



“I want to use this as an opportunity to express my tremendous satisfaction with the program as it has saved a lot of time and frustration both in the design office and in the field.”

Tony Fernandes, Chief Piping and Layout Engineer at BBS

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Bilfinger Berger Services reduces project costs 60% using CADWorx on smart plant collaborative modules

Bilfinger Berger Services (BBS) Pty Ltd, Australia is a specialized engineering and asset management contractor. The company offers engineering, construction, operations, maintenance, asset management services, automation systems and electrical switchgear products for power, mining and minerals, chemical and process, telecommunications, oil and gas and other industries.

BBS to take part in one of the largest port projects in Australia

BBS was awarded a contract to undertake a third phase in the Botany port Terminal Expansions project with Vopak Terminals, Australia. Sydney's port Botany expansion project is said to be one of the largest port projects undertaken in Australia in the last 30 years. Upon completion, the US\$69 million expansion will almost double the storage capacity of the site and increase annual throughput from 2100 to 3950 million litres.

BBS was to provide the design, supply and installation of the Botany Terminal B3A expansion for five additional fuel storage tanks for a variety of fuel products. Each of the five storage tanks was 24m high with a capacity of 78,300 cubic meters.

Need for automation

BBS used the other piping program before and had to rely heavily on the experience of its piping drafters to drive it. “We lost a few of these experienced drafters in quick succession and were exposed to failure. Just then we decided to acquire a few packages of CADWorx software and it saved us because it could be easily used by piping design engineers to fill in the gaps. This was not previously possible with the old software,” says Mr. Fernandes, Chief Piping and Layout Engineer.

CADWorx allowed BBS to successfully customize piping isometrics using Isogen, without the need for any manual input, hence eliminating checking. All the service information on the isometrics was extracted from the piping database.

Improving project collaboration with CADWorx plant modules

The complexity and workload of the Botany project called for an improvement in project collaboration. CADWorx Equipment, CADWorx Steel and CADWorx Plant tools helped BBS to prepare collaborative plant modules. These software modules were most useful for BBS internal review between the various disciplines and the client. “These modules were not only convenient to pass on information for civil and structural detail design but also to issue piping isometrics for shop fabrication and site installation, and to issue bill of material for procurement as required, such as field run piping,” says Mr. Fernandes.

BBS was able to perform pipe support modeling and detailing, develop piping arrangement drawings from the model and export piping model for stress analysis using CAESAR II.

Reducing project costs by 60% without loss of accuracy

Overall, CADWorx allowed BBS to reduce their piping engineering and drafting budget without any loss in the accuracy of details. “Unlike other software, CADWorx helped us model all pipelines on a project in one drawing file or a few sub files, reducing number of x-refs. For the above project, piping isometrics were issued two months ahead of schedule and the project is well advanced for completion in September this year,” says Mr.

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