

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 5)

Thermo Fibertek Inc.

(Name of Issuer)

Common Stock, par value \$.01 per share

(Title of Class of Securities)

88355W-10-5

(CUSIP Number)

Seth H. Hoogasian, Esq.
General Counsel
(781) 622-1000

Thermo Electron Corporation
81 Wyman Street
Waltham, MA 02254-9046

(Name, Address and Telephone Number of Person Authorized
to Receive Notices and Communications)

January 22, 1998

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(b)(3) or (4), check the following box [].

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

PAGE

NAME OF REPORTING PERSON

1 S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE
PERSON
Thermo Electron Corporation
IRS No. 04-2209186

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
(a) []
(b) [x]

3 SEC USE ONLY

4 SOURCE OF FUNDS*

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS
REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) []

6 CITIZENSHIP OR PLACE OF ORGANIZATION

State of Delaware

7 SOLE VOTING POWER

55,499,624

NUMBER OF

SHARES

8 SHARED VOTING POWER

0

BENEFICIALLY

OWNED BY

9 SOLE DISPOSITIVE POWER

EACH

55,499,624

10 SHARED DISPOSITIVE POWER

0

REPORTING

PERSON WITH

PAGE

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH
REPORTING PERSON

55,499,624

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11)
EXCLUDES CERTAIN SHARES* []

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11

90.2%

14 TYPE OF REPORTING PERSON *

CO

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Thermo Electron Corporation hereby amends its statement on Schedule 13D relating to the shares (the "Shares") of common stock, par value \$.01 per share, of Thermo Fibertek Inc. (the "Issuer"), as set forth below.

Item 2. Identity and Background.

Item 2 is hereby amended and restated in its entirety as follows:

This Amendment is being filed by Thermo Electron Corporation (the "Reporting Person"), pursuant to Rule 13d-2, to reflect an increase in the Reporting Person's holdings of the Issuer's Shares since the Reporting Person's last filing on Schedule 13D, in June 1997, of more than one percent.

The Reporting Person develops, manufactures and markets environmental, analytical and process control instruments, cogeneration and alternative-energy power plants, low-emission combustion systems, paper and waste-recycling equipment, and biomedical products. The Reporting Person also provides a range of services including environmental remediation and consulting, laboratory analysis, and metals fabrication and processing, as well as research and product development in unconventional imaging, adaptive optics, and direct energy conversion.

The principal business address and principal office address of the Reporting Person, a Delaware corporation, is 81 Wyman Street, Waltham, Massachusetts 02254-9046.

Appendix A attached to this Amendment sets forth with respect to each executive officer and director of the Reporting Person his or her (a) name; (b) residence or business address; (c) present principal occupation or employment and the name, principal business and address of any corporation or other organization in which such employment is conducted; and (d) citizenship. To the knowledge of the Reporting Person, there is no person who may be deemed to be a controlling person of the Reporting Person.

During the last five years, neither the Reporting Person nor (to the knowledge of the Reporting Person) any executive officer or director of the Reporting Person have been convicted in a criminal proceeding (excluding traffic violations and similar misdemeanors).

During the last five years, neither the Reporting Person nor (to the knowledge of the Reporting Person) any executive officer or director of the Reporting Person has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction which resulted in a judgment, decree or final order (i) enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or (ii) finding a violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is hereby amended and restated in its entirety as follows:

The Reporting Person has expended approximately \$10,906,786.75 in purchasing Shares of the Issuer since the date of its last filing on Schedule 13D. These funds were paid out of the Reporting Person's working capital.

Item 4. Purpose of Transaction

Item 4 is hereby amended and restated in its entirety as follows:

The Reporting Person may make purchases of Shares or other securities of the Issuer in such manner and in such amounts as it determines to be appropriate. In determining whether to do so for other purposes, the Reporting Person will consider various relevant factors, including its evaluation of the Issuer's business, prospects and financial condition, amounts and prices of available securities of the Issuer, the market for the Issuer's securities, other opportunities available to the Reporting Person and general market and economic conditions. Purchases may be made either on the open market or directly from the Issuer.

