

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

FORM 12b-25

NOTIFICATION OF LATE FILING

SEC File Number: 000-24838
CUSIP Number: 577223100

(Check one): ☒ Form 10-K ☐ Form 20-F ☐ Form 11-K ☐ Form 10-Q ☐ Form 10-D ☐ Form N-SAR ☐ Form N-CSR

For Period Ended: **December 31, 2005**

- ☐ Transition Report on Form 10-K
- ☐ Transition Report on Form 20-F
- ☐ Transition Report on Form 11-K
- ☐ Transition Report on Form 10-Q
- ☐ Transition Report on Form N-SAR

For the Transition Period Ended: _____

Read Instruction (on back page) Before Preparing Form. Please Print or Type.

**Nothing in this form shall be construed to imply that the Commission
has verified any information contained herein.**

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates:

PART I — REGISTRANT INFORMATION

Mattson Technology, Inc.

Full Name of Registrant

N/A

Former Name if Applicable

47131 Bayside Parkway

Address of Principal Executive Office (*Street and Number*)

Fremont, California 94538

City, State and Zip Code

PART II — RULES 12b-25(b) AND (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate)

- (a) The reason described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;
- ☒ (b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-SAR or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q or subject distribution report on Form 10-D, or portion thereof, will be filed on or before the fifth calendar day following the prescribed due date; and

(c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III — NARRATIVE

State below in reasonable detail why Forms 10-K, 20-F, 11-K, 10-Q, 10-D, N-SAR, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period. (Attach extra Sheets if Needed)

The Company has encountered an unanticipated need for additional time to complete the processes for the year-end preparation and audit of its financial statements and assessment of its internal control over financial reporting. As a result, the Company was unable to file its annual report on Form 10-K for the year ended December 31, 2005 by the prescribed filing date of March 16, 2006. The Company is currently reviewing certain expense and reserve-related entries, and the timing of certain revenue-related entries, and believes a restatement of financial statements for previous quarterly periods in 2005 is likely. The Company currently believes that the impact of such a restatement would be to reduce net income in the prior quarters of 2005 cumulatively by less than \$1.5 million, with some corresponding increase in previously announced net income for the fourth quarter of 2005, and a resulting impact on the Company's 2005 financial results not expected to exceed \$750,000. A restatement of certain annual periods prior to 2005 may also be required. If a restatement is required for annual periods prior to 2005, the Company currently believes that the impact would be to reduce previously reported shareholders' equity as of December 31, 2004 and net income previously reported for prior years in an aggregate amount not exceeding \$750,000. The Company is also currently evaluating the impact of this potential restatement on its report on internal control over financial reporting, which may result in the determination that a material weakness exists.

PART IV — OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification

Ludger Viefhues, Executive Vice President, Finance and Chief Financial Officer (510) 657-5900
(Name) (Area Code) (Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s). Yes ☒ No ☐

(3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? Yes ☒ No ☐

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

The Company's results of operations for the year ended December 31, 2005, to be reported in the annual report on Form 10-K, will reflect significant changes from the prior year, unrelated to the causes for the delay described in Part III. On February 1, 2006, the Company issued a press release reporting its results for the year ended December 31, 2005, a copy of which was furnished with a report on Form 8-K on February 1, 2006.

Mattson Technology, Inc.
(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

Date **March 17, 2006**

By /s/ Ludger Viefhues
Ludger Viefhues
Executive Vice President, Finance and Chief
Financial Officer