
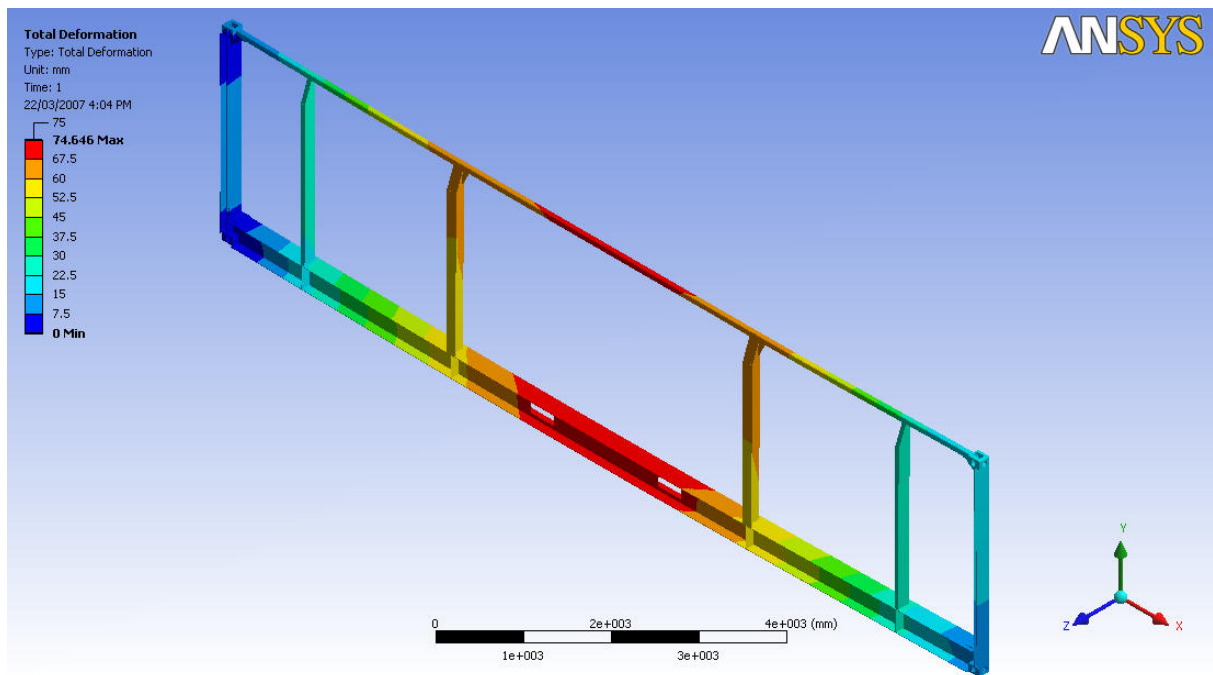


| | | |
|-----------------------|------------------------------|--|
| <i>Project</i> | 40' Curtain Container |  |
| <i>Document</i> | Preliminary Analysis | |
| <i>Equipment Name</i> | Curtain Container Side Truss | |
| <i>Equipment No.</i> | TBA | |


1. Analysis

A simple verification model of the curtain container wall was constructed and prepared for analysis to determine the effect of a uniformly distributed load (UDL) of 10.17kN/m bearing upon the floor beam. In the analysis, this UDL was applied as a 120 kN force over the top flange of the floor beam. The model was prepared for analysis and meshed, with element refinements made where critical stress regions were expected. The corner castings were constrained to allow only compressive behaviour.

The deformations of the structural members in the curtain container wall, obtained from ANSYS finite element model solver, indicates a maximum deflection of 75 mm located in the middle of the floor beam.



A stress plot of the model indicates that several regions of the container wall structure the members are experiencing excessive stresses, which have been circled in Figure 1, and enlarged in following images.

