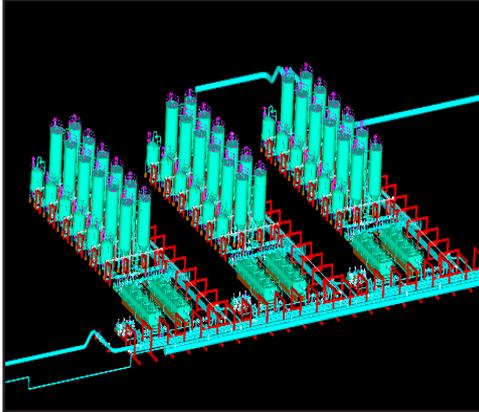


# CASE STUDY



# CADWorx & Analysis Solutions



## Empresas Y&V achieves fast completion and design precision with CADWorx and CAESAR II

A leading general contractor with offices in Canada, Chile, Colombia, Mexico, USA, Venezuela, and Europe, Empresas Y&V (Y&V) provides comprehensive engineering, procurement, and construction services to clients engaged in production and oil refining, gas production, and petrochemical processing. With more than 1,500 highly qualified employees and comprehensive technological knowledge and proven project management expertise, Y&V solves all project-related challenges, from the development phase through successful completion.

Pacific Rubiales Energy Corporation awarded Y&V Group a \$35 million project for six water treatment plants units 15 through 20 at the Central Processing Facility 2 (CPF2) for crude oil treatment at the Rubiales field in Colombia. On the fuel performance catalyst 2 (FPC2), the recovery of oily water cream takes place in water treatment plants (WTPs).

Currently, the plants distribute the flow of water from the skimming tanks with oil content between 600 and 800 ppm (parts per million) equally between the water treatment plant packages to reduce the oil content to 1 ppm. The treated water at the outlet of the WTP, with an oil content of less than 1 ppm, goes to a pool of water that is treated before being injected into the well.

The project involved 20 pieces of equipment for each plant such as pumps, filters, decanters, and flotation cells; pipes with diameters ranging from small bores of 1/2" to 2" up to large 42" bores. Y&V's assignment included all of the basic and detail engineering for the six water treatment plant unit

### Solving project challenges with CADWorx and CAESAR II

Y&V used Intergraph CADWorx Plant Professional to develop the 3D models, orthographic drawings, isometric drawings, and bills of material interfaced with CAESAR II for analyzing and generating reports on the flexibility of the piping systems. Focusing on knowledge management, they implemented CADWorx within the company for equipment and piping designs, to address projects that required both short deadlines in the deliverables and precise and efficient execution. "With CADWorx we were able to meet the client's fast delivery schedules as well as the required precision in the design, bill of materials and other deliverables," said Nicola Continelli, Piping Leader at Y&V. "We managed to reduce the times of flexibility analysis by extracting CAESAR II files directly from CADWorx for analysis in CAESAR II."

### Reducing delivery time through CADWorx Design Review

CADWorx helped Y&V speed the delivery times for isometric drawings, and CADWorx Design Review helped them identify and address interference issues in the 3D model. It also reduced the amount of time for configuration and learning.

### Exceeding expectations with CADWorx

"As a Venezuelan engineering company operating in Colombia, we emphasize knowledge management and chose CADWorx Plant for the design of equipment and piping even though our experience had been with AutoPLANT and PDS, and the results were beyond all expectations," Continelli concluded.

"CADWorx allowed us to reduce the delivery time of isometric drawings while CADWorx Design Review helped minimize interference due to 3D modeling."

### PRODUCT INDEX

Intergraph CAESAR II®

Intergraph CADWorx®

### INDUSTRIES SERVED

- Petrochemical
- Construction

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