



DIVISION OF
CORPORATION FINANCE

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

October 13, 2010

Mr. Douglas A. Neugold
President and Chief Executive Officer
ATMI, Inc.
7 Commerce Drive
Danbury, CT 06810
Also via facsimile to (203) 797-2544

Re: ATMI, Inc.
Form 10-K for the fiscal year ended December 31, 2009
Filed February 18, 2010
File No. 001-16239

Dear Mr. Neugold:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Customers, Sales, and Marketing, page 11

1. Please discuss any risks attendant to your foreign operations. Refer to Item 101(d)(3) of Regulation S-K.

Risk Factors, page 15

2. We note your disclosure in the first paragraph that your cautionary statements "are not meant to be an exhaustive discussion of risks that apply to companies like ATMI." In future filings, please remove this limitation on the scope of your risk factors or revise to clarify that you have discussed all known material risks.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 26

Fair Value Measurements, page 29

3. In the last paragraph on page 29, we note that you received an independent third-party valuation for an auction-rate security. Please tell us what consideration you gave as to whether this third party should be identified as an expert. In your discussion, please explain the nature and extent of the third party's involvement in the valuation of the auction-rate security. If the third party was an expert, please either delete the reference or name the party and tell us what consideration you have given to providing a consent to be named as such.

Definitive Proxy Statement on Schedule 14A

General

4. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis of your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.

Compensation Discussion and Analysis, page 21

5. We note that the Compensation Committee retains discretion, in light of company and individual performance, to account for extraordinary factors in granting annual incentive compensation awards. We further note that the Committee and the Board approved an aggregate discretionary incentive compensation award of \$551,000 to the executive officers based in part on the enumerated accomplishments on page 24. Please disclose how the Compensation Committee determined the aggregate amount available for payout in 2009.

Summary Compensation Table, page 30

6. To the extent you retain a presentation that separately categorizes the compensation attributable to each type of equity award under your long-term equity incentive program, please note that the inclusion of a column that tallies the amounts disclosed in the previous columns obscures the ability of the reader to fully understand the amounts reported in the "Total" Compensation column since, under the circumstances, the amount in the total column is not the aggregate of the total dollar value of each form of compensation quantified in the other columns of the table.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

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In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please contact Jessica Dickerson, Staff Attorney, at (202) 551-3749 or me at (202) 551-3397 with any questions.

Sincerely,

Jay Ingram
Legal Branch Chief