

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933



EMCORE CORPORATION

Exact name of registrant as specified in its charter

New Jersey
State of Incorporation

22-2746503
IRS Employer Identification No.

145 Belmont Drive
Somerset, New Jersey 08873
Address of principal executive offices, including Zip Code

EMCORE CORPORATION
2000 STOCK OPTION PLAN
Full Title of the Plan

Thomas G. Werthan
EMCORE Corporation
145 Belmont Drive
Somerset, New Jersey 08873
Name and Address of Agent for Service

(732) 271-9090
Registrant's telephone number, including area code, of Agent for Service

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered ⁽¹⁾⁽²⁾	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, without par value	2,500,000	\$7.15 ⁽³⁾	\$ 17,875,000	\$ 1,912.63

(1) Plus an indeterminate number of additional shares of Common Stock that may be offered and issued pursuant to stock dividends, stock splits, or similar transactions.

(2) This registration statement is being filed for purposes of registering 2,500,000 additional shares of Common Stock of EMCORE Corporation, issuable pursuant to our 2000 Stock Option Plan, as amended and restated (the "Plan"). We have previously registered an aggregate 6,850,000 shares pursuant to registration statements on Form S-8 (File Nos. 333-37306, 333-60816, and

333-118076) under the Plan. The registration fees for the previously registered shares were paid at the time that the previous registration statements were filed.

- (3) Estimated pursuant to Rule 457(h) of the General Rules and Regulations under the Securities Act of 1933, as amended (the “Securities Act”), for the purpose of computing the registration fee, based on the average of the high and low sales price on the NASDAQ National Market on March 8, 2006.
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EXPLANATORY NOTE

Pursuant to General Instruction E of Form S-8, the registrant, EMCORE Corporation (the “Registrant”), is filing this registration statement (“Registration Statement”) with respect to the issuance of an additional 2,500,000 shares of its common stock, no par value per share (the “Common Stock”), under the Plan.

On May 18, 2000, May 11, 2001, and August 10, 2004, the Registrant filed registration statements (the “Prior Registration Statements”) on Form S-8 (File Nos. 333-37306, 333-60816, and 333-118076, respectively) with respect to the issuance of an aggregate 6,850,000 shares of Common Stock under the Plan. The contents of the Prior Registration Statements are hereby incorporated in this Registration Statement by reference.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Part I will be sent or given to persons to whom the information is required to be given as specified by Rule 428(b)(1) of the Securities Act. Such documents are not being filed with the Securities and Exchange Commission (the “Commission”) either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act. Such documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Form, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated herein by reference:

- (1) Registrant’s Annual Report on Form 10-K for the fiscal year ended September 30, 2005.
- (2) Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2005.
- (3) Registrant’s Current Reports on Form 8-K filed with the Commission on October 25, 2005; November 16, 2005; January 19, 2006; February 2, 2006; February 17, 2006 (Items 1.01 and 9.01 only); and March 1, 2006; as well as the Registrant’s Amended Current Report on Form 8-K/A filed with the Commission on March 6, 2006.
- (4) The Registrant’s Registration Statement on Form 8-A, filed with the Commission on February 26, 1997 (File Number 0-22175) pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which incorporates by reference the description of the shares of Common Stock contained in the Registration Statement on Form S-1 (File Number 333-18565) filed by the Registrant on December 23, 1996, as amended by Amendment No. 1 filed on February 6, 1997, Amendment No. 2 filed on February 11, 1997 and Amendment No. 3 filed on February 24, 1997, and declared effective by the Commission on March 6, 1997, and any amendment or report filed with the Commission for purposes of updating such description.

All reports and other documents filed by the Registrant with the Commission pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement, which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the respective dates of filing of such reports and documents.

Item 5. Interests of Named Experts and Counsel.

An opinion concerning the validity of the issuance of shares of Common Stock has been passed upon for the Registrant by Howard W. Brodie, Esq., Executive Vice President and Chief Legal Officer of the Registrant. See Exhibit 5.1 to this Registration

Statement. As of March 10, 2006, Mr. Brodie had options to purchase 260,000 shares of Common Stock, of which 105,345 shares were vested.

Item 8. Exhibits.

