

Industrial / Software and Development

18m Deep Cone Thickener

Peter Dann were commissioned to design and detail an 18m diameter deep cone thickener tank, our brief was to produce a design that allowed maximum gravity compression of solids, also to design a truss bridge spanning across the tank that supports the stirring mechanism, and the access staircase.

The analysis of the tank which included hydrostatic and seismic load cases, was completed using Staad Pro finite element analysis software to determine forces and moments in the steel members and stresses in the plates to allow a rigorous optimised design to be completed.

The structure was modelled using our 3D StruCAD software which then enabled us to produce full fabrication detail drawings for manufacture by the steelwork fabricator. This resulted in a more efficient programme due to the reduction in the quantity of fully detailed engineers drawings required, and the ability of our engineers to approve fabrication drawings quickly in house.

