

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL                                 |           |
|--|-----------|
| OMB Number:                                  | 3235-0287 |
| Estimated average burden hours per response: | 0.5       |

|   |         |          |  |  |  |   |  |  |
|---|---------|----------|--|--|--|---|--|--|
| 1. Name and Address of Reporting Person*<br><u>BERLINGHIERI LEO</u> |         |          | 2. Issuer Name and Ticker or Trading Symbol<br><u>MKS INSTRUMENTS INC [ MKSI ]</u> |  |  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><input checked="" type="checkbox"/> Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><b>President and CEO</b> |  |  |
| (Last)  | (First) | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>02/07/2011</u>              |  |  | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person  |  |  |
| 2 TECH DRIVE  |         |          | 4. If Amendment, Date of Original Filed (Month/Day/Year)                           |  |  |   |  |  |
| (Street)<br><u>ANDOVER MA 01810</u>                                 |         |          |  |  |  |   |  |  |
| (City) (State) (Zip)  |         |          |  |  |  |   |  |  |

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) |            |                        | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|------------------------|---|--|---|
|                                 |                                      |  | Code                           | V | Amount  | (A) or (D) | Price                  |   |  |   |
| Common Stock                    | 02/07/2011                           |  | M                              |   | 16,264  | A          | \$24.5                 | 21,277  | D  |   |
| Common Stock                    | 02/07/2011                           |  | S                              |   | 16,264  | D          | \$30.66 <sup>(1)</sup> | 5,013   | D  |   |
| Common Stock                    | 02/07/2011                           |  | M                              |   | 4,000   | A          | \$23.5                 | 9,013   | D  |   |
| Common Stock                    | 02/07/2011                           |  | S                              |   | 4,000   | D          | \$30.62 <sup>(2)</sup> | 5,013   | D  |   |

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) |   | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |        | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |       |
|--|--|--------------------------------------|--|--------------------------------|---|--|--------|--|-----------------|---|--|--|---|--|-------|
|  |  |                                      |  | Code                           | V | (A)  | (D)    | Date Exercisable   | Expiration Date |   |  |  |   |  | Title |
| Stock Option (Right to Buy)                | \$24.5   | 02/07/2011                           |  | M                              |   |  | 16,264 | 11/14/2001 <sup>(3)</sup>                                | 11/14/2011      | Common Stock  | 16,264                                     | \$0  | 108,736   | D  |       |
| Stock Option (Right to Buy)                | \$23.5   | 02/07/2011                           |  | M                              |   |  | 4,000  | 01/30/2003 <sup>(4)</sup>                                | 01/30/2012      | Common Stock  | 4,000                                      | \$0  | 26,000  | D  |       |

**Explanation of Responses:**

- This transaction was executed in multiple trades at prices ranging from \$30.25 to \$31.11. The price reported above reflects the weighted average sale price. The reporting person hereby undertakes to provide, upon request, the full information regarding the number of shares and prices at which the transaction was effected.
- This transaction was executed in multiple trades at prices ranging from \$30.25 to \$31.10. The price reported above reflects the weighted average sale price. The reporting person hereby undertakes to provide, upon request, the full information regarding the number of shares and prices at which the transaction was effected.
- This option grant vests upon issue.
- 25% after first year, 6.25% each quarter thereafter - total 4 years.

/s/Renee M. Donlan POA 02/08/2011

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.