Form 144 Filer Information SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 144

FORM 144

NOTICE OF PROPOSED SALE OF SECURITIES

PURSUANT TO RULE 144 UNDER THE SECURITIES ACT OF 1933

144: Filer Information

Filer CIK 0001192439
Filer CCC XXXXXXXX
Is this a LIVE or TEST Filing? • LIVE • TEST

Submission Contact Information

Name

Phone

E-Mail Address

144: Issuer Information

Name of Issuer MKS INSTRUMENTS INC

SEC File Number 000-23621

2 TECH DRIVE SUITE 201 ANDOVER

Address of Issuer ANDOVER

MASSACHUSETTS

01810

Phone 978-645-5500

Name of Person for Whose Account the Securities are To Be Sold BAGSHAW SETH H

See the definition of "person" in paragraph (a) of Rule 144. Information is to be given not only as to the person for whose account the securities are to be sold but also as to all other persons included in that definition. In addition, information shall be given as to sales by all persons whose sales are required by paragraph (e) of Rule 144 to be aggregated with sales for the account of the person filing this notice.

Relationship to Issuer Officer

144: Securities Information

| Title of the Class of Securities To Be Sold | Name and Address of the Broker | Number of Shares or Other Units To Be Sold | Aggregate Market Value | | | Name the Securities Exchange |
|--|---|---|---------------------------|----------|------------|------------------------------------|
| Common | Fidelity Brokerage Services LLC 900 Salem Street Smithfield RI 02917 | 25000 | 2432583.38 | 66862788 | 09/06/2023 | NASDAQ |

Furnish the following information with respect to the acquisition of the securities to be sold and with respect to the payment of all or any part of the purchase price or other consideration therefor:

144: Securities To Be Sold

Title of the Amount of Date you Nature of Name of Is Date Date of Nature of Class Acquired Acquisition Person from this Donor **Securities Payment** Payment *

| | Transaction | Whom Acquired | a Acquired Gift? | l Acquired | |
|--------|--|------------------|---------------------|------------|-------------------------|
| Common | 02/15/2018 Restricted Stock Vesting | Issuer | | 5069 | 02/15/2018 Compensation |
| Common | 05/31/2018 ESPP Purchase | Issuer | | 134 | 05/31/2018 Cash |
| Common | 11/30/2018 ESPP Purchase | Issuer | | 109 | 11/30/2018 Cash |
| Common | 02/15/2019 Restricted Stock Vesting | Issuer | | 13371 | 02/15/2019 Compensation |
| Common | 05/31/2019 ESPP Purchase | Issuer | | 175 | 05/31/2019 Cash |
| Common | 11/29/2019 ESPP Purchase | Issuer | | 152 | 11/29/2019 Cash |
| Common | 02/15/2020 Restricted Stock Vesting | Issuer | | 42 | 02/15/2020 Compensation |
| Common | 05/29/2020 ESPP Purchase | Issuer | | 118 | 05/29/2020 Cash |
| Common | 11/30/2020 ESPP Purchase | Issuer | | 119 | 11/30/2020 Cash |
| Common | 02/15/2021 Restricted Stock Vesting | Issuer | | 122 | 02/15/2021 Compensation |
| Common | 05/28/2021 ESPP Purchase | Issuer | | 89 | 05/28/2021 Cash |
| Common | 10/28/2021 Restricted Stock Vesting | Issuer | | 2425 | 10/28/2021 Compensation |
| Common | 11/30/2021 ESPP Purchase | Issuer | | 67 | 11/30/2021 Cash |
| Common | 02/15/2022 Restricted Stock Vesting | Issuer | | 3008 | 02/15/2022 Compensation |

^{*} If the securities were purchased and full payment therefor was not made in cash at the time of purchase, explain in the table or in a note thereto the nature of the consideration given. If the consideration consisted of any note or other obligation, or if payment was made in installments describe the arrangement and state when the note or other obligation was discharged in full or the last installment paid.

Furnish the following information as to all securities of the issuer sold during the past 3 months by the person for whose account the securities are to be sold.

144: Securities Sold During The Past 3 Months

Nothing to Report

144: Remarks and Signature

Remarks

Date of

09/06/2023 Notice

ATTENTION:

The person for whose account the securities to which this notice relates are to be sold hereby represents by signing this notice that he does not know any material adverse information in regard to the current and prospective operations of the Issuer of the securities to be sold which has not been publicly disclosed. If such person has adopted a written trading plan or given trading instructions to satisfy Rule 10b5-1 under the Exchange Act, by signing the form and indicating the date that the plan was adopted or the instruction given, that person makes such representation as of the plan adoption or instruction date.

/s/ Ryan Riviere, as a duly authorized representative of Fidelity Brokerage Services LLC, as attorney-in-fact for Signature Seth H. Bagshaw

ATTENTION: Intentional misstatements or omission of facts constitute Federal Criminal Violations (See 18 U.S.C. 1001)