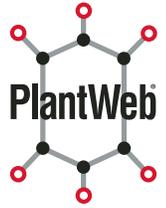


# Experience Proves the Value of PlantWeb®, AMS™ Suite: Intelligent Device Manager, And DeltaV™ in Syntroleum Process



## RESULTS

- 60% savings in the wiring of fieldbus devices
- 50% reduction in field device configuration and commissioning time
- 30% reduction in the time required to start a plant
- Saves up to 20 minutes per device calibration



## APPLICATION

Two plants in Tulsa, Oklahoma, have validated a technology for converting natural gas into high-performing, ultra-clean fuels, including diesel and jet fuels and naphtha.

## CUSTOMER

Syntroleum® Corporation owns a proprietary process for converting synthesis derived from natural gas, coal, or other carbon-based feedstocks into synthetic liquid hydrocarbons. The Syntroleum Process, with a combined 127 patents issued and pending, is intended for application in natural gas and coal monetization projects.

The Syntroleum Process provides solutions for U.S. domestic energy security using coal-based synthesis gas and for the flaring of natural gas at offshore oil production sites in remote locations, where as much as 10 billion cubic feet of gas are wasted every day. More than 334,000 gallons of ultra-clean fuels have been produced from natural gas utilizing the Syntroleum Corporation's proprietary process. The successful production of diesel and jet fuels as well as naphtha has validated the Syntroleum technology as "ready for commercial markets."

## CHALLENGE

Four years ago, Syntroleum needed to build a cost-effective plant to demonstrate its technical leadership in processing natural gas into liquid fuels in a minimum of space, as in marine production or processing sites. When the Catoosa Demonstration Facility was being designed to demonstrate and prove the Syntroleum technology, the need to find an equally advanced process control system was as important as minimizing construction and startup costs.

***"Not only have our demonstration facility and pilot plant proved the validity of the Syntroleum Process, they have also proved that the DeltaV automation system and AMS Device Manager software provide benefits for end-users before, during, and after startup."***

**James Goodman**

Senior Instrument & Controls Technician,  
Syntroleum Corporation

**AMS**  
Suite

For more information:  
[www.assetweb.com](http://www.assetweb.com)

  
**EMERSON**  
Process Management

### SOLUTION

One of the engineers working on Syntroleum's Catoosa Demonstration Facility attended an Emerson Process Management seminar and believed that the PlantWeb digital architecture, including the AMS Device Manager, DeltaV automation system, and FOUNDATION™ fieldbus digital instrumentation, met project requirements for reduced engineering and wiring costs, faster commissioning and startup, and reliability in marine environments. As a result, Emerson was selected as the Main Automation Contractor, installing PlantWeb, DeltaV, and 990 smart instruments and FIELDVUE® digital valve controllers in the facility. AMS Device Manager was also provided to assist with instrument commissioning, control loop validation, and startup.

According to Senior Instrument Technician James Goodman, the PlantWeb architecture and other Emerson products have "exceeded expectations" for lowering engineering, commissioning, startup, installation, training, and maintenance costs. "It's all of the above," he said. "I was hesitant at first, but now I'm quite satisfied and comfortable using fieldbus."

Goodman was enthusiastic about the amount of time he was able to save using AMS Device Manager during the instrument configuration and commissioning phases. The required data for every instrument in the facility was available in the database, so he could initiate communication and download a configuration as soon as an instrument was installed.

The ability of AMS Device Manager to monitor the field devices enabled Goodman to keep a close watch on every instrument during startup to assure everything was functioning properly and to make quick replacements when necessary. He estimated startup time was reduced by at least 30 percent by using this software. AMS Device Manager has also cut down on the time required for the facility's scheduled turnarounds.

Syntroleum intends to offer its licensees the PlantWeb architecture with fieldbus instrumentation in future deployment of the gas-to-liquid-fuel technology in commercial-scale facilities. "We believe that an end-user will see the benefits of reduced wiring and commissioning costs," Goodman said. "With our experience using PlantWeb, we can develop and export all of the config files necessary, saving engineering and programming time for our customers. Startups will be fast and certain. And later, AMS Device Manager can be used for predictive maintenance and asset optimization during ongoing operations."

Syntroleum is a registered trademark and service mark of Syntroleum Corporation.

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AMS Suite: Intelligent Device Manager powers PlantWeb through predictive and proactive maintenance of intelligent field devices to improve availability and performance.

