

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: OCTOBER 2, 2000  
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(Date of earliest event reported)

Commission File No. 0-23521  
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MKS INSTRUMENTS, INC.

-----  
(Exact name of Registrant as specified in its Charter)

Massachusetts

04-2277512

-----  
(State or other jurisdiction of  
incorporation or organization)

-----  
(IRS Employer Identification No.)

Six Shattuck Road, Andover, Massachusetts

01810

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(Address of principal executive offices)

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(Zip Code)

(978) 975-2350

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(Registrant's telephone number, including area code)

## ITEM 5. OTHER EVENTS.

On October 2, 2000, MKS Instruments, Inc. ("MKS"), Mango Subsidiary Corp., a wholly owned subsidiary of MKS ("Sub") and Applied Science and Technology, Inc. ("ASTeX") entered into an Agreement and Plan of Merger ("Merger Agreement"). Pursuant to the Merger Agreement, Sub will merge with and into ASTeX, with ASTeX surviving the merger as a wholly owned subsidiary of MKS. The merger, which has been approved by the Board of Directors of each company, is subject to regulatory and MKS and ASTeX stockholder approval and other customary conditions to closing.

Certain affiliates of ASTeX, holding an aggregate of approximately 5.9% of the outstanding shares of ASTeX common stock, have agreed to vote in favor of the merger. In the event that

the Merger Agreement is terminated under certain circumstances, a termination fee of \$9,075,000 is payable.

Pursuant to the Merger Agreement, MKS will issue 0.7669 share of MKS common stock for each share of ASTeX common stock outstanding immediately prior to the close of the transaction. Based on the number of shares of ASTeX and MKS currently outstanding, MKS will issue approximately 11 million shares of its common stock to complete the merger, representing approximately 30% of MKS's then outstanding shares. In addition, MKS will assume all ASTeX stock options outstanding at the effective time of the merger. The transaction is intended to be treated as a tax-free reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended, and is expected to be accounted for as a pooling transaction.

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.

Dated: October 11, 2000  
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MKS INSTRUMENTS, INC.

/s/ Ronald C. Weigner  
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Ronald C. Weigner  
Vice President and Chief Financial  
Officer

## INDEX TO EXHIBITS

EXHIBIT  
NO.  
- - - -

DESCRIPTION  
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99.1 Press release dated October 2, 2000 by the Registrant.

MKS Instruments (ticker: MKSI, exchange: NASDAQ) News Release - 2-Oct-2000

MKS Instruments and ASTeX Announce Definitive Merger Agreement

ANDOVER, Mass., Oct. 2 /PRNewswire/ -- MKS Instruments, Inc. (Nasdaq: MKSI), a leading supplier of gas measurement, control and analysis products used in semiconductor and other advanced thin-film manufacturing processes, announced today that it has entered into a definitive merger agreement to acquire Applied Science and Technology, Inc. ("ASTeX") (Nasdaq: ASTX), a Wilmington, MA-based company that designs, develops, and manufactures precision reactive gas solutions. MKS will be the surviving corporation. For the four quarters ended June 30, 2000 MKS and ASTeX revenues were \$248 million and \$140 million, respectively.

The announced transaction combines MKS, as the number one supplier of gas process control instruments, with ASTeX, the number one supplier of reactive gas solutions. The merger furthers MKS' strategy of offering a one-stop, broad based product range for its OEM and end-user customers. ASTeX's broad product line is based on its core technologies, which include reactive gas generation, power sources, and subsystem integration. The ASTeX merger will add manufacturing capabilities in Massachusetts, Colorado, Germany, and Korea.

John Bertucci, Chairman and CEO of MKS Instruments, stated that the ASTeX product offering will further enhance MKS' strategic objective of surrounding advanced process chambers with MKS control instruments and subsystems. MKS' products used to control vacuum and gas based processes will be complemented with ASTeX's reactive gas generators, RF and microwave power sources, thereby doubling the potential market served by MKS products.

"When this transaction is completed, we believe MKS will offer the most comprehensive line of process control solutions available," said John Bertucci. "Our combined products will monitor and control critical variables -- pressure, gas flow, gas composition and energy -- related to advanced thin film processes."

The transaction is consistent with MKS' stated objective of expanding its core product offering, both through strategic acquisitions and new product development. MKS acquisitions this year have included Compact Instruments, with technology for advanced vacuum instrumentation, Telvac, with vacuum subsystem manufacturing capability for the European market, Spectra International, with a line of in-process monitoring products, and D.I.P. Inc., with products and technology for digital process control networks.

