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2.672 Project Laboratory  
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# *Common 2.672 Report Problems*

(In no particular order)

1. Focus of paper on match between experiment and theory rather than on the problem and physical understanding of the problem.
2. Conclusions based on experimental system in class rather than scaling findings to full size, real-world system.
3. Failure to present limitations of analysis
4. Lack of sufficient background in the introduction and failure to explicitly state the problem
5. Failure to clearly state or justify theoretical assumptions
6. Failure to clearly define the motivation for the work and state the objectives and goals.
7. Formatting errors – papers should follow ASME journal format.
8. Poor organization particularly the theoretical analysis section (The reader can not jump into an analysis and follow it without understand why you are approaching the problem the way you are and where you are headed with your analysis.)
9. Report written as a classroom lab write-up rather than as a technical journal paper. (The experiment is *NOT* the solution nor is the agreement or lack of agreement between your experimental data and your model. The purpose of the experiment is to assist in the development of a theoretical model. The solution is what you learn from your analysis relating to the problem you stated in the introduction.)
10. Confusion between an abstract and an introduction.
11. Lack of references – ie) equations presented without reference to their source.
12. Lack of diagrams explaining theoretical approach – ie) Diagrams showing control volumes, flow profiles, force balances, Bernoulli streamlines, and equation coordinates.
13. Poor graphs
  - a. Font and numbers too small
  - b. Use of color to differentiate data
  - c. No units, mixed units, or non-SI units or meaningless units such as voltage
  - d. Borders around graph
  - e. Axes too faint
  - f. No gridlines when appropriate
  - g. Poor legends
  - h. Curve fits that have no physical meaning
  - i. Symbols for data that are difficult to distinguish apart
  - j. Failure to highlight important features
  - k. No error bars
  - l. Too much data presented in one graph
14. Poor experimental setup schematics
15. Poor figure captions
16. No direct comparison between theory and data
17. Failure to discuss results, graphs, and figures in detail
18. Failure to define variables used in equations.
19. Inclusion of computer code and experimental data into body of report.