



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

March 4, 2009

Via U.S. Mail and Facsimile (978) 262-2502

Martin S. Headley
Executive Vice President and Chief Financial Officer
Brooks Automation, Inc.
15 Elizabeth Drive
Chelmsford, Massachusetts 01824

Re: Brooks Automation, Inc.
Form 10-K for the Fiscal Year Ended September 30, 2008
Filed November 26, 2008
Form 10-Q for the Quarterly Period Ended December 31, 2008
File No. 000-25434

Dear Mr. Headley:

We have limited our review of your filings to those issues we have addressed in our comments. Where indicated, we think you should revise your future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended September 30, 2008

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 22

Critical Accounting Policies and Estimates, page 47

1. In the interest of providing readers with a better insight into management's judgments into accounting for goodwill, please consider disclosing the following:
 - The reporting unit level at which you test goodwill for impairment and your basis for that determination.
 - Each of the valuation methodologies used to value goodwill (if multiple approaches are used), including sufficient information to enable a reader to understand how each of the methods used differ, the assumed benefits of a valuation prepared under each method, and why management selected these methods as being the most meaningful for the company in preparing the goodwill impairment analyses.
 - How you weight each of the methods used including the basis for that weighting (if multiple approaches are used).
 - A qualitative and quantitative description of the material assumptions used and a sensitivity analysis of those assumptions based upon reasonably likely changes.
 - If applicable, how the assumptions and methodologies used for valuing goodwill in the current year have changed since the prior year highlighting the impact of any changes.

Financial Statements, page 37

Consolidated Statements of Operations, page 40

2. It appears that you have combined impairment losses related to goodwill, property and intangible assets in a single line item titled 'Impairment charges.' In future filings, consistent with paragraph 43 of SFAS 142, please revise your presentation to present the aggregate amount of goodwill impairment losses as a separate line item in the income statement.

Note 6. Goodwill and Intangible Assets, page 52

3. We note that you consider goodwill impaired when the net book value of a reporting unit exceeds its estimated fair value. Under paragraphs 19 – 21 of SFAS 142, we note that the goodwill impairment testing consists of two steps and that the amount of the goodwill impairment loss is based upon a comparison of the implied fair value of reporting unit goodwill with the carrying amount of that

goodwill. The implied fair value of goodwill should be determined in the same manner as the amount of goodwill recognized in a business combination. Please tell us how you considered this guidance and disclose in future filings in more detail how you determined the amount of your goodwill impairment losses.

Form 10-Q for the Quarterly Period Ended December 31, 2008

Item 4. Controls and Procedures, page 20

4. We note your disclosure that your “chief executive officer and chief financial officer have concluded that [y]our disclosure controls and procedures are effective to ensure that information required to be disclosed by [you] in the reports that [you] file under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported in accordance with the time specified by the SEC’s rules and forms.” The language that is currently included after the word “effective” in your disclosure appears to be superfluous, since the meaning of “disclosure controls and procedures” is established by Rule 13a-15(e) of the Exchange Act. Please remove the language in your future filings or revise the disclosure so that the language that appears after the word “effective” is substantially similar in all material respects to the language that appears in the entire two-sentence definition of “disclosure controls and procedures” set forth in Rule 13a-15(e).

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 or me at (202) 551-3671 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Martin James
Senior Assistant Chief Accountant