



“CADWorx Plant Design Suite allowed us to easily generate and use the project data including ISOMETRICS, list of materials, 3D model.”

Juan Carlos Rangel, Project Manager  
for the Copa Macoya Gas Plant Project

#### PRODUCT INDEX

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## CADWorx helps Phaser Technologies develop deliverables in a week

### Phaser Technologies' growing presence in Venezuela

Phaser Technologies C.A. provides general project and engineering services for process, instrumentation, electrical, mechanical, civil, and oil and gas projects in Venezuela.

### Copa Macoya Gas Gathering and Distribution Plant

The company was granted an \$800,000 project for Teikoku Oil Company, a Japanese oil and natural gas firm that became part of INPEX Corporation in 2006. Teikoku Oil Company hired Phaser Technologies to perform process, layout, instrumentation and control improvements for the 2.3 km. sq. Copa Macoya Gas Plant, located in Valle de la Pascua city in central Venezuela.

The Copa Macoya plant gathers and dehydrates natural gas for distribution and sale. Operating at 1050 psi, with a gas throughput of 150 MMFCD, the plant uses ultrasonic and chromatographic devices to measure gas flow and quality and employs a glycol dehydration system to remove moisture from the produced (wet) gas. The glycol that is used to bind to the aqueous portions of the gas is recaptured and regenerated for reuse at the site with the maximum temperature in the glycol reboiler/regenerator unit of 375 deg C. The resulting dehydrated gas is distributed for consumer use via two gas pipelines of 12 in. and 16 in. diameter. These pipelines pass through three gas compressor stations, each 18 km apart.

### AutoCAD limitations and move to 3D

One of the biggest challenges for Phaser Technologies in undertaking the design of the Copa Macoya project was its tight deadline of only one week to complete the design for the upgrade of the plant. This involved working with complex piping process diagrams to produce accurate project deliverables such as a 3D model, multiple design views, bills of material and fabrication isometric drawings. “With COADE CADWorx Plant Design Suite, we could develop all project deliverables efficiently and in a very short period of time,” said Juan Carlos Rangel, project manager for the Copa Macoya Gas Plant project.

“Using just basic AutoCAD in 3D on our previous projects led to inaccurate deliverables, high memory consumption and discontinuities between piping components. Once we started using the CADWorx Plant Design Suite, we saw significant improvements in the quality of the connection of all piping components and therefore project deliverables,” added Rangel.

### Quickly generating data and meeting deadlines

The CADWorx Plant Design Suite allowed Phaser Technologies to easily generate and use the project data. “We not only finished a complete plant design upgrade in time, but also ensured error-free isometrics, equipment datasheets and project reports,” stated Rangel.

### CADWorx is a solution for future projects

“The significant results that we achieved with Copa Macoya project using CADWorx convinced us that we should select the CADWorx Plant Design Suite for all of our projects,” explained Rangel. “We have two upcoming projects, one in Curacao Island, where we will automate a gas compressor station, and another for Petroleos de Venezuela S.A. (PDVSA) Company, where we will automate a pumping system, two projects ideal for CADWorx,” Rangel concluded.

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