

Mail Stop 6010

September 6, 2006

Stephen J. Fanning
President and Chief Executive Officer
Thermage, Inc.
35881 Industrial Boulevard
Hayward, California 94545

**Re: Thermage, Inc.
Registration Statement on Form S-1
Filed August 10, 2006
File No. 333-136501**

Dear Mr. Fanning:

We have reviewed your registration statement and have the following comments. Where indicated, we think you should revise your document 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a *bona fide* estimate of the public offering price within that range.

Prospectus Cover Graphics

2. Please reconcile your secondary headline regarding independent data with your statement on page 8 that there are no published, peer-reviewed studies.
3. Please clarify what rhytids are.

Prospectus Summary, page 1

4. The introductory paragraph to your summary states that the summary is not complete. A summary, by its very nature, does not and is not required to contain all of the detailed information that is in the prospectus. However, if you have elected to include a summary in your prospectus, it must be complete. Do you mean to say that, because this is a summary, it may not contain all of the information that is important to your investors? Delete the reference to an incomplete summary from your prospectus.

Our Company, page 1

5. We note your disclosure in the first paragraph that surgical procedures “cost thousands of dollars.” Please revise to clarify how the cost of your procedures compares to alternative, surgical procedures.
6. Revise your disclosure to specify the scope of the FDA clearance you received in 2002.

The Market . . . , page 1

7. Please tell us whether you commissioned any of the market data used in your document and whether any of the data was prepared for use in this registration statement.

Our Thermage Procedure, page 2

8. Given the disclosure in the second risk factor on page 8, please tell us why your disclosure in the second full paragraph on page 3 and other disclosure in your prospectus regarding your technology being “clinically proven” is appropriate.
9. If you retain the disclosure in the second full paragraph on page 3 and related disclosure elsewhere in the prospectus, clarify the basis for that disclosure. To the extent the disclosure summarizes reports of third parties, please file the consents required by Rule 436.

Summary Financial Data, page 6

10. Please tell us why a separate column was not provided to show the pro forma impact of the conversion of all outstanding shares of your preferred stock into shares of common stock and the reclassification of convertible preferred stock warrants from liabilities to stockholders' equity (deficit). We note that you included these transactions on the capitalization table on page 26 and on the face of the balance sheet in the financial statements on page F-3.

Risk Factors, page 8

11. We note that your authorized capital stock will consist of 100,000,000 shares of common stock and 10,000,000 shares of preferred stock. If true, please add a risk factor that addresses the fact that you may issue authorized but unissued shares of common and preferred stock without further shareholder approval and that these shares may be granted rights and preferences that are greater than those of common shares being offered pursuant to this prospectus.

If there is not sufficient patient demand . . . , page 10

12. Please include the negative coverage as a separate risk factor. Describe negative media coverage and negative reports from the medical community or patients. Also, please tell us about the rates of these reports.

Product liability suits . . . , page 16

13. Please clarify what you mean by "properties" and "changes" in the first sentence of the second paragraph so investors can understand the scope of the risk.

After-Market Modifications . . . , page 16

14. The first sentence implies that modifications have reached the market. However, later in this risk factor, you state that risk exists "if" the modifications reach the market and your security features fail. Please reconcile these statements.

If we fail to obtain and maintain . . . , page 18

15. Please disclose any historical material recalls of your products.

Use of Proceeds, page 25

16. We note that you intend to use some of the offering's proceeds to repay your working capital line with GE Capital. Please provide the disclosure required by Instruction 4 to Item 504 of Regulation S-K.

Dilution, page 28

17. We note that the amount of total consideration from existing stockholders is \$48.7 million. It appears that this amount assumes conversion of the preferred stock and the reclassification of the warrants. Please tell us how you calculated the amount of total consideration and reconcile with pages F-3 and F-20.

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

18. Please discuss the material effects of references to your company or products in the media. Also disclose the extent of your involvement in obtaining these references.

Significant Business Trends, page 32

19. Please disclose any known reasons for the trend toward decreased net revenue from RF generators disclosed on page F-9.

