

Technical Report: NCSX Vacuum Vessel Manufacturing Study

1. Manufacturing process recommendations:

- 1.1. Major Tool & Machine, Inc. recommends the Vacuum Vessel be produced by means of welding together cold formed panels to produce the desired vessel shape as the most reliable and effective manufacturing method. We have closely evaluated PPPL's electronic model and separated the geometry of the 60 degree period into 9 individual panels that can be readily produced at our facility (utilizing our 750 ton hydraulic press). Though the actual location of each break-line is not considered final, based on the degree of deformation and / or overall footprint of each panel, it is not expected to change dramatically.

Figure 1: Pictorial representation of MTM's conceptual break lines.

