



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4631

May 27, 2010

Mr. James W. Brown  
Vice President and Chief Financial Officer  
Titanium Metals Corporation  
5430 LBJ Freeway, Suite 1700  
Dallas, TX 75240

**Re: Titanium Metals Corporation  
Form 10-K for the year ended December 31, 2009  
Definitive Proxy on Schedule 14A filed April 7, 2010  
File No. 1-14368**

Dear Mr. Brown:

We have reviewed your filings and have the following 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 or may not 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 on 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 year ended December 31, 2009**

**Critical Accounting Policies and Estimates**

**Impairment of long-lived assets, page 11**

1. We note that demand for your products has declined in the periods presented. With a view towards future disclosure, please provide us with a more specific and comprehensive discussion of the changes in circumstances which would cause you to perform an impairment analysis of your long-lived assets. Also, please identify when your last impairment analysis was performed. If the fair value of your long-lived assets is not substantially in excess of the carrying value, please disclose the following:
  - The percentage by which fair value exceeds carrying value;
  - A description of the methods and key assumptions used and how the key assumptions were determined;

- A discussion of the degree of uncertainties associated with the key assumptions, and;
- A discussion of any potential events, trends and/or changes in circumstances that could reasonably be expected to negatively affect the key assumptions.

If you have determined that estimated fair values substantially exceed carrying values, please disclose that determination. Refer to Item 303 of Regulation S-K and Section V of Interpretive Release 33-8350 for guidance. Please provide us with your proposed future disclosures.

2. Additionally we note that you evaluate intangible assets for impairment when events or circumstances warrant such review. In future filings, if material, please identify the types of intangible assets you have and whether they are finite or indefinite lived.

Liquidity and Capital Resources, page 14

3. We note your analysis of cash provided by operating activities. In future periodic filings, please revise your disclosures to discuss the underlying reasons for any significant changes in the line items in your operating cash flows, specifically working capital items. Refer to Item 303(a) of Regulation S-K and to SEC Release 33-8350.

Future cash requirements – Liquidity, page 15

4. We note your disclosure on page F-14 indicating that your credit facilities contain certain financial covenants and that you were in compliance with such covenants during the years presented. We also note that you were able to borrow all available amounts under your credit facilities at December 31, 2009 without violating any covenants. If in the future it becomes reasonably likely that you will not be in compliance with any of your material debt covenants, please disclose the required ratios/amounts as well as the actual ratios/amounts as of each reporting date. Also discuss compliance with any other particular restrictions. Please also consider showing the specific computations used to arrive at the actual ratios/amounts with corresponding reconciliations to US GAAP amounts, if necessary. See Sections I.D and IV.C of the SEC Interpretive Release No. 33-8350.

Item 9A Controls and Procedures

Changes in internal control over financial reporting, page 18

5. Rule 13a-15(d) under the Securities Exchange Act of 1934, as amended, requires that your disclosure regarding changes in your internal control of financial reporting address any change in your internal control over financial reporting that occurred during your fourth fiscal quarter and that has materially affected, or is reasonably likely to materially affect, your internal control over financial reporting (emphasis added). Your disclosure does not address the “reasonably likely” part of the requirement. Please tell us supplementally whether there was any change in your internal control over financial reporting during your fourth fiscal quarter that was reasonably likely to materially affect your internal control over financial reporting. In future filings, please fully address this disclosure requirement. Please refer to Item 308(c) of Regulation S-K.

Signatures, page 22

6. We note that your principal executive officer has signed the annual report on Form 10-K on behalf of the registrant, but he does not appear to have signed individually in his capacity as your principal executive officer. Your annual report on Form 10-K must be signed by the registrant, and individually by your principal executive officer, your principal financial officer, your controller or principal accounting officer, and by at least the majority of your board of directors. Please see General Instruction D(2)(a) of Form 10-K and the signature page section of Form 10-K. In the future, please ensure that your filings are properly executed.

Notes to Consolidated Financial Statements

Note 2 – Summary of Significant Accounting Policies

Accounts Receivable, page F-10

7. We note that you provide an allowance for doubtful accounts. In future filings please quantify this allowance on the face of the financial statements or in the notes thereto and include a roll forward of the allowance activity. Alternatively, if appropriate, please clearly indicate that this allowance and related activity is not material.

Revenue Recognition, page F-11

8. We note that you record amounts charged to customers for shipping and handling in Net Sales. In future filings, please also disclose your policy for recording shipping and handling costs. Please refer to ASC Topic 605-45-50-2.

Note 12 – Income Taxes, page F-16

9. In future filings please disclose the amounts and expiration dates of operating loss and tax credit carryforwards. Please refer to ASC Topic 740-10-50-3.

**Definitive Proxy on Schedule 14A**

Executive Officers, page 24

10. We note that the business experience and background provided for Mr. Christopher Armstrong does not appear to cover all of the past five years, as required by Item 401(e)(1) of Regulation S-K. In future filings, please ensure that the required information is provided from at least the past five years.

Nominations Committee; Identifying and Evaluating Director Nominees, page 26

11. While we note that you have no policy regarding the diversity of your nominees for directors, you have not stated whether the nominating committee considers diversity in identifying nominees for director. Please provide this disclosure in future filing in compliance with Item 407(c)(2)(vi) of Regulation S-K.

Leadership Structure of the Board of Directors and Non-Management and Independent Director Meetings, page 26

12. We note your statement that “[your] board of directors believes its leadership structure is appropriate for a controlled company under the NYSE listing standards.” With a view towards future disclosure, please tell us why the board holds this belief. Please refer to Item 407(h) of Regulation S-K.

Compensation of Executive Officers and Directors, page 31  
Compensation Discussion and Analysis, page 31

13. With a view towards future disclosure, please provide us with a materially complete description and analysis of the individual factors considered in determining the compensation applicable to each of your named executive officers. As presented, your discussion lacks specificity about how you calculated the amounts included in the Summary Compensation table on page 35. For example in 2009, for Harold Simmons, you have not discussed how you computed the \$1 million for your portion of the ISAs fee for base salary, nor how you computed the directors fees of \$24,000 which you paid. We note that the amount charged under the ISAs and the cash director fees are not dependent upon your financial performance. Please tell us what they are dependent upon and the relative weights given to each factor considered.

14. Since the amount of time the named executive officers are expected to devote to the company was a factor in the determination of compensation, with a view towards future disclosure please tell us the amount of expected time that was expected to be devoted to the company by each of the named executive officers during 2009.

Summary of Cash and Certain Other Compensation of Executive Officers, page 35  
2009 Grants of Plan-Based Awards, page 37

15. In future filings, for the awards of stock, please clarify whether the aggregate grant date fair value was computed in accordance with FASB ASC Topic 718.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please provide us with a supplemental response letter that keys your responses to our comments and provides any requested supplemental information. Detailed letters greatly facilitate our review. Please file your supplemental response on EDGAR as a correspondence file. 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 and 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 their filings;
- 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.

Mr. James W. Brown  
Titanium Metals Corporation  
May 27, 2010  
Page 6

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.

If you have any questions regarding these comments, please direct them to Mindy Hooker, Staff Accountant, at (202) 551-3732, Dorine Miller, Financial Analyst, at (202) 551-3711, Dieter King, Attorney, at (202) 551-3338 or to the undersigned at (202) 551-3689.

Sincerely,

John Hartz  
Sr. Asst. Chief Accountant