

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

SCHEDULE 13G  
(RULE 13D-102)

INFORMATION TO BE INCLUDED IN STATEMENTS  
FILED PURSUANT TO RULES 13D-1(B)(C), AND (D)  
AND AMENDMENTS THERETO FILED  
PURSUANT TO RULE 13D-(2)(B)

(AMENDMENT NO. 5)

MKS Instruments, Inc.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

55306N 10 4

-----  
(CUSIP Number)

December 31, 2004

-----  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

-----  
 1 NAMES OF REPORTING PERSONS.  
 I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Claire R. Bertucci

-----  
 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a) [ ]  
 (b) [ ]

Not Applicable

-----  
 3 SEC USE ONLY

-----  
 4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

-----  
 5 SOLE VOTING POWER

0

-----  
 6 SHARED VOTING POWER

4,546,784(1)

NUMBER OF SHARES  
 BENEFICIALLY OWNED BY  
 EACH REPORTING PERSON  
 WITH

-----  
 7 SOLE DISPOSITIVE POWER

4,546,784(1)

-----  
 8 SHARED DISPOSITIVE POWER

0

-----  
 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9,558,000(1)

-----  
 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

Not Applicable

-----  
 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

17.8%(1)

-----  
 12 TYPE OF REPORTING PERSON\*

IN

\* See Instructions before filling out

(1) CONSISTS OF SHARES BENEFICIALLY OWNED AS OF JANUARY 31, 2005. SHARES  
 REPORTED IN ROW 9 ALSO INCLUDE 5,011,216 SHARES BENEFICIALLY OWNED BY JOHN  
 R. BERTUCCI, MRS. BERTUCCI'S SPOUSE, AS OF JANUARY 31, 2005 WITH RESPECT TO  
 WHICH MRS. BERTUCCI DISCLAIMS BENEFICIAL OWNERSHIP.

- Item 1(a). Name of Issuer:  
MKS Instruments, Inc.
- Item 1(b). Address of Issuer's Principal Executive Offices:  
90 Industrial Way  
Wilmington, MA 01887
- Item 2(a). Name of Person Filing:  
Claire R. Bertucci
- Item 2(b). Address of Principal Business Office or, if None, Residence:  
The address of the reporting persons is:  
c/o MKS Instruments, Inc.  
90 Industrial Way  
Wilmington, MA 01887
- Item 2(c). Citizenship:  
Mrs. Bertucci is a citizen of the United States.
- Item 2(d). Title of Class of Securities:  
Common Stock, no par value per share.
- Item 2(e). CUSIP Number:  
CUSIP No. 55306N 10 4
- Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a: Not Applicable.
- (a)  Broker or dealer registered under Section 15 of the Exchange Act.
  - (b)  Bank as defined in Section 3(a)(6) of the Exchange Act.
  - (c)  Insurance company as defined in Section 3(a)(19) of the Exchange Act.
  - (d)  Investment company registered under Section 8 of the Investment Company Act.

- (e) [ ] An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f) [ ] An employee benefit plan or endowment fund in accordance with Rule 13d- 1(b)(1)(ii)(F);
- (g) [ ] A parent holding company or control person in accordance with Rule 13d- 1(b)(1)(ii)(G);
- (h) [ ] A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act;
- (i) [ ] A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act;
- (j) [ ] Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

Item 4. Ownership:

The filing of this statement shall not be construed as an admission that any of the reporting persons are, for the purpose of Section 13(d) or 13(g) of the Act, the beneficial owners of any securities covered under this Statement.

- (a) Amount Beneficially Owned by Claire R. Bertucci:  
9,558,000 shares(2)
- (b) Percent of Class: 17.8%(2)
- (c) Number of Shares as to which Claire R. Bertucci has:
  - (i) Sole power to vote or to direct the vote: 0 shares
  - (ii) Shared power to vote or to direct the vote:  
9,558,000 shares(2)
  - (iii) Sole power to dispose or to direct the disposition  
of: 9,558,000(2) shares
  - (iv) Shared power to dispose or to direct the disposition  
of: 0 shares

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5% of the class of securities, check the following: [ ].

- (2) CONSISTS OF SHARES BENEFICIALLY OWNED AS OF JANUARY 31, 2005. SHARES REPORTED IN ROW 4(a) ALSO INCLUDE 5,011,216 SHARES BENEFICIALLY OWNED BY JOHN R. BERTUCCI, MRS. BERTUCCI'S SPOUSE, AS OF JANUARY 31, 2005 WITH RESPECT TO WHICH MRS. BERTUCCI DISCLAIMS BENEFICIAL OWNERSHIP.

- Item 6. Ownership of More than Five Percent on Behalf of Another Person.  
Not applicable
- Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.  
Not applicable
- Item 8. Identification and Classification of Members of the Group.  
Not applicable
- Item 9. Notice of Dissolution of Group.  
Not applicable
- Item 10. Certification.  
Not applicable

SIGNATURES

After reasonable inquiry and to the best of the knowledge and belief of each of the undersigned, each of the undersigned hereby certifies that the information set forth in this statement is true, complete and correct.

Dated: February 15, 2005

/s/ Claire R. Bertucci  
-----  
Claire R. Bertucci