Critical Accounting Policies and Estimates, page 33

20. We note that the fair value of your common stock underlying options granted during the period from January 1, 2005 through June 30, 2006 was originally estimated by your "board of directors, with input from management" and you did not obtain contemporaneous valuations by an unrelated valuation specialist. You subsequently reassessed the valuation of your common stock relating to grants of options during the 18 months ended June 30, 2006. In the retrospective valuation, you estimated the fair value of your common stock based upon several factors, including your "operating and financial performance, progress and milestones attained in [y]our business, past sales of convertible preferred stock, and the expected valuation that [you] would obtain in an initial public offering." We note your belief that "the combination of these factors and events reflect a true measurement of [y]our relative fair value over an extended period of time and believe that the fair value of [y]our common stock is appropriately reflected using a linear progression from \$4.00 per share of common stock at January 1, 2005, to \$11.93 at June 30, 2006." Please respond to the following comments:

- Please tell us and revise to disclose the methodologies and all of the significant factors and assumptions used in determining the fair value of your common stock as of January 1, 2004 (\$4.00) and as of June 30, 2006 (\$11.93).
- Please discuss how management concluded that a linear progression model is consistent with the definition of fair value under U.S. GAAP.
- Please disclose the reasons why you choose to use a linear progression valuation model to value the common stock underlying your stock option

grants and why you chose not to obtain a contemporaneous valuation by an unrelated valuation specialist.

Please note that we are deferring any final evaluation of stock compensation until the estimated offering price is specified, and we may have further comments in that regard when you file the amendment containing that information.

Stock-Based Compensation, page 41

21. Please revise, as necessary, the dollar amounts included in the last paragraph on this page by removing the word “million.” Please also reconcile the amount of stock-based compensation expense of \$1,792 in the six months ended June 30, 2006 to the amount of employee stock-based compensation expense recognized under SFAS 123R in the six months ended June 30, 2006 of \$1,602 as disclosed in Note 9 on page F-28.

Liquidity and Capital Resources, page 42

22. Please revise your contractual obligations table to include other long-term liabilities reflected in your balance sheet under GAAP, or tell us why the current disclosure complies with Item 303(a)(5) of Regulation S-K

Business, page 47

Injections, page 49

23. We note your disclosure regarding injections that “the effects of these procedures are temporary and require repeat treatment . . .” We also note your disclosure in the first full paragraph on page 50 that “we believe that the ideal treatment [provides] lasting, noticeable effect from a single procedure . . .” In an appropriate section of your prospectus, please disclose the limitations of the Thermage procedure, including whether the effects of the Thermage procedure are temporary and require repeat treatments to maintain results.

Clinical Research, page 59

24. Please clarify whether the peer-reviewed articles were written and published by independent researchers.

Manufacturing, page 60

25. Please clarify which manufacturing steps you conduct at your facility.

Government Regulation, page 61

26. With a view toward disclosure, please tell us the status of the FDA clearances you are in the process of seeking as you mention on page 3.

International, page 64

27. Given your risk factor about foreign regulations, please tell us why you do not disclose the regulatory processes in each of the regions mentioned on page F-9.

Management, page 66

28. Please revise to disclose the information required by Item 401(e) for Dr. Knowlton and Mr. Ludlum.
29. With a view toward disclosure, please tell us the name of the “privately held medical device company” mentioned in this section. Also tell us the nature of the company’s business.
30. Please clarify the nature of Mr. Sieczkarek’s “various senior executive positions.”

Audit Committee, page 69

31. Please tell us how your audit’s committees role of “recommending” auditors as mentioned in the first bullet point is consistent with Rule 10A-3(b)(2).

Summary Compensation Table, page 72

32. Please add a row in the table for Mr. Byrnes. See Regulation S-K Item 402(a)(3)(i).

Employment Agreements and Change of Control Arrangements, page 78

33. Please revise to disclose the number of employees as well as the identities of the directors and executive officers that have been selected for participation in the severance benefit plan.

Consulting Agreement . . . , page 80

34. Please disclose the terms and duration of the agreement.

Option Re-Pricing Arrangement, page 81

35. Please revise to disclose the identities of the directors and executive officers referenced here, the number of options subject to repricing and the original exercise price of the repriced options.

Principal Stockholders, page 82

36. Please reconcile the number of people mentioned in parentheses in the last row with the number of executive officers and directors mentioned on page 66.