Except as set forth in this Item 4 and in Item 6, neither the Reporting Person nor, to the Reporting Person's knowledge, any of the executive officers or directors of the Reporting Person has any current plans or proposals which relate to or would result in any of the actions specified in clauses (a) through (j) of Item 4 of Schedule 13D, although the Reporting Person and such other persons do not rule out the possibility of effecting or seeking to effect any such actions in the future.

Item 5. Interest in Securities of the Issuer.

Items 5(a) - (c) are hereby amended and restated in their entirety as follows:

(a) The Shares beneficially owned by the Reporting Person include 55,351,624 Shares, or approximately 90% of the outstanding Shares, owned directly by the Reporting Person. To the knowledge of the Reporting Person, the executive officers and directors of the Reporting Person beneficially own an aggregate of 1,424,765 Shares or approximately 2.3% of the outstanding Shares. To the knowledge of the Reporting Person, the Shares beneficially owned by all executive officers and directors of the Reporting Person include 1,284,610 Shares that such persons have the right to acquire within 60 days through the exercise of stock options. Ownership information for each executive officer and

director of the Reporting Person who owns Shares is set forth below.

| Name ----- | Number of ----- Shares(1) ----- |
|--|--|
| John M. Albertine | 6,750 |
| Peter O. Crisp | 6,750 |
| Elias P. Gyftopoulos | 6,750 |
| George N. Hatsopoulos | 188,484 |
| John N. Hatsopoulos | 98,320 |
| Frank Jungers | 7,875 |
| Paul F. Kelleher | 90,500 |
| Robert A. McCabe | 6,750 |
| Frank E. Morris | 6,750 |
| Donald E. Noble | 116,250 |
| Hutham S. Olayan | 6,750 |
| Peter G. Pantazelos | 9,000 |
| William A. Rainville | 759,086 |
| Arvin H. Smith | 90,000 |
| Roger D. Wellington | 15,750 |
| John W. Wood Jr. | 9,000 |
| All directors and current executive officers as a group (17 persons) | 1,424,765 |

(1) Shares reported as beneficially owned by Dr. Albertine, Mr. Crisp, Dr. Gyftopoulos, Dr. G. Hatsopoulos, Mr. J. Hatsopoulos, Mr. Jungers, Mr. Kelleher, Mr. McCabe, Dr. Morris, Mr. Noble, Ms. Olayan, Mr. Pantazelos, Mr. Rainville, Mr. Smith, Mr. Wellington, Mr. Wood and all directors and executive officers as a group include 6,750, 6,750, 6,750, 157,910, 57,600, 6,750, 74,250, 6,750, 6,750, 97,850, 6,750, 9,000, 735,000, 90,000, 6,750, 9,000 and 1,284,610 Shares, respectively, that such person or members of the group have the right to acquire within 60 days.

While certain directors and executive officers of the Reporting Person are also directors and officers of the Issuer, all such persons disclaim beneficial ownership of the Shares owned by the Reporting Person.

(b) The Reporting Person and the executive officers and directors of the Reporting Person have the sole power to vote and dispose of the Shares each such person owns, except that 1,125 of the Shares that are beneficially owned by one of the directors of the Reporting Person, Mr. Frank Jungers, are held by Mr. Jungers

spouse. Shares beneficially owned by Mr. Noble include 5,715 shares allocated to Mr. Noble's account pursuant to the Issuer's deferred compensation plan for directors.

(c) The Reporting Person has effected the following transactions with respect to the Shares during the past 60 days:

| DATE | AMOUNT (SHS.) | PRICE PER SHARE | TRANSFER TYPE |
|---------|---------------|-----------------|-------------------------|
| 1/15/98 | 45,000 | \$11.31 | Purchase on Open Market |
| 1/15/98 | 1,000 | \$11.38 | Purchase on Open Market |
| 1/15/98 | 2,900 | \$11.38 | Purchase on Open Market |
| 1/15/98 | 5,000 | \$11.38 | Purchase on Open Market |
| 1/16/98 | 3,900 | \$11.06 | Purchase on Open Market |
| 1/20/98 | 1,100 | \$11.44 | Purchase on Open Market |
| 1/20/98 | 5,600 | \$11.44 | Purchase on Open Market |
| 1/21/98 | 800 | \$11.44 | Purchase on Open Market |
| 1/21/98 | 6,000 | \$11.44 | Purchase on Open Market |
| 1/21/98 | 2,700 | \$11.50 | Purchase on Open Market |
| 1/21/98 | 10,000 | \$11.50 | Purchase on Open Market |
| 1/22/98 | 1,500 | \$11.44 | Purchase on Open Market |
| 1/22/98 | 100,000 | \$11.44 | Purchase on Open Market |
| 1/22/98 | 3,300 | \$11.75 | Purchase on Open Market |
| 1/22/98 | 5,000 | \$11.88 | Purchase on Open Market |
| 1/23/98 | 3,100 | \$12.00 | Purchase on Open Market |
| 1/23/98 | 5,000 | \$12.00 | Purchase on Open Market |
| 1/27/98 | 12,000 | \$12.25 | Purchase on Open Market |

| | | | |
|---------|--------|---------|-------------------------|
| 2/4/98 | 2,600 | \$12.25 | Purchase on Open Market |
| 2/5/98 | 10,400 | \$12.44 | Purchase on Open Market |
| 2/5/98 | 1,100 | \$12.38 | Purchase on Open Market |
| 2/6/98 | 3,300 | \$12.44 | Purchase on Open Market |
| 2/9/98 | 1,000 | \$12.38 | Purchase on Open Market |
| 2/10/98 | 4,600 | \$12.38 | Purchase on Open Market |
| 2/11/98 | 2,000 | \$12.38 | Purchase on Open Market |
| 2/11/98 | 3,500 | \$12.31 | Purchase on Open Market |
| 2/12/98 | 28,000 | \$12.31 | Purchase on Open Market |
| 2/12/98 | 2,000 | \$12.31 | Purchase on Open Market |
| 2/12/98 | 5,500 | \$12.25 | Purchase on Open Market |
| 2/13/98 | 2,200 | \$12.50 | Purchase on Open Market |
| 2/13/98 | 700 | \$12.44 | Purchase on Open Market |
| 2/19/98 | 13,000 | \$12.31 | Purchase on Open Market |
| 2/20/98 | 6,400 | \$12.25 | Purchase on Open Market |
| 2/23/98 | 15,000 | \$12.38 | Purchase on Open Market |
| 2/23/98 | 10,500 | \$12.25 | Purchase on Open Market |
| 2/24/98 | 4,700 | \$12.75 | Purchase on Open Market |
| 2/24/98 | 600 | \$12.25 | Purchase on Open Market |
| 3/5/98 | 30,900 | \$12.25 | Purchase on Open Market |

To the knowledge of the Reporting Person, the executive officers and directors of the Reporting Person have effected no transactions in the Shares in the past 60 days, except that (i) Dr. George Hatsopoulos sold 3,426 shares on January 21, 1998 to cover payment of tax liability on a previous option exercise; and

(ii) Mr. John Hatsopoulos sold 5,625 shares on January 21, 1998 to cover payment of tax liability on a previous option exercise.

Item 6. Contracts, Arrangements, Understandings or Relationships with respect to Securities of the Issuer.

The first paragraph of Item 6 is hereby amended and restated in its entirety as follows:

Of the 55,351,614 Shares beneficially owned by the Reporting Person, 558,104 Shares are subject to options to acquire such Shares granted by the Reporting Person pursuant to its director and employee stock option plans. The executive officers and directors of the Reporting Person have the right, pursuant to such options, to acquire 162,000 Shares. In addition, the following executive officers and directors of the Reporting Person have the right to acquire Shares from the Issuer pursuant to the Issuer's director and employee stock option plans: Dr. George N. Hatsopoulos has the right to acquire 157,910 Shares within 60 days; Mr. John N. Hatsopoulos has the right to acquire 57,600 Shares within 60 days; Mr. Paul F. Kelleher has the right to acquire 74,250 Shares within 60 days; Mr. Donald E. Noble has the right to acquire 97,850 Shares within 60 days; and Mr. William A. Rainville has the right to acquire 735,000 Shares within 60 days.

