

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

SCHEDULE 13D

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(a) AND
AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(a)

(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 02454-9046

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

January 31, 2000

(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 that is the subject of this Schedule 13D, and is filing
this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the
following box [].

1 NAME OF REPORTING PERSON
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) []

3 SEC USE ONLY

4 SOURCE OF FUNDS*

WC

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

[]

6 CITIZENSHIP OR PLACE OF ORGANIZATION

State of Delaware

NUMBER OF SHARES 7 SOLE VOTING POWER
BENEFICIALLY
OWNED BY EACH
REPORTING PERSON 55,773,057
WITH

8 SHARED VOTING POWER

0

9 SOLE DISPOSITIVE POWER

55,773,057

10 SHARED DISPOSITIVE POWER

0

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 a change in the information previously reported under Items 4 and 6 of this Schedule 13D.

Through the largest of its four operating segments, measurement and detection, the Reporting Person is a leading provider of analytical and monitoring instruments used in everything from life sciences research to food and beverage production. The Reporting Person serves the healthcare market through its biomedical segment and is a recognized leader in heart-assist devices, respiratory-care equipment, neurodiagnostics, and mammography systems. Through its energy and environment segment, the Reporting Person develops and operates power plants and offers a range of environmental consulting and resource management services. The Reporting Person is also a major producer of paper-recycling equipment and provides water-clarification and fiber-recovery products and services through its recycling and resource recovery segment. In addition, the Reporting Person conducts a broad range of advanced technology R&D.

The principal business address and principal office address of the Reporting Person, a Delaware corporation, is 81 Wyman Street, Waltham, Massachusetts 02454-9046.

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 has 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 \$4,500,000 in purchasing Shares of the Issuer since the Reporting Person's last filing on Schedule 13D. These funds were paid out of the Reporting Person's working capital. Any funds necessary in connection with the transaction described in Item 4 below will be 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:

On January 31, 2000, the Reporting Person issued a press release stating that it plans to spin off its equity interest in the Issuer as a dividend to the Reporting Person's shareholders. When the spinoff is completed, the Issuer will no longer be a subsidiary of the Reporting Person and will have its own entirely separate and independent board of directors and management team. The Reporting Person may retain up to 10% of the outstanding Shares in order to satisfy options held by employees and members of management. The completion of this transaction is subject to a number of conditions, including a favorable ruling by the Internal Revenue Service regarding the tax treatment of the spinoff and final action by the board of directors of the Reporting Person.

Except as set forth in this Item 4 and 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 Reporting Person beneficially owns 55,773,057 Shares, or approximately 91.1% of the outstanding Shares. To the knowledge of the Reporting Person, the executive officers and directors of the Reporting Person beneficially own an aggregate of 1,213,240 Shares or approximately 1.95% 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 919,410 Shares that such persons have the right to acquire within 60 days through the exercise of stock options. Share ownership information for each executive officer and director of the Reporting Person, as of January 1, 2000, is set forth below:

Name	Number of Shares(1)
Samuel W. Bodman	0
Peter O. Crisp	8,250
Elias P. Gyftopoulos	8,250
George N. Hatsopoulos	177,429
John N. Hatsopoulos	113,593
Brian D. Holt	0
Frank Jungers	9,375
John T. Keiser	4,923
Paul F. Kelleher	79,143
Earl R. Lewis	0
Robert A. McCabe	8,250
Theo Melas-Kyriazi	86,250
Hutham S. Olayan	8,250
Robert W. O'Leary	1,500
William A. Rainville	690,777
Richard F. Syron	0
Roger D. Wellington	17,250
All directors and current executive officers as a group (17 persons)	1,213,240

(1) Shares reported as beneficially owned by Mr. Crisp, Dr. Gyftopoulos, Dr. G. Hatsopoulos, Mr. J. Hatsopoulos, Mr. Jungers, Mr. Kelleher, Mr. McCabe, Mr. Melas-Kyriazi, Ms. Olayan, Mr. O'Leary, Mr. Rainville, Mr. Wellington and all directors and executive officers as a group include 8,250, 8,250, 139,910, 36,000, 8,250, 56,250, 8,250, 86,250, 8,250, 1,500, 550,000, 8,250, and 919,410 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 as follows: (i) Shares beneficially owned by Mr. J. Hatsopoulos include 2,900 Shares owned by his spouse; and (ii) Shares owned by Mr. Jungers include 1,125 Shares owned by his spouse.

(c) The Reporting Person has effected no transactions with respect to the Shares during the past 60 days. To the knowledge of the Reporting Person, the executive officers and directors of the Reporting Person have effected no transactions in the Shares during the past 60 days.

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

The first two paragraphs of Item 6 are hereby amended and restated in their entirety as follows:

As set forth in Item 4 hereof, the Reporting Person has announced that it plans to spin off its equity interest in the Issuer as a dividend to the Reporting Person's shareholders.

Of the 55,773,057 Shares beneficially owned by the Reporting Person, 279,163 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 52,500 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. G. Hatsopoulos has the right to acquire 139,910 Shares within 60 days; Mr. J. Hatsopoulos has the right to acquire 36,000 Shares within 60 days; Mr. Kelleher has the right to acquire 56,250 Shares within 60 days; Mr. Melas-Kyriazi has the right to acquire 86,250 Shares within 60 days; and Mr. Rainville has the right to acquire 550,000 Shares within 60 days.

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: February 1, 2000

THERMO ELECTRON CORPORATION

By: /s/ Theo Melas-Kyriazi

Theo Melas-Kyriazi
Vice President and Chief
Financial Officer

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 and director of Thermo Electron is 81 Wyman Street, Waltham, Massachusetts 02454-9046.

Samuel W. Bodman: Director, Thermo Electron

Mr. Bodman is Chairman and Chief Executive Officer of Cabot Corporation, a manufacturer of specialty chemicals and materials. His business address is Cabot Corporation, 75 State Street, Boston, Massachusetts 02109.

Peter O. Crisp: Director, Thermo Electron

Mr. Crisp was, until September 1997, a General Partner of Venrock Associates, a venture capital investment firm. He has been the vice chairman of Rockefeller Financial Services, Inc. since December 1997.

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 Chairman of Pilot Capital Corporation, a firm which is engaged in private investments. His business address is Pilot Capital Corporation, 444 Madison Avenue, Suite 2103, New York, New York 10022.

Robert W. O'Leary: Director, Thermo Electron

Mr. O'Leary is the President and Chairman of Premier, Inc., a strategic alliance of not-for-profit health care and hospital systems. His business address is Premier, Inc., 12225 El Camino Real, San Diego, California 92130.

Hutham S. Olayan: Director, Thermo Electron

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

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.

Richard F. Syron: President, Chief Executive Officer and Chairman of the Board, Thermo Electron

George N. Hatsopoulos: Director and Chairman Emeritus, Thermo Electron

John N. Hatsopoulos: Director and Vice Chairman of the Board, Thermo Electron

Theo Melas-Kyriazi: Vice President and Chief Financial Officer, Thermo Electron

Mr. Melas-Kyriazi is a citizen of Greece.

Brian D. Holt: Chief Operating Officer, Energy and Environment, Thermo Electron

John T. Keiser: Chief Operating Officer, Biomedical, Thermo Electron

Earl R. Lewis: Chief Operating Officer, Measurement and Detection, Thermo Electron

William A. Rainville: Chief Operating Officer, Recycling and Resource Recovery, Thermo Electron

Paul F. Kelleher: Senior Vice President, Finance & Administration and Chief Accounting Officer, Thermo Electron