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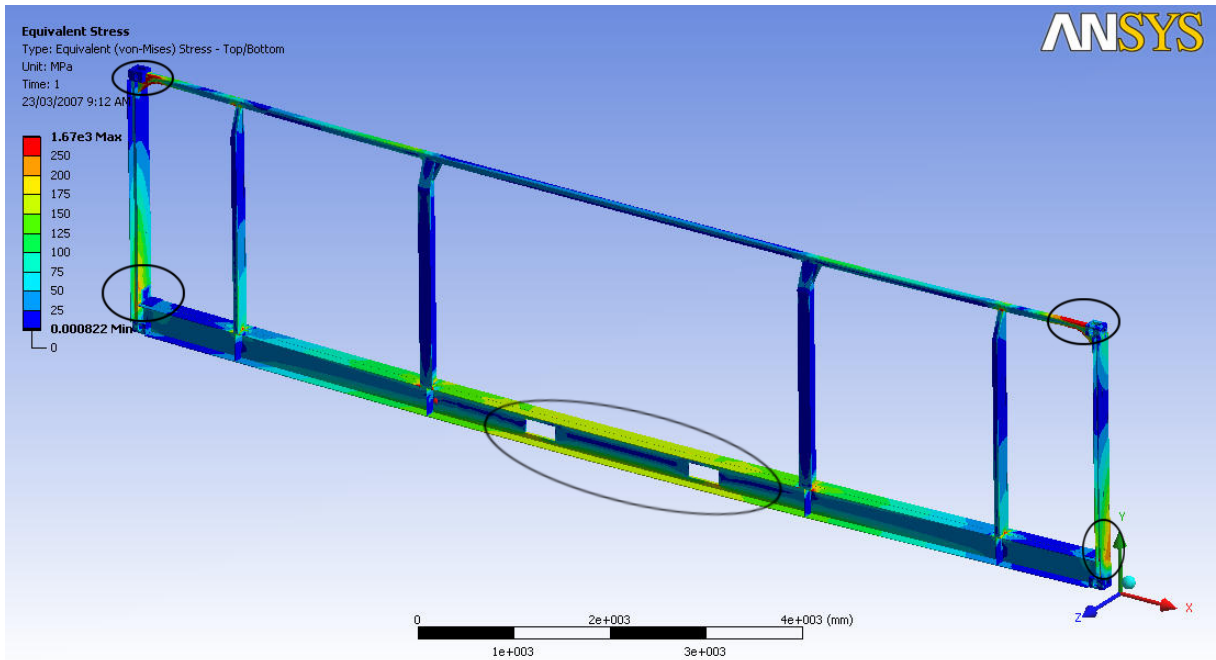


Figure 1: Stress plot obtained from ANSYS solver. Circles indicate regions of excessive stress on structural members.

Closer views of these regions are presented in the following figures.

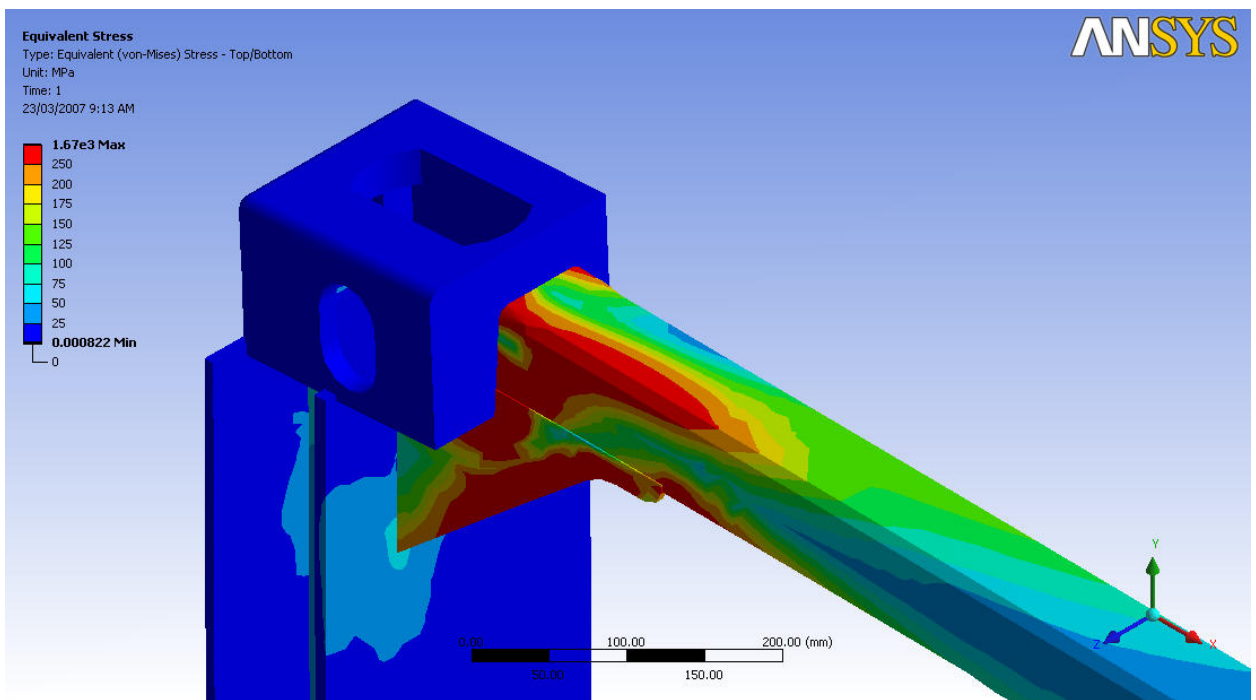



Figure 2: Stress contour plot of top corner gusset.

