

Computational Fluid Dynamics Modelling

Background

NSW Public Works Manly Hydraulics Laboratory (MHL) offers a comprehensive consultancy and technical services specialising in flow simulation requirements in the fields of water and environment.

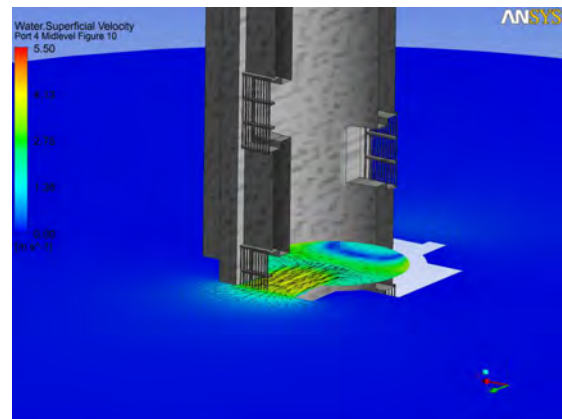
Services Provided

NSW Public Works MHL has experience in a wide range of fluid flows and assesses the design development process from a fundamental understanding of the core flow physics. Some of the investigation options when undertaking a CFD approach include:

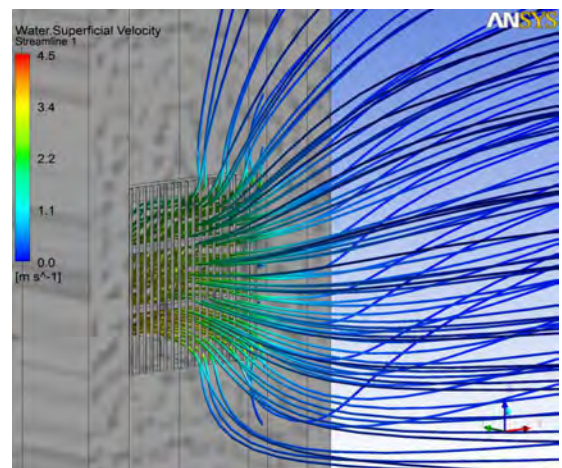
- verification of existing equipment performance
- understanding of general hydraulic behaviour
- effects of geometrical changes and flow conditions on hydraulic system performance
- what-if scenarios to potentially improve design.

Benefits

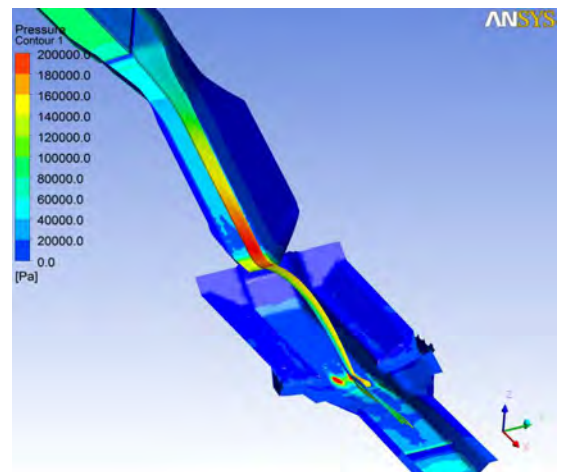
Our well established experience in constructing and testing physical models of water infrastructure as well as with the application of CFD in the water industry makes NSW Public Works MHL a unique contributor to the higher level design standard for the client. We create a tight partnership with the client during the development of modelling options, and recommend a practical CFD approach designed to obtain the best value for the client.



Contours and vectors of velocity through a reservoir intake



Intake tower front view contour and vectors around port



3D view of a spillway simulation