

Registration No. 333-\_\_\_\_\_

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER  
THE SECURITIES ACT OF 1933

MKS INSTRUMENTS, INC.  
(Exact Name of Registrant as Specified in Its Charter)

MASSACHUSETTS  
(State or Other Jurisdiction of  
Incorporation or Organization)

04-2277512  
(I.R.S. Employer  
Identification Number)

90 INDUSTRIAL WAY, WILMINGTON, MASSACHUSETTS  
(Address of Principal Executive Offices)

01887  
(Zip Code)

SECOND AMENDED AND RESTATED INTERNATIONAL EMPLOYEE STOCK PURCHASE PLAN  
(Full Title of the Plan)

JOHN R. BERTUCCI  
CHAIRMAN AND CHIEF EXECUTIVE OFFICER  
MKS INSTRUMENTS, INC.  
90 INDUSTRIAL WAY  
WILMINGTON, MA 01887  
(Name and Address of Agent For Service)

(978) 284-4000  
(Telephone Number, Including Area Code, of Agent For Service)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, no par value per share	175,000	\$22.78(1)	\$3,986,500(1)	\$505.09

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended, and based upon the average of the high and low prices of the Registrant's Common Stock as reported on the Nasdaq National Market on June 9, 2004.

STATEMENT OF INCORPORATION BY REFERENCE

Except as otherwise set forth below, this Registration Statement on Form S-8 incorporates by reference the contents of the Registration Statement on Form S-8, File No. 333-31224, and the Registration Statement on Form S-8, File No. 333-90498, relating to the Registrant's Second Amended and Restated International Employee Stock Purchase Plan.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Wilmington, Massachusetts on June 2, 2004.

MKS INSTRUMENTS, INC.

By: /s/ John R. Bertucci

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John R. Bertucci  
Chairman of the Board and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of MKS Instruments, Inc. hereby severally constitute and appoint John R. Bertucci, Ronald C. Weigner and Mark G. Borden, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the Registration Statement on Form S-8 filed herewith and any and all subsequent amendments to said Registration Statement, and generally to do all such things in our names and behalf in our capacities as officers and directors to enable MKS Instruments, Inc. to comply with all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by said attorneys, or any of them, to said Registration Statement and any and all amendments thereto.

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT, THIS REGISTRATION STATEMENT HAS BEEN SIGNED BY THE FOLLOWING PERSONS IN THE CAPACITIES AND ON THE DATES INDICATED.

Signature	Title	Date
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/s/ John R. Bertucci ----- John R. Bertucci	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	June 2, 2004
/s/ Ronald C. Weigner ----- Ronald C. Weigner	Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	June 2, 2004
/s/ Robert R. Anderson ----- Robert R. Anderson	Director	June 2, 2004
/s/ James G. Berges ----- James G. Berges	Director	June 2, 2004
/s/ Richard S. Chute ----- Richard S. Chute	Director	June 2, 2004
/s/ Hans-Jochen Kahl ----- Hans-Jochen Kahl	Director	June 2, 2004

/s/ Owen W. Robbins  
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Owen W. Robbins

Director

June 2, 2004

/s/ Louis P. Valente  
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Louis P. Valente

Director

June 2, 2004

EXHIBIT INDEX

Exhibit Number	Description
4.1 (1)	Restated Articles of Organization of the Registrant.
4.2 (2)	Articles of Amendment.
4.3 (3)	Articles of Amendment.
4.4 (4)	Amended and Restated By-Laws of the Registrant.
4.5 (4)	Specimen Certificate for Common Stock of the Registrant.
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP.
23.1	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1).
23.2	Consent of PricewaterhouseCoopers LLP.
24.1	Power of Attorney (included in the signature pages of this Registration Statement).

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- (1) Incorporated herein by reference from the Registrant's Registration Statement on Form S-4 (File No. 333-49738) filed with the Securities and Exchange Commission on November 13, 2000.
- (2) Incorporated herein by reference from the Registrant's Quarterly Report on Form 10-Q (File No. 000-23621) for the quarter ended June 30, 2001.
- (3) Incorporated herein by reference from the Registrant's Quarterly Report on Form 10-Q (File No. 000-23621) for the quarter ended June 30, 2002.
- (4) Incorporated herein by reference from the Registrant's Registration Statement on Form S-1 (File No. 333-71363) filed with the Securities and Exchange Commission on January 28, 1999, as amended.

[Wilmer Cutler Pickering Hale and Dorr LLP Letterhead]

June 10, 2004

MKS Instruments, Inc.  
90 Industrial Way  
Wilmington, MA 01887

Re: Second Amended and Restated International Employee Stock Purchase  
Plan

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 175,000 shares of common stock, no par value per share (the "Shares"), of MKS Instruments, Inc., a Massachusetts corporation (the "Company"), issuable under the Company's Second Amended and Restated International Employee Stock Purchase Plan (the "Plan").

We have examined the Articles of Organization and By-Laws of the Company, each as amended and restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

We assume that the appropriate action will be taken, prior to the offer and sale of the shares in accordance with the Plan, to register and qualify the shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of The Commonwealth of Massachusetts and the federal laws of the United States of America.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Securities and Exchange Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

WILMER CUTLER PICKERING HALE AND DORR  
LLP

By: /s/ Mark G. Borden

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Mark G. Borden, a Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated January 30, 2004 relating to the financial statements and financial statement schedules of MKS Instruments Inc., which appears in MKS Instruments Inc. Annual Report on Form 10-K for the year ended December 31, 2003.

/s/ PricewaterhouseCoopers LLP  
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PricewaterhouseCoopers LLP

Boston, MA  
June 9, 2004