



Rental Power

> Case History

Integrated Flow Solutions, USA

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**Power
Generation**

Where:

Integrated Flow Solutions, Tyler, Texas, USA

What:

Temporary power station for full-capacity testing of pumping systems for deep sea oil platform

Purpose:

Provide power to perform complete testing of the pumping systems at full capacity to help reduce offshore commissioning time

Primary choice factors:

Immediate response of Cummins Power Generation; full-service support; quick delivery of pre-integrated Rental Power systems, ready to run on delivery

On-site power allows full-capacity test of pumping system for deep sea oil platform

TYLER, TEXAS, USA — As international oil companies continue to pursue oil and gas in deeper offshore waters, the high capital and operating costs of the production platform make it more critical than ever that production equipment operate the first time and every time. That's why product testing became a priority when Integrated Flow Solutions (IFS) of Tyler, Texas, was engaged to design and install two key pumping systems for the \$195 million Matterhorn Deepwater Production Facility platform. The costs of equipment failure are high; an unplanned shutdown of the platform is estimated to cost \$900,000 per day.

“By bringing in 2 MW of on-site power from Cummins Power Generation Inc. for a three-week testing period, IFS engineers were able to test all phases of the pumping system at full capacity prior to its installation on the offshore platform,” said Bill Marsh, president of IFS.

Platform success depends on pump reliability

The Matterhorn is a SeaStar mono-column tension leg platform designed to produce 33,000 barrels of crude oil and 55 million standard cubic feet of natural gas per day. It was recently installed in 2,820 feet of water in the Gulf of Mexico. To help increase oil flow, one of the



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pumping systems IFS designed and installed is a water injection package with two 800 horsepower electric, motor-driven centrifugal pumps to inject deaerated, clean and filtered seawater into the oil-producing geological formation.

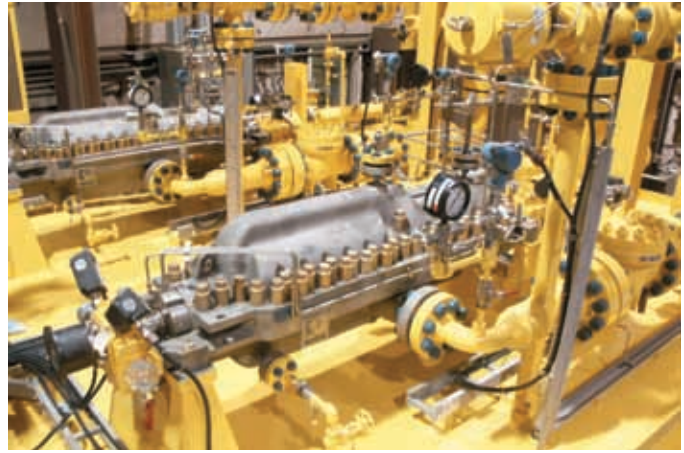
IFS also designed and constructed an oil shipping pump package, consisting of three 1,000 horsepower electric, motor-driven centrifugal pumps for pumping crude oil from the platform to shore. With limited oil storage capacity on the platform, it is crucial that this pumping system operate continuously and reliably.

Extensive product testing was required to make sure the equipment met project specifications and to reduce offshore commissioning time. However, due to their high horsepower ratings, the two pumping systems required more electric power than was available at the IFS manufacturing facility.

“The only way to perform a complete package test of the pumping systems was to set up our own temporary power generation station,” said Troy Urbantke, operations manager for IFS. “Otherwise, it would have required the utility to build a new substation at our facility just to supply enough power to test the equipment.”

Power system tests range of required voltages

IFS contacted Jared Brown, rental coordinator in Houston for Cummins Power Generation, who assembled the components and accessories necessary for an on-site Rental Power system that met the company’s needs — a model DQKC 2 MW PowerCommand® diesel generator set, an electrical



Pumping systems designed by IFS for installation on an offshore platform required extensive product testing to meet specifications.

distribution system, power transformers and motor starters. Brown first set up the system at the Cummins Power Generation facility in Houston and then delivered it, as a package, to IFS within hours of receiving the order. Marsh said:

“The unit was delivered to us ready to use and left us free to concentrate on our test. The whole process helped us deliver a reliable product.”

The model DQKC generator features pre-integrated, digitally controlled components, designed and built to work together. Its oversized alternator is specially engineered for improved starting of large electric motors. A PowerCommand Digital Master Control provides precise voltage regulation, overload protection and diagnostic features. The trailerized system has its own fuel tank, and is designed to run continuously for 20 hours at 75 percent load.

“We were able to test the range of required voltages by running the generator output through a multi-tap voltage transformer,” said Brown. “That allowed us the flexibility to test in the medium range of 480 to 4,160 volts for these pumping systems.”

Urbantke sums up the experience: “The unit was delivered to us ready to use and left us free to concentrate on our test. The whole process helped us deliver a reliable product.”

For more information about Rental Power or other energy solutions, contact your local Cummins Power Generation distributor or visit www.cumminspower.com/rental.

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