Packaging Project Analysis: Team Knox Box

The Packaging Project was an in-depth whole week project that used some creative and original thinking in order to accomplish the task of packaging a product. This project consisted of many different parts. During the project we got a tour of Grand Traverse Container by Paul Phillips. There were eight teams of 5 or 6 people. Each person on the team had an assigned task and needed to attend certain seminars. There were many things that went into this project. This includes designing the box using CAD, creating the box itself, BMC and outside markings, quality testing, bid proposals and a presentation.

Before we could contruct the box using the sheet of corrugated that was provide, we first must create a design using SolidWorks. In order for our team to do this part we needed to have someone certified with SolidWorks by completing Holly’s tutorial successfully. After we were able to certify someone we then began designing. This was a long and tedious process, but it was useful in the end.

While a few people were designing the box there were other things that needed to be accomplished. After attending Debby’s seminar we found out that we needed to create a BMC (Box Manufacturer’s Certificate) and other markings that go on the outside of the box such as the fragile marking. These markings help UPS when they are shipping the product. The information on the BMC included the type of box, edge crush test results, drop test results, burst test results, compression requirement, size limit, and gross weight limit.

Another project requirement was cost accounting. This is huge while we created the box because it is what determined the price of our box and how much profit we could make on our boxes. In order to be certified to work cost accounting we need a few of our team members to attend Deb and Holly’s seminar. After returning from this seminar my team mates were knowledgeable on how to account for costs and exenditures. They also were told that each team member was required to log their own hours at the end of the day incuding what they accomplished that day.

Lastly, we needed to test the box and create a bid proposal for our presentation. The testing process included dropping the box at certain angles and a lot of measurements. In order to be allowed to test we had to have someone and a partner pass the container testing certification test. Later these results would be added to the BMC. Once we were done teesting we started on the bid proposal. This included the final price that we were going to sell our box for. We presented this information, along with our box, to Tim and Mr. Phillips. I was quite pleased with our end cost and presentation.

My involvement in the project was pretty crucial. I was the one on the team who was certified in SolidWorks to design the box. It took me about two days to complete the SolidWorks certification and then I started working on the design. Since so many of the other tasks relied on getting the design done first, I needed to work hard and finish the blueprint for our team to begin on other tasks. We decided to use a wide box with tabs that secured the top and enclosed the box. This was a little tricky to construct but it worked out in the end.

The seminars that I attended were Debby’s and Holly’s. I learned about SolidWorks at Holly’s and BMC/outside markings at Debby’s. This allowed me to not only work on Solid Works but to also help with the BMC. Being the designer I was the one who drew out the net for the box. With the help of my teammates I then cut out the net and we constructed the box itself. After I helped a little with the quality testing, all we had left to do was add the stickers. We then shipped the boxes to Colorado!

On the first of June, the boxes finally returned from Colorado. We opened up our box, and, much of a surprise to us, one pot actually survived the long haul! The middle pot was completely demolished whereas the left one was only slightly broken. Our interior packaging, which might not have been up to par, was bent and destroyed as well. Unfortunately, the sensors in side of the box were all tripped. Other than that there were only a few dents in the box. We concluded that this damage was due to poor handling and poor internal packaging.

Overall, the packaging project was a great project for learning about the packaging industry and packaging engineering. I learn a lot from Mr. Phillips and the other guys at Grand Traverse Container about how their company works and on packaging itself. Although it was a long week and a lot of work it was very informative and enlightening. Below are some pictures we took along the way.



 

 