



“CADWorx Plant model not only improved communications between us and the client but I believe it played a very integral role in developing their trust in us as a company.”

John MacFarlane, Senior Mechanical Piping Designer at Wardrop, A Tetra Tech company

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Wardrop, A Tetra Tech Company strengthens client relationship with CADWorx and CAESAR II

Succeeding in energy, infrastructure and mining industries

Wardrop (former Wardrop Engineering Ltd.) is part of Tetra Tech company, a publicly-traded Canadian company. Wardrop, A Tetra Tech Company (Wardrop) provides multi-disciplined engineering and technical services, focusing on the energy, infrastructure and mining industries. The firm has provided a full suite of technical and professional services to clients and communities around the world.

Mining process project requires accuracy plus meeting tight schedules

Wardrop was awarded a \$5.5M USD project from a client in British Columbia, Canada. The project itself was based around a molecular recognition technology (MRT) process made up of one removal column loaded with a proprietary resin. This MRT process selectively removes specific ions from its parent solution.

Involving approximately 70 separate pipe runs with pipe diameters ranging from 1/2 inch to six inches, the project was very complex due to strict service regulations for runs and a limited area in which to work. A major challenge of the project was that a majority of the project's piping system was made of a dual laminate material. This material had to be fabricated in the shop and then installed in the field, requiring extreme accuracy. Other project challenges included the equipment delivery items and the tight fabrication and delivery schedules.

Working in 3D cuts off workload

Initially, the project began in a 2D environment which soon progressed into a 3D model environment due to its increasing complexity. “The move to a 3D model proved to be very valuable in a number of different ways,” said John MacFarlane, senior mechanical piping designer at Wardrop. “We managed to develop over 100 piping isometrics, reviewed them, made small modifications and issued them, all within 4-5 working days,” MacFarlane explained. “Two-dimensional drawings developed from the 3D model became a day's work load instead of week's work load, so once we moved to 3D, we have never looked back.”

Developing intelligent and fast deliverables

Using CADWorx Plant Design Suite, Wardrop developed a detailed engineering package that included structural, mechanical and piping drawings, estimates, line lists, and valve lists. Once the team has finished customizing the ISOGEN output, the piping isometrics were developed quickly and accurately.

Improving communication and eliminating inaccuracy

CADWorx Plant and CAESAR II helped Wardrop to eliminate confusion between client needs and deliverables and inaccuracies in everything from the material estimates to design changes. This eliminated wasting project time on solving these issues.

“CADWorx was extremely helpful in producing a very accurate material estimate with which we placed a dollar figure for each piece of material, which impressed the client,” stated MacFarlane. “As a team, we at Wardrop take a lot of pride in what we produce, which is one of our strongest assets,” he added. “CADWorx software fits very well into that mould and will continue to for a very long time.”