"ASTeX is an ideal strategic fit for MKS," said Mr. Bertucci. "We serve virtually the same markets with zero product duplication; our product lines are fully complementary, and we have a high degree of geographical and cultural fit. We are very impressed by the high level of subsystem integration that ASTeX has achieved with its products. By offering additional fully integrated process control solutions we intend to increase MKS' value to our customers. The

combined technological capabilities of the two companies will enable us to add further value through new innovative product solutions."

Dr. Richard Post, Chairman and CEO of ASTeX, stated, "We're very enthusiastic about the combination of our two companies. Together, we will have a greater technological advantage, a larger installed customer base, and a broader ability to serve our customers. We believe that ASTeX's growth objectives can be achieved most rapidly by leveraging the global infrastructure of MKS. We are particularly enthusiastic about MKS' strong position in Japan and the rest of Asia."

Dr. Post will report to John Bertucci as Corporate Vice-President of Business Development and will serve on the Executive Committee of MKS. He and Dr. Peter Younger, President of MKS, will co-chair the MKS/ASTeX integration team. John Ross will continue to manage the new ASTeX Products group of MKS as Corporate Vice-President and General Manager, reporting to Peter Younger. At the closing, the MKS Board of Directors will be expanded from 5 to 7 members and two ASTeX designees will join.

Under the terms of the agreement, each outstanding share of ASTeX common stock will be exchanged for 0.7669 newly issued shares of common stock of MKS. This would result in the issuance of approximately 11 million shares of common stock of MKS, representing 30% of MKS' then outstanding shares. The transaction is valued at approximately \$300 million, based on the closing price of MKS common stock on Friday, September 29, 2000.

The transaction is expected to close in the fourth calendar quarter of 2000, and is expected to be slightly accretive to EPS in 2001. The transaction is expected to be accounted for as a pooling of interests, and is expected to qualify as a tax-free reorganization. The merger is subject to the approval of both MKS and ASTeX stockholders, regulatory approval and other customary closing conditions.

Conference Call Management will host a teleconference, Monday, October 2, 2000, at 8:45 a.m. ET to discuss the transaction. To participate on the audio portion of the call, please dial 800-982-3472 (domestic) or 703-871-3022 (international) at least five minutes before start-time.

MKS Instruments, Inc. is a leading worldwide developer, manufacturer and supplier of instruments, components and subsystems used to measure, control and analyze gases in semiconductor manufacturing and similar industrial manufacturing processes. MKS Instruments, Inc. sold products to more than 4,000 customers in 1999. In addition to semiconductors, MKS's products are used in processes to manufacture a diverse range of products, such as optical filters, fiber optic cables, flat panel displays, magnetic and optical storage media, architectural glass, solar panels and gas lasers.

MKS plans to file a Registration Statement on SEC Form S-4 in connection with the merger and MKS and ASTeX expect to mail a Joint Proxy Statement/Prospectus to their stockholders containing information about the merger. Investors and security holders are urged to read the Registration Statement and the Joint Proxy Statement/Prospectus carefully when they

are available. The Registration Statement and the Joint Proxy Statement/Prospectus will contain important information about MKS, ASTeX, the merger and related matters. Investors and security holders will be able to obtain free copies of these documents through the web site maintained by the U.S. Securities and Exchange Commission at <http://www.sec.gov>.

In addition to the Registration Statement and the Joint Proxy Statement/Prospectus, MKS and ASTeX file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any reports, statements and other information filed by MKS and ASTeX at the SEC public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549 or at the Commission's other public reference rooms in New York, New York and Chicago, Illinois. Please call the Commission at 1-800-SEC-0330 for further information on public reference rooms. MKS' and ASTeX's filings with the Commission also are available to the public from commercial document-retrieval services and at the web site maintained by the Commission at <http://www.sec.gov>.

MKS and ASTeX, and their respective directors, executive officers and certain members of management and employees may be soliciting proxies from MKS and ASTeX stockholders in favor of the adoption of the merger agreement and the transactions associated with the merger. A description of any interests that MKS' and ASTeX's directors and executive officers have in the merger will be available in the Joint Proxy Statement/Prospectus.

This report may contain projections or other forward-looking statements regarding future events or the future financial performance of MKS and ASTeX. These projections or statements are only predictions. Actual events or results may differ materially from those in the projections or other forward-looking statements set forth herein. Among the important factors that could cause actual events to differ materially from those in the projections or other forward-looking statements are the challenges and risks involved with integrating the operations of MKS and ASTeX, potential fluctuations in quarterly results, dependence on new product development, rapid technological and market change, acquisition strategy, manufacturing and sourcing risks, volatility of stock price, international operations, financial risk management, and future growth subject to risks. Readers are referred to MKS' and ASTeX's filings with the Securities and Exchange Commission, including their most recent filings on Form 10-K and 10-Q, for a discussion of these and other important risk factors concerning MKS and ASTeX and their respective operations.