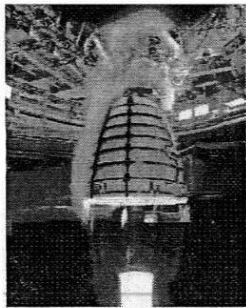


Name: Example Answer Date: _____ Hour: _____

Alloy the Way to Mars -- Final Recommendations



Based on the data presented on the class data table, write a letter to the SLS Deputy Program Manager, Ms. Jody Singer, explaining the material you would recommend for the RS-25 engines and engine turbines. Use data to support your reasoning. Additionally, begin your letter with an introduction of yourself and the purpose for writing this letter.

Dear Ms. Singer,

My name is [redacted]. I am writing this letter to inform you which material I recommend for the RS-25 engines and turbines. I believe that you should use ~~stainless steel~~. Although Nickel is stronger, stainless steel is less dense. An addition to stainless steel is that it has nickel inside of it so it is still strong. The stainless weighs only 0.002258 kg/m^3 . The Nickel weighs 0.0046602 kg/m^3 , but has a specific strength of $177,460.19 \text{ kg/m}^3$. While stainless steel has a specific strength of $25,952.2 \text{ kg/m}^3$, it's important that it is able to go into space without too much trouble. I hope that you will consider my advice.

Example answer: Good example of incorporating data as part of the recommendation letter, but incorrect conclusion since the student should have recommended an alloy with a *higher* specific strength (nickel over stainless steel).

Hope you have success

Sincerely,

[redacted signature]