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Signature

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

Date: March 17, 1998

THERMO ELECTRON CORPORATION

By: /s/ Melissa F. Riordan

Melissa F. Riordan
Treasurer

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Appendix A is hereby amended and restated in its entirety as follows:

APPENDIX A

The following individuals are executive officers or directors of Thermo Electron Corporation ("Thermo Electron"). Unless otherwise noted, all such individuals are citizens of the United States. Unless otherwise noted, the business address of each executive officer of Thermo Electron is 81 Wyman Street, Waltham, Massachusetts 02254-9046.

John M. Albertine: Director, Thermo Electron

Dr. Albertine is Chairman of the Board and Chief Executive Officer of Albertine Enterprises, Inc., an economic and public policy consulting firm. His business address is Albertine Enterprises, Inc., 1156 15th Street N.W., Suite 505, Washington, DC 20005.

Peter O. Crisp: Director, Thermo Electron

Mr. Crisp was, until August 1997, a General Partner of Venrock Associates, a venture capital investment firm. His address is 103 Horseshoe Road, Mill Neck, New York 11765-1005.

Elias P. Gyftopoulos: Director, Thermo Electron

Dr. Gyftopoulos is Professor Emeritus of the Massachusetts Institute of Technology. His business address is Massachusetts Institute of Technology, Room 24-109, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139.

Frank Jungers: Director, Thermo Electron

Mr. Jungers is a consultant on business and energy matters. His business address is 822 NW Murray, Suite 242, Portland, Oregon 97229.

Robert A. McCabe: Director, Thermo Electron

Mr. McCabe is President of Pilot Capital Corporation, a firm specializing in private investments and acquisition services. His business address is Pilot Capital Corporation, 444 Madison Avenue, Suite 2103, New York, New York 10022.

Frank E. Morris: Director, Thermo Electron

Dr. Morris served as President of the Federal Reserve Bank of Boston from 1968 until he retired in 1988. Dr. Morris also served as the Peter Drucker Professor of Management at Boston College from 1989 to 1994. His residential address is P.O. Box 825, 24 Sugarhouse Road, New London, New Hampshire 03257.

Donald E. Noble: Director, Thermo Electron

For more than 20 years, from 1959 to 1980, Mr. Noble served as the Chief Executive Officer of Rubbermaid, Incorporated, first with the title of President and then as Chairman of the Board. His business address is Rubbermaid Incorporated, 1147 Akron Road, Wooster, Ohio 44691.

Hutham S. Olayan: Director, Thermo Electron

Ms. Olayan is the President and a director of Olayan America Corporation and President of Competrol Real Estate Limited, firms engaged in advisory services and private real estate investments. Her business address is Suite 1100, 505 Park Avenue, New York, New York 10022. Ms. Olayan is a citizen of Saudi Arabia.

Richard F. Syron: Director, Thermo Electron

Mr. Syron has served as the Chairman and Chief Executive Officer of the American Stock Exchange since 1994. Mr. Syron was President and Chief Executive Officer of the Federal Reserve Bank of Boston from 1989 to 1994. His business address is 86 Trinity Place, New York, New York 10006.

Roger D. Wellington: Director, Thermo Electron

Mr. Wellington is the President and Chief Executive Officer of Wellington Consultants, Inc. and of Wellington Associates, Inc., international business consulting firms. His address is P.O. Box 8186, Longboat Key, Florida 34228.

George N. Hatsopoulos: Director, Chairman of the

Board and Chief
Executive Officer,
Thermo Electron

John N. Hatsopoulos: Director, President and

Chief Financial Officer,
Thermo Electron

Peter G. Pantazelos: Executive Vice President,

Corporate Development
Thermo Electron

Arvin H. Smith: Executive Vice President,

Thermo Electron

William A. Rainville: Senior Vice President,

Thermo Electron

John W. Wood Jr.: Senior Vice President,

Thermo Electron

Paul F. Kelleher: Senior Vice President,

Finance & Administration
and Chief Accounting
Officer, Thermo Electron