The exhibits filed as part of this Registration Statement are as follows:

Exhibit No. Description

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| 4.1 | 2000 Stock Option Plan, as amended and restated on February 13, 2006 (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on February 17, 2006). |
| 4.2 | Restated Certificate of Incorporation, dated December 21, 2000 (incorporated by reference to Exhibit 3.1 of the Registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2000). |
| 4.3 | Amended By-Laws, as amended through December 21, 2000 (incorporated by reference to Exhibit 3.2 of the Registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2000). |
| <u>5.1</u> | Opinion of Howard W. Brodie, Esq.* |
| 23.1 | Consent of Howard W. Brodie, Esq. (included in Exhibit 5.1 to this Registration Statement).* |
| <u>23.2</u> | Consent of Deloitte & Touche LLP.* |
| 24.1 | Power of Attorney (included on signature page).* |

* Filed herewith.

SIGNATURE

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 the City of Somerset, State of New Jersey, on this 10th day of March, 2006.

EMCORE CORPORATION

By: /s/ Thomas G. Werthan

Thomas G. Werthan
Chief Financial Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints and hereby authorizes Reuben F. Richards, Jr. and Thomas G. Werthan, severally, such person's true and lawful attorneys-in-fact, with full power of substitution or resubstitution, for such person and in his name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective amendments to this Registration Statement and to sign any and all additional registration statements relating to the same offering of securities as this Registration Statement that are filed pursuant to Rule 462(b) of the Securities Act, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Commission granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the date indicated.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Thomas J. Russell</u> Thomas J. Russell	Chairman of the Board and Director	March 10, 2006
<u>/s/ Reuben F. Richards, Jr.</u> Reuben F. Richards, Jr.	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 10, 2006
<u>/s/ Thomas G. Werthan</u> Thomas G. Werthan	Executive Vice President, Chief Financial Officer, and Director (Principal Accounting and Financial Officer)	March 10, 2006
<u>/s/ Richard A. Stall</u> Richard A. Stall	Executive Vice President, Chief Technology Officer, and Director	March 10, 2006
<u>/s/ Robert Bogomolny</u> Robert Bogomolny	Director	March 10, 2006
<u>/s/ John Gillen</u> John Gillen	Director	March 10, 2006
<u>/s/ Robert Louis-Dreyfus</u> Robert Louis-Dreyfus	Director	March 10, 2006
<u>/s/ Charles T. Scott</u> Charles T. Scott	Director	March 10, 2006

EXHIBIT INDEX

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| 24.1 | Power of Attorney (included on signature page).* |

* *Filed herewith.*

**EMCORE Corporation
145 Belmont Drive
Somerset, NJ 08873**

March 10, 2006

EMCORE Corporation
145 Belmont Drive
Somerset, NJ 08873

**Re: EMCORE Corporation
Registration Statement on Form S-8**

Ladies and Gentlemen:

You have requested my opinion in connection with the above-referenced registration statement (the "Registration Statement"), which is concurrently being filed by EMCORE Corporation, a New Jersey corporation (the "Company") with the Securities and Exchange Commission under the Securities Act of 1933, as amended. The Registration Statement relates to the registration of 2,500,000 additional shares of the Company's common stock (the "Shares") that may be acquired pursuant to the terms and provisions of the Company's 2000 Stock Option Plan, as amended and restated (the "Plan").

This opinion is being furnished in accordance with the requirements of Item 8 of Form S-8 and Item 601(b)(5)(i) of Regulation S-K.

I am familiar with the corporate proceedings relating to the authorization of the Shares and have reviewed the corporate proceedings taken with respect to the approval of such amendment to the Plan. I have examined and relied on originals, or copies certified to my satisfaction, of all such corporate records of the Company and such other instruments and other certificates of public officials, officers, and representatives of the Company and such other persons, and I have made such investigations of law, as I have deemed appropriate, as a basis for the opinion herein expressed.

I do not express or purport to express any opinions with respect to laws other than the Federal laws of the United States and the laws of the State of New Jersey.

Based upon the foregoing, it is my opinion that the Shares will, if issued and delivered in accordance with the terms and provisions of the Plan, be validly issued, fully paid, and non-assessable.

I hereby consent to the filing of this opinion as an Exhibit to the Registration Statement. By giving such consent, I do not thereby admit that I am an "expert" with respect to any part of such Registration Statement, as that term is used in the Securities Act of 1933, as amended, or the rules or regulations of the Commission issued thereunder.

Very truly yours,

/s/ Howard W. Brodie, Esq.
Howard W. Brodie, Esq.
Executive Vice President & Chief Legal Officer
EMCORE Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports relating to the financial statements of EMCORE Corporation and management's report on the effectiveness of internal control over financial reporting dated December 14, 2005, appearing in the Annual Report on Form 10-K of EMCORE Corporation for the fiscal year ended September 30, 2005.

/s/ DELOITTE & TOUCHE LLP

Parsippany, New Jersey
March 10, 2006
