



AP Engineering Windsor Locks, CT



Mr. D. Rosewood
CEO, Colossal Shipping
Tacoma, WA.

The Shipping Proposal

Dear Mr. Rosewood;

I would like to notify you that I've found a way to ship your T.V.'s safely without going bankrupt by doing experiments of friction with many materials. I've come up with a material that will reduce the sliding and damaging of your precious T.V.'s while the ship is moving. The solution from the items we have tested the item that passed the experiments is the sand paper. If you use the sand paper for surface, it'll prevent more friction and more damage.

The data we collected was incredible, because most of the friction numbers were in the 40-50g range. The sand paper however had a friction rating of 50.76g, because the surface was rough enough to hold our test item in place. The item with the least friction was the wax paper, which held only 35.8g, because the surface was very smooth and would make anything move a lot. The aluminum foil had a friction of 47.63g, because it's strong, but had a very smooth surface. The cardboard had a friction of 47.53g, because it's strong, but had a bumpy surface. The closest item to the sand paper was the metal, which had a friction of 46.36, because it's strong, but had a smooth and slippery surface.

The sand paper is the item what I know you should use in the containers, so the T.V.'s won't get damaged or broken while the ship is moving. This care and safety of your T.V.'s will make your customers happy and gain more customers for a better business.

Sincerely;

Mr. A. Paulie
AP Engineering
Windsor Locks, CT

*Wicked **Friction***
Windsor Locks, CT

Shipping Proposal

Dear CEO of Colossal Shipping,

I would like to tell you that I have found a material to stop the friction between your T.V.'s and the floor by conducting an experiment with other materials. The best material to use for your shipping container is 60 grit sandpaper. The sandpaper has many good qualities. These include lower price and most amount of friction.

The data collected was a big range of numbers that went anywhere from 300N to 1500N. The sheet metal you had been using previously had a very low force of friction of 357.71N. The sandpaper we found had a force of friction of 1491.6N. There is a very wide gap between these numbers which means that the sandpaper will definitely work better than the sheet metal. The top items we had was the 60 grit sandpaper which had the highest force friction, the 220 grit sandpaper which had a force of friction of 1200.6N, the final one was the shelf liner with a force of friction of 1075.06. The 60 grit sandpaper is also the second cheapest option for your 40ft containers. The sandpaper would cost around \$1,248. This includes the cost of replacing it twice a year.

The sandpaper is definitely the right way to go with your containers. They have a lower cost than the other materials and it has the highest amount of friction which means that the T.V.'s won't slide around. The T.V.'s won't be damaged which also means more profit for you!

Sincerely,
Ms. K. Jones
Wicked Friction
Windsor Locks, CT.

Windsor Locks Engineering
7 Center Street
Windsor Locks, CT

Mr. Ahab, CEO Colossal Shipping
Tacoma Washington

September 30, 2015

Dear Mr. Ahab;

Here at Windsor Locks Engineering we have conducted a number of tests on different shipping materials and think we have the best solution for your shipping crates.

As you recall, you are trying to ship very expensive televisions across the Pacific Ocean in containers with steel floors. Through your Call for Proposals, you asked us to investigate other materials for the container floors which might increase the amount of friction and thereby decrease the sliding of the TVs and their potential damage.

We investigated these materials by creating a model of your shipping container. We tested a sheet metal floor's friction by placing a weight onto the sheet metal and then adding weight to a contain which was attached so that it pulled on the weight. We added mass until the weight shifted and measured that mass. This mass represents the force of friction. Any material that required a higher mass to move than the sheet metal became a candidate for our recommendation.

Our test found that currently your shipping containers have a force of friction of 25 grams. We had 6 materials that created a higher force of friction. The best of which was the quilted cloth which had a force of friction of 65 grams. This is nearly 3 times stronger that the sheet metal.

Strangely, we do not recommend this quilted cloth, because of its cost. It will cost about \$2240 per year to use this cloth. An alternative is your better choice. The Black Lattice Cloth had a force of 58 but a cost of only \$720 per year.

We were excited by the opportunity to research this topic and assess the options you have. We look forward to working closely with you as we reequip your shipping containers with this stronger and better material.

Sincerely,

J. Smith
Windsor Locks Engineering
Windsor Locks, CT

Name: _____

Date: _____

Period: _____

Writing Rubric – Shipping & Sliding Proposal

	Exceeds Expectations 4	Meets Expectations 3	Progressing 2	Limited Progress 1
Heading	Meets Standard Plus Includes date and graphic for Company	Includes your Company information, Colossal Shipping Information & a salutation (Dear)	Includes either your company's information or that of Colossal Shipping	Fails to use a heading to identify your company or Colossal Shipping
Statement of Need	Provides a strong and engaging opening statement based on need expressed by the CEO of Colossal Shipping	Relevant opening statement based on the needs of Colossal Shipping	Attempts to use the needs of Colossal Shipping to write a topic sentence	Opening statement not based on the needs of colossal shipping as identified in Cal for Proposals
Proposal	Provides a fact-based and clear proposal with additional detail and content specific vocabulary and data that contributes to understanding	Provides a fact-based and clear proposal based on content using content specific vocabulary and data properly	Provides a proposal semi-based on facts with some errors. Attempts to use content specific vocabulary	Does not provide a fact-based proposal to the original question or does not use content specific vocabulary
Supporting Evidence	Provides additional supporting pieces of evidence and content specific vocabulary with an explanation that supports the proposal	Provides enough evidence with an explanation which supports the proposal. Uses content specific vocabulary properly	Provides some supporting evidence and attempts to use content specific vocabulary properly	Evidence provided does not support answer. Does not use content specific vocabulary properly
Conclusion	Provides a strong and engaging statement that summarizes the original proposal and supporting evidence giving clear instructions for action by the CEO	Provides a statement that summarizes the original proposal and supporting evidence	Provides a conclusion that restates the original proposal	Does not provide a concluding statement