Description of Capital Stock, page 85

37. Your disclosure may not be qualified by reference to statutes. Please revise the first paragraph accordingly.

Where You Can Find Additional Information, page 96

38. Please disclose the toll-free telephone number in Regulation S-K Item 101(e).

Financial Statements, page F-1

Note 2 - Summary of Significant Accounting Policies, page F-7

Fair Value of Financial Instruments, page F-8

39. Please note that the disclosures required by SFAS 107 are not limited to current assets and liabilities. Please revise to provide all of the disclosures required by SFAS 107, or tell us why the current disclosure complies.

Revenue Recognition, page F-10

40. Please tell us in more detail how you determined the current and long-term portions of the deferred revenue. We note that deferred revenue includes sales of extended warranty contracts.

Net Income (Loss) Per Share, page F-12

41. We note that you used the two-step method for computing basic earnings per share in 2004. As a result, you allocated \$3,800,000 to preferred stockholders of your total net income of \$5,033,000. Please tell us how you computed the allocation amount for the preferred stockholders and relate your calculation to the terms of the preferred stock dividends on pages F-20 – F-21. Please refer to paragraphs 60 -61 of SFAS 128 and Issue 3 of EITF 03-6.

42. With respect to your calculation of pro forma earnings per share, please tell us and disclose why you reduced the loss in the numerator for the charges related to the preferred stock warrant liability. Please discuss the assumptions underlying this adjustment. Please also refer to our comment below on the warrants.

Note 3. Change in Accounting Policy, page F-15

43. Please tell us and disclose the method and significant assumptions used to value the preferred stock warrants at each reporting period and upon initial adoption of FSP 150-5. See paragraph 10 of SFAS 107.

Note 8 - Redeemable Convertible Preferred Stock, page F-20

Warrants for Convertible Preferred Stock, page F-22

44. We note that assuming the conversion of your remaining preferred stock and the exercise of warrants for preferred stock into common stock, the holders are entitled to certain registration rights as indicated on page 86. Please disclose the significant terms of any registration rights agreements, including circumstances under which you may be required to pay penalties. See paragraph 4 of SFAS 129.
45. On page 43, you disclose that “[u]pon completion of this offering, all of [y]our warrants to purchase shares of preferred stock will be either exercised or converted into warrants to purchase common stock and, accordingly, the liability will be reclassified as common stock and additional paid-in capital.” The disclosure on page 22 does not discuss the right of the Series C preferred stock warrant holders to exchange those warrants for common stock warrants. Instead, the disclosure discusses terms of “expiration” for the warrants including “immediately prior to the closing” of a public offering for the warrants issued in 2002 and on the third anniversary of the offering for the warrants issued in 2005, both if not earlier expired. Please reconcile your disclosures and discuss how you considered those terms of the warrants in your pro forma accounting and disclosure.

Note 9 – Common Stock, page F-23

Stock Option Plan, page F-23

46. With respect to your stock option disclosures, please provide the following disclosures or tell why you were not required to provide them.
- Information related to the weighted average grant date fair value of options and unvested stock and methods and assumptions used to calculate fair value. Please see paragraphs 47 (b) – (d) of SFAS 123.

- The total incremental compensation cost resulting from modifications. Please see paragraph A240(g)(2) of SFAS 123R.
- Information related to options granted to non-employees under paragraphs 47 and 48 of SFAS 123 or paragraph 64 of SFAS 123R.

Part II

Item 15. Recent Sales of Unregistered Securities, page II-2

47. Please revise your disclosure generally to include all of the information required by Item 701 of Regulation S-K for each of the sales during the past three years. Note that this disclosure item is not limited to equity transactions. We note for example the notes payable disclosed on page F-19.

Item 17. Undertakings, page II-4

48. Please provide the undertakings contained in Items 512(a)(5)(ii) and 512(a)(6) of Regulation S-K.

Exhibits

49. Please file complete exhibits, including all attachments. For example, we note your reference to an "omitted" attachment in exhibit 10.5.

* * * * *

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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.

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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a 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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact at David Burton at (202) 551-3626 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. Please contact Donald C. Hunt at (202) 551-3647 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via fax): David Saul, Esq., Wilson Sonsini Goodrich & Rosati, P.C.