



DIVISION OF  
CORPORATION FINANCE

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

June 21, 2010

Leonard Borow  
Chief Executive Officer and President  
Aeroflex Holding Corp.  
35 South Service Road  
P.O. Box 6022  
Plainview, NY 11803

**Re: Aeroflex Holding Corp.**  
**Amendment No. 2 to Form S-1**  
**Filed June 10, 2010**  
**File No. 333-165920**

Dear Mr. Borow:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Our Growth Strategy, page 4

1. We note your disclosure on page 5 that in June 2010, you entered into an agreement to acquire Advanced Control Components, Inc. Please provide investors with sufficient information regarding this potential merger so that they can assess its materiality to your business and tell us why you have not filed this agreement as an exhibit to your registration statement.

Management, page 98

2. Please revise Mark H. Ronald's business experience description on page 101 to clarify the dates that Mr. Ronald has served as a Special Advisor to Veritas Capital and provide the dates of this employment.

Leonard Borow  
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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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jeanne Bennett at (202) 551-3606 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam at (202) 551-3316 or me at (202) 551-3635 with any other questions.

Sincerely,

Tim Buchmiller  
Senior Attorney

cc (by facsimile): Michael R. Littenberg, Esq  
Schulte Roth & Zabel LLP