Traumatic Brain Injury Reducing Army Combat Helmet

Team 6
Week 6
March 3, 2009
Damian Frankiewicz
Work Completed:

The Expanded Polystyrene was ordered this week for the inner lining of the helmet. The company used as the supplier is as follows:

Foam Pack Industries
72 Fadem Road
Springfield, NJ 07081-3710

Jim contacted the supplier prior to my ordering contact and came to the conclusion to have 1 lb density cubes with 14 inch lengths. 5 were ordered for ample amounts of testing for the three helmet shells. The total amount for the EPS order came out to be exactly $100.

Other parts that require ordering are the suspension system and the original helmet padding used. Both of these are the standard models used and little tweaking will occur during installation. Besides these two parts that need to be ordered, the remaining two parts of the helmet are the neck and chin guards in the back and front of the helmets, respectively.

In addition, some work was done to begin preparations to cut the third and final outer shell. Due to our work rotations, it was my job to cut the Kevlar layers. To practice, I used some cloth to cut our the pinwheel design previously used in the second helmet. First, four strips are cut on the sides of the fabric towards the middle. This technique is shown in Figure 1.
The four cut strips are then taped onto the helmet so that the four corner squares are hanging. These corner squares are then draped onto the helmet and any overlapping fabric is folded and cut off. The result is a similar pinwheel design shown in Figure 2.
Future Work:

A cutting tool must be ordered to begin cutting the Expanded Polystyrene. In addition, the Kevlar must be cut using the method discussed for the third outer shell.

Hours Worked:

A total of 11 hours were worked for the sixth week.