

Edgar Filing: METTLER TOLEDO INTERNATIONAL INC/ - Form SC 13G

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5. SOLE VOTING POWER

1,965,700

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
WITH

6. SHARED VOTING POWER

0

7. SOLE DISPOSITIVE POWER

1,982,000

8. SHARED DISPOSITIVE POWER

0

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,982,000

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.50%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IA

Page 2 of 8 Pages

=====

13G

Page 3 of 8 Pages

=====

1. NAMES OR REPORTING PERSONS
S.S. OR I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS

James H. Simons

2. CHECK APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS):

(a)

(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Edgar Filing: METTLER TOLEDO INTERNATIONAL INC/ - Form SC 13G

This Schedule 13G is being filed by Renaissance Technologies LLC ("RTC") and James H. Simons ("Simons").

- (b) Address of Principal Business Office or, if none, Residence.

The principal business address of the reporting persons is:

800 Third Avenue
New York, New York 10022

- (c) Citizenship.

Dr. Simons is a United States citizen and
RTC is a Delaware limited liability company

- (d) Title of Class of Securities.

Common Stock

- (e) CUSIP Number.

592688105

Page 4 of 8 Pages

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:

- (a) Broker or dealer registered under Section 15 of the Act.
(b) Bank as defined in Section 3(a)(6) of the Act.
(c) Insurance Company as defined in Section 3(a)(19) of the Act.
(d) Investment Company registered under Section 8 of the Investment Company Act.
(e) Investment Adviser in accordance with Sec. 240.13d-1(b)(1)(ii)(E).
(f) Employee Benefit Plan or Endowment Fund in accordance with Sec. 240.13d1(b)(1)(ii)(F).
(g) Parent holding company, in accordance with Sec. 240.13d-1(b)(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 of 1940.
(j) Group, in accordance with Sec. 240.13d-1(b)(1)(ii)(J).

If this statement is filed pursuant to Sec. 240.13d-1(c), check this box .

Item 4. Ownership

- (a) Amount Beneficially Owned.

RTC: 1,982,000 shares

Simons: 1,982,000 shares, comprising the shares beneficially owned by RTC, because of Dr. Simons' position as control person of RTC.

- (b) Percent of Class. RTC: 5.50%

Edgar Filing: METTLER TOLEDO INTERNATIONAL INC/ - Form SC 13G

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 12, 2008

/s/ James H. Simons

James H. Simons

Renaissance Technologies LLC

By: /s/ Mark Silber

Mark Silber
Executive Vice President

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (see 18 U.S.C. 1001).

Page 7 of 8 Pages