NOVA MEASURING INSTRUMENTS LTD
Form 6-K
February 22, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934

February 22, 2016

Commission File No.: 000-30668

NOVA MEASURING INSTRUMENTS LTD.
(Translation of registrant's name into English)

Building 22 Weizmann Science Park, Rehovot
P.O.B 266
Israel
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F S Form 40-F £

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

Attached hereto and incorporated by way of reference herein is a press release issued by the Registrant and entitled: "Nova and imec developed innovative scatterometry approach for self-aligned quadruple patterning (SAQP) process control".

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, thereunto duly authorized.

NOVA MEASURING INSTRUMENTS LTD.
(Registrant)

Date: February 22, 2016 By: /s/ Dror David

Dror David
Chief Financial Officer

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Company Press Release

Nova and imec developed innovative scatterometry approach for self-aligned quadruple patterning (SAQP) process control

San Jose – February 22, 2016 – Nano-electronics research center imec and Nova Measuring Instruments (Nasdaq: NVMI), a leading innovator and key provider of metrology solutions for advanced process control used in semiconductor manufacturing, announced today at the SPIE advanced lithography conference that they are jointly developing an innovative scatterometry approach to enable SAQP process control. The initial results will be presented during the conference.

As 193nm immersion lithography is reaching its optical resolution limit using single exposure, advanced multipatterning concepts are studied to reach lower nodes. Targeting the N7 node, self-aligned quadruple patterning (SAQP) is an advanced patterning approach that uses pitch splitting to extend the capability of double patterning (SADP) 193nm immersion lithography. Nova and imec jointly developed an approach based on scatterometry technology to determine the main contributors to the CD (critical dimension) variation between different populations of lines and spaces. Using parallel interpretation of multiple scatterometry targets with slightly variable pitches, the researchers revealed that scatterometry is capable of measuring different space populations, and the developed metrology solutions can be utilized to monitor and control each process step of SAQP patterning.

“Collaborating with Nova has enabled us to develop a method to improve process control in SAQP for the most advanced nodes,” said An Steegen, senior vice president process technology at imec. “Such collaboration is helping the entire semiconductor industry to lower risks and shorten the time to market for the next generation technologies by delivering innovative metrology solutions for the key process control challenges ahead.”

“We are excited with the opportunity to collaborate with imec, join its Affiliation Program and demonstrate the value of our optical CD for early R&D stages,” said Dr. Shay Wolfling, Nova’s CTO. “We believe that the growing process challenges arising from the advance technology nodes require close partnership between research centers, customers and vendors and this is part of Nova’s stated long-term strategy. Such collaboration with imec, early in the development cycle, allows us to align our technology roadmap accordingly and contribute to our customers’ success.”

About Nova: Nova Measuring Instrument Ltd. delivers continuous innovation by providing advanced metrology solutions for the semiconductor manufacturing industry. Deployed with the world's largest integrated-circuit manufacturers, Nova's products deliver state-of-the-art, high-performance metrology solutions for effective process control throughout the semiconductor fabrication lifecycle. Nova's product portfolio, which combines high-precision hardware and cutting-edge software, supports the development and production of the most advanced devices in today's high-end semiconductor market. Nova's technical innovation and market leadership enable customers to improve process performance, enhance products' yields and accelerate time to market. Nova acts as a partner to semiconductor manufacturers from its offices around the world. Additional information may be found at www.novameasuring.com

About imec
Imec performs world-leading research in nanoelectronics. Imec leverages its scientific knowledge with the innovative power of its global partnerships in ICT, healthcare and energy. Imec delivers industry-relevant technology solutions. In a unique high-tech environment, its international top talent is committed to providing the building blocks for a better life in a sustainable society. Imec is headquartered in Leuven, Belgium, and has offices in Belgium, the Netherlands, Taiwan, USA, China, India and Japan. Its staff of about 2,200 people includes almost 700 industrial residents and guest researchers. In 2014, imec's revenue (P&L) totaled 363 million euro. Further information on imec can be found at www.imec.be. Stay up to date about what's happening at imec with the monthly imec magazine, available for tablets and smartphones (as an app for iOS and Android), or via the website www.imec.be/imecmagazine

Imec is a registered trademark for the activities of IMEC International (a legal entity set up under Belgian law as a "stichting van openbaar nut"), imec Belgium (IMEC vzw supported by the Flemish Government), imec the Netherlands (Stichting IMEC Nederland, part of Holst Centre which is supported by the Dutch Government), imec Taiwan (IMEC Taiwan Co.)and imec China (IMEC Microelectronics (Shanghai) Co. Ltd.) and imec India (Imec India Private Limited).

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding, but are not limited to, anticipated growth opportunities and projections about our business and its future revenues, expenses and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward looking statements. Factors that may affect our results, performance, circumstances or achievements include, but are not limited to, the following: our dependency on three product lines; our dependency on a small number of large customers and small number of suppliers; the highly cyclical and competitive nature of the markets we target and we operate in; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; our ability to recognize the benefits of ReVera acquisition and risks that the acquisition may disrupt current plans and operations and impact relationships with customers, distributors and suppliers; our dependency on PEMs; risks related to exclusivity obligations and non-limited liability that may be included in our commercial agreements and arrangements; our ability to retain our competitive position despite the ongoing consolidation in our industry; risks related to our dependence on our manufacturing facilities; risks related to changes in our order backlog; risks related to the worldwide financial instabilities; risks related to our intellectual property; new product offerings from our competitors; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products; risks related to currency fluctuations, risks related to acquisitions we may pursue and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's Annual Report on Form 20-F for the year ended December 31, 2014 filed with the Securities and Exchange Commission on February 25, 2015. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any

obligation to update the forward-looking information contained in this press release.