

COMMENTS REGARDING LETTER AND MEMO CONTENT

Introduction/summary

The purpose of the letter or memo **MUST** clearly be stated in one of the first two sentences! Let the reader know what to expect in the letter or memo. Provide a brief description of the situation (summarize the content of the letter) and summarize the purpose of the letter. Explain what is in the letter (summarize main points).

Background

The background provides information to “set the scene” - in other words help the reader understand the context of the memo. Before explaining that steel exhibited ductile to brittle transition (in the discussion), it would be advisable to explain (in the background) what ductile to brittle transition is (assuming of course, that your reader may not know – don’t assume your reader knows what you will be discussing).

Discussion

The discussion is the “heart” of the letter or memo where you communicate the necessary information. Explain what you did and what the results were. Do not draw unsubstantiated conclusions. Do not state “martensite was formed when the steel was quickly quenched” unless you have data to support that. A better statement may be: “the steel had a hardness of 45 Rc after quenching in water. Comparing this hardness with that of martensite for this material (Figure 10.2, Ref [1]) indicates martensite was formed.”

Conclusion

The conclusion should:

- “Recap” the important points

- Concisely summarize the answer to the question (the results and discussion should explain the answer in detail).

- Describes what action is to be taken by you or the reader

Conclusions should:

- NOT** discuss information that was not discussed in the background or discussion

- NOT** refer to figures or tables.

- And it **definitely** should **not** say: “in this letter I gave you a summary of what I was going to talk about, then I told you about the results.” It would be better to say: “I hope the information regarding basic mechanical properties of the materials tested, as discussed above, will be useful to you.”

At the end of the body

A courteous closing is required. Always inform the reader of your desire to help in the future, and provide contact information (phone number, email, etc.). Then do **NOT** forget to sign it!

References

Cite where you get information! For relatively short letters and memos (less than a few pages), it is generally desirable use superscript numerals and place bibliography as a footnote:

The average rainfall in Portland in 1998 was 45.6 inches, as measured at Portland International Airport¹.

Put bibliographic information at the bottom of the page:

¹National Weather Service, Report XYZ, 1999.

Attachments

In this course, always include the original data. Also, generally you should include figures, graphs, tables, etc. as attachments (stapled together with the letter or memo). At the very bottom of the last page, below the listing of references, list the attachments:

ATTACHED: graph of heat treat results
original data

Comments regarding common errors or omissions:

Always state the purpose of the letter within the first two sentences.

The conclusion should always summarize/restate the main points (answer the question asked).

Discuss/explain the results – not just state “the yield strength was 20ksi” – so what?

The results should typically be in a table or graph and may be attached to the letter or memo.

Mention all figures, tables, attachments, etc. in the body of the letter.

Cite all information obtained from other sources besides your own work.

MORE STUFF:

While format and depth of coverage will vary depending upon the type of document and its purpose, at a minimum, all technical documents should do the following:

- State what the question is to be answered.
- Summarize what you did to answer the question.
- Educate the audience or reader so they know everything they need to know to understand what you did and to understand the answer.
- Describe what was done to answer the question.
- Explain the results (interpret them).
- State the answer to the question.

Letters and memos generally are written to communicate some work the author has performed. Typically, it answers a question. The following is provided as an **extreme** example of a poor technical letter.

199°F

This is an answer, but what is the question? A slightly better document would be:

The purpose of this investigation was to determine the boiling point of water at a pressure of 23 inches of mercury. A test was performed, and it was determined to be 199°F.

This still doesn't help the reader understand very much. What else might you, the reader, want to know? You might want to know why this was done; why is it important? Even if you had requested the author to perform the work for you, it would appropriate for the author to remind you why this work was done.

Per your request (letter from Mr. He Is Teacher to I. M. Student, February 30, 2002) we performed a test to determine the boiling point of water at a pressure of 23 inches of mercury. The nominal atmospheric pressure at sea level is 29.9 inches of mercury but it is lower at higher elevations. The testing showed the boiling point to be 199°F at a pressure of 23 inches of mercury.

You may need to be educated to understand the answer. You may like to know what was done to arrive at the answer. You may need to have the data interpreted for you. So obviously, the above example still needs some work.

If you are going to read a technical document, you would like to know the following:

- What question does this document answer?
- What do I need to know to understand the answer?
- What did the author do to answer the question?

What were the results of what was done?
How should I interpret your results?
What is the answer to the question?
Should anything else be done? What?

The following provides an outline of the basic elements that all forms of formal communication (regarding testing and experimentation) should contain. They may or may not be grouped together (for example, Introduction and Summary are often combined in one section or one paragraph).

1. Introduction: What is the question to be answered?
2. Summary: Summarize what you did to answer the question.
3. Background: What does the reader need to know to understand what you did?
4. Methodology: What did you do to answer the question?
5. Results: What is the data?
6. Discussion: How do you interpret the data?
7. Conclusion: What is the answer to the question?
8. Recommendation: Should anything else be done, or done differently?
9. References: Cite all sources of information used
10. Appendices or attachments:
Any other information that may be of interest, but not necessary to the understanding.

NOTE regarding background:

Background - educates the reader so they can understand the methodology, the results, and/or the discussion. Explain the scientific or engineering principals involved. The background does NOT discuss what you actually did nor does it mention the results.