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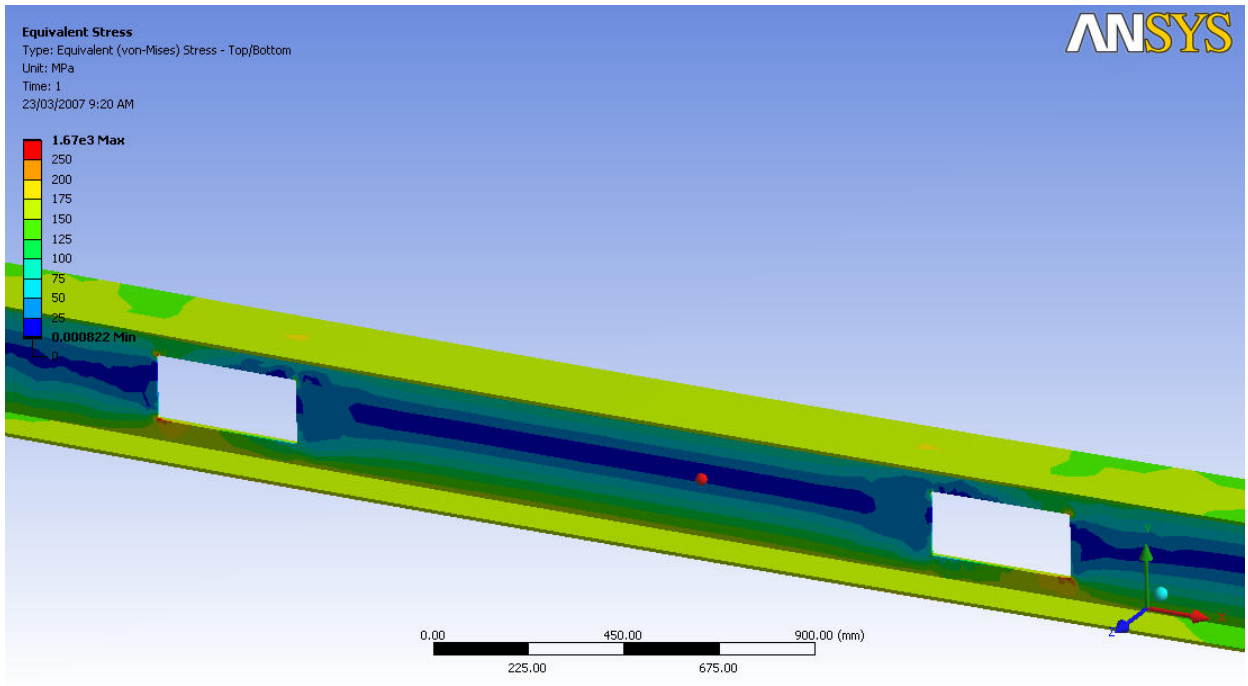


Figure 3: Stress contour plot of floor beam and fork lift pockets.

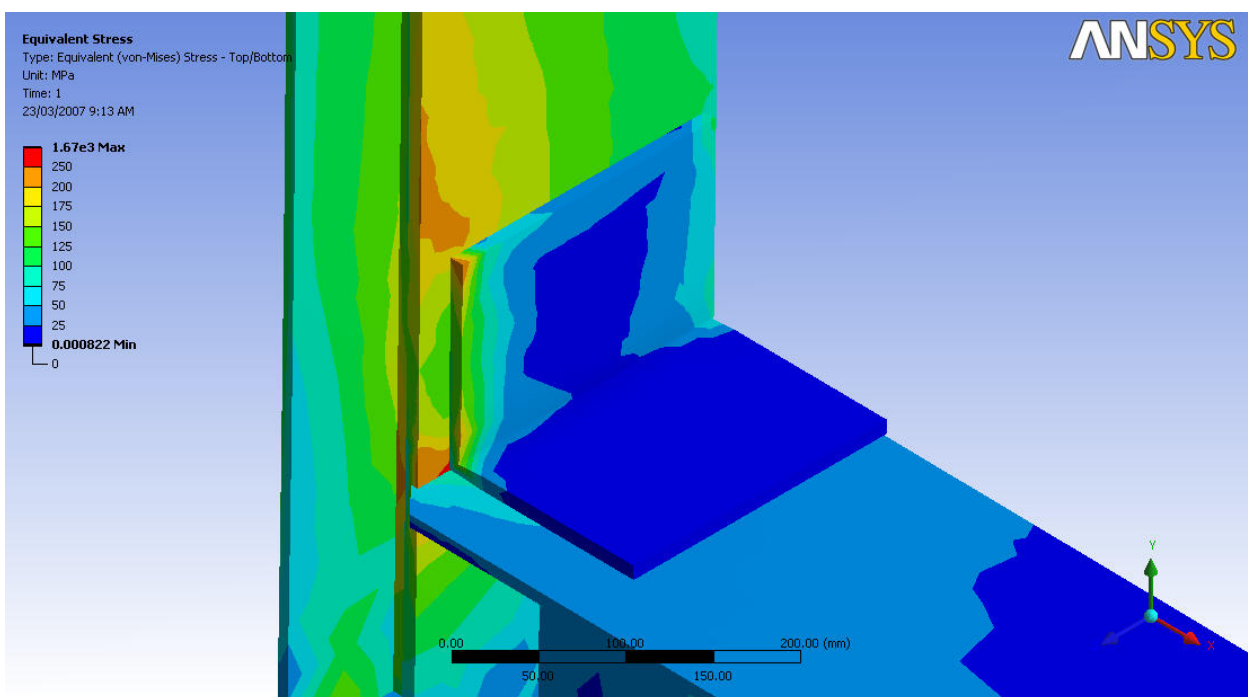


Figure 4: Stress contour plot of corner angle plate on base beam.