



DIVISION OF
CORPORATION FINANCE

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

April 22, 2014

Via E-mail

Mr. Samuel F. Thomas
Chief Executive Officer
Chart Industries, Inc.
One Infinity Corporate Centre Drive; Suite 300
Garfield Heights, OH 44125-5370

**Re: Chart Industries, Inc.
Form 10-K for the Year Ended December 31, 2013
Filed February 25, 2014
File No. 1-11442**

Dear Mr. Thomas:

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 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Item 7. Management's Discussion and Analysis..., page 32

1. We note from your disclosures on page F-20 that you acquired a significant amount of warranty reserves in connection with the 2012 AirSep business combination and that both your warranty expense and warranty usage have increased significantly since 2011. Please show us how you will revise your MD&A in future filings to explain any material fluctuations in both your warranty expense and warranty reserve during the periods presented. Please ensure that your revisions to future filings address the reasons for any disproportionate fluctuations in trends. For example, it is unclear why warranty expense increased 40% and warranty usage increased 56% during 2013 while sales increased at a slower pace of 16% over the same period.

2. As a related matter, we note from your disclosures on page F-21 that AirSep experienced a significant number of warranty claims in one of its product lines. Please show us how you will revise either your MD&A or your critical accounting policy discussion on page 45 to address the following:
- Explain the reasons for this increased level of warranty claims;
 - Describe what has been done to date to address these warranty claims;
 - Disclose the extent to which you expect to continue experiencing a higher level of warranty claims associated with this product line in the future;
 - Explain how you determined that the warranty reserve as of December 31, 2013 was sufficient in light of the fact that warranty usage exceeded warranty expense by more than \$10 million during 2013; and
 - Describe the extent to which your product warranty reserve policies have changed as a result of the AirSep acquisition.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk, page 47

3. Your discussion of covenant compliance on page 47 makes reference to the non-GAAP measure “adjusted EBITDA.” Although you define the measure on page 48, the definition does not provide sufficient information to enable an investor to determine the specific items included or excluded from your calculation of this measure. Please show us how you will revise your future filings to both identify “adjusted EBITDA” as a non-GAAP measure and reconcile this measure to the most directly comparable GAAP measure. Please refer to Item 10(e)(1)(i) of Regulation S-K and Question 102.09 of our Compliance & Disclosure Interpretations related to Non-GAAP Financial Measures which can be found at <http://www.sec.gov/divisions/corpfin/guidance/nongaapinterp.htm>.

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.

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.

Samuel F. Thomas
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You may contact Lisa Etheredge, Staff Accountant, at (202) 551-3424 or me at (202) 551-3768 if you have questions.

Sincerely,

/s/ John Cash

John Cash
Accounting Branch Chief