /s/ Robert T. Hass

Name: Robert T. Hass Title: Chief Accounting Officer

EXHIBIT 99.1

Amtech Systems Announces Stock Repurchase Program

TEMPE, Arizona – January 5, 2009 – Amtech Systems, Inc. (NASDAQ: ASYS), a global supplier of production and automation systems and related supplies for the manufacture of solar cells, semiconductors, and silicon wafers, today announced that its Board of Directors has approved a stock repurchase program authorizing the repurchase of up to \$4 million of its common stock. As of September 30, 2008, Amtech had outstanding approximately 9.1 million shares of common stock.

J.S. Whang, President and Chief Executive Officer of Amtech, commented, "At current price levels, we believe Amtech's common stock represents an attractive investment opportunity for the Company. We also believe we can continue to invest in the initiatives that are key to our future success as well as enhance the value of our Company by repurchasing common stock under this program."

Under the program, shares may be repurchased from time to time in open market transactions at prevailing market prices or in privately negotiated purchases. The timing and actual number of shares purchased will depend on a variety of factors, such as price, corporate and regulatory requirements, alternative investment opportunities, and other market and economic conditions. Repurchases under the program will be funded from available working capital. The program may be commenced, suspended or terminated at any time, or from time-to-time at management's discretion without prior notice.

About Amtech Systems, Inc.

Amtech Systems, Inc. manufactures capital equipment, including silicon wafer handling automation, thermal processing equipment and related consumables used in fabricating solar cells and semiconductor devices. Semiconductors, or semiconductor chips, are fabricated on silicon wafer substrates, sliced from ingots, and are part of the circuitry, or electronic components, of many products including solar cells, computers, telecommunications devices, automotive products, consumer goods, and industrial automation and control systems. The Company's wafer handling, thermal processing and consumable products currently address the diffusion, oxidation and deposition steps used in the fabrication of solar cells, semiconductors, MEMS and the polishing of newly sliced silicon wafers.

Statements contained in this press release that are not historical facts may be forward looking statements within the meaning of the Private Litigation Reform Act. Such statements may use words such as "proposed," "anticipate," "believe," "estimate," "expect," "intend," "predict," "project" and similar expressions as they relate to Amtech Systems, Inc. or our management. When we make forward-looking statements, we are basing them on our management's beliefs and assumptions, using information currently available to us. Although we believe that the expectations reflected in the forward looking statements are reasonable, these forward-looking statements are subject to risks, uncertainties and assumptions including the risk of unsuccessful development of the new PECVD system, the risk of the market not accepting this product, and the risks discussed in our filings with the Securities and Exchange Commission. If one or more of these risks materialize, or if our underlying assumptions prove to be incorrect, actual are subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, growth strategy and liquidity. We have no intention, and disclaim any obligation, to update or revise any forward-looking statements, whether as a result of new information, future results or otherwise.

Contacts:

Amtech Systems, Inc Bradley C. Anderson Chief Financial Officer (480) 967-5146 MKR Group, Inc. Investor Relations Todd Kehrli or Jim Byers (323) 468-2300 asys@mkr-group.com

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