

WFS, NuStar and Precision Technologies complete commissioning of new subsea system for JAMSTEC

Seatooth® S100 - A subsea data logger and controller solution

For scientific purposes, The Japanese Agency for Marine-Earth Science and Technology (JAMSTEC) is planning to study the genesis of submarine resources at the hydrothermal vents area in Japanese waters. Some of the challenges faced during this operation are the streamlining of subsea data logging operations, working at depths of up to 2000m, managing the signal conversion electronics at water temp of near boiling point and reducing power consumption for longer duration subsea application.

With over a decade of subsea industry experience WFS Technologies Ltd is a global leader in subsea wireless instrumentation and control solutions for the offshore oil and gas industry. Founded in 2003, WFS launched the world's first commercially available underwater radio modem in 2006. WFS continues to innovate in the subsea industry, focusing on Asset Integrity, Drilling Controls, Flow Assurance and Subsea Operations.



Seatooth® S100

In February 2014 WFS, working with its partner in Singapore Precision Technologies, met with Nustar Technologies to discuss the application of subsea

wireless data logging capabilities to support flow metering in NuStar equipment designed for JAMSTEC's submarine resources research.

WFS collaborated with NuStar and Precision Technologies to develop and deliver a subsea light weight and power efficient solution that combined the data logger and controller. To achieve this innovative solution WFS utilised patented Seatooth® technology. The system was successfully commissioned in Japan in April/May 2015.

“We are pleased to have chosen to work with WFS Technologies Ltd, the team helped simplify JAMSTEC's requirement on mineral flow rate data harvesting process, through direct flowmeter magnetic frequency data logging, effectively eliminating the need of additional signal conversion electronics and substantially reducing overall logging system power consumption, weight and size” Teo Sim Guan, Engineering Director of Nustar Technologies.

The Seatooth® S100 is a compact, low-power, wireless modem, data logger, multiplexer and controller. The Seatooth® S100 supports a variety of underwater applications, providing a robust wireless communications link up to 15ft in the most challenging environmental conditions. The Seatooth® S100 is equipped with a standard data communications interface making it well-suited to underwater sensor, diver and vehicle applications. It can be deployed swiftly on temporary or permanent installations to support a range of offshore survey applications.

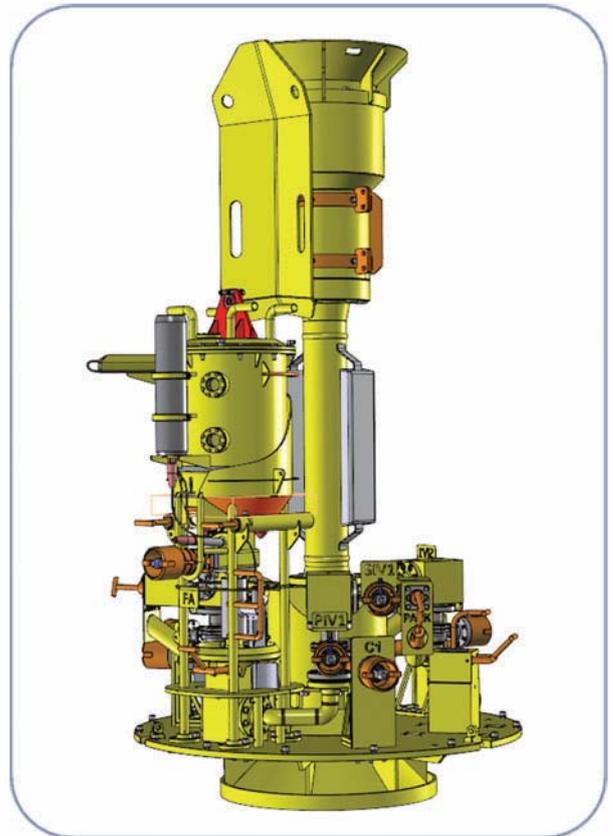
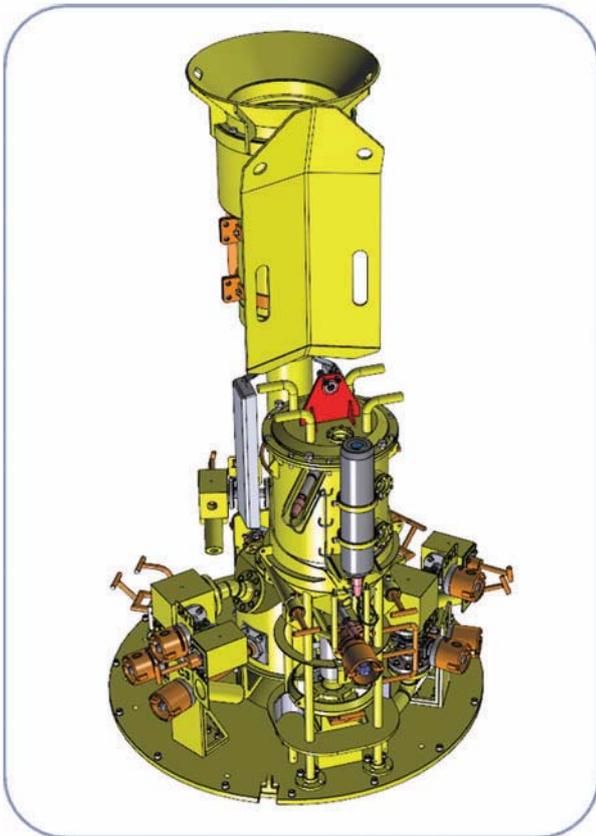
WFS are proud to announce the successful collaboration in this challenging subsea project. In this project, Seatooth® S100 will help improve safety, increase operational flexibility, reduce costs and extend asset life. The Submarine Mineral Genesis Monitoring System will be deployed for sea trial early 2016.



Submarine Mineral Genesis Monitoring System testing in Singapore and Japan



Submarine Mineral Genesis Monitoring System with WFS Seatooth® S100 and other telemetry equipment at flow test



Submarine Mineral Genesis Monitoring System (2nd Generation)

- Modular Lightweight System Unit; for ease of manufacturability, Installation and Transportation
- Manifold is able to equip up to 3-retrievable Submarine Mineral Genesis Monitoring Cell
- Retrievable Submarine Mineral Genesis Monitoring Cell concept to harvest minerals
 - smaller, lighter and easier to handle than 1st generation Submarine Mineral Genesis Monitoring Cell
 - able to measure the amount of mineral cultivated through load cell and windows
- Rated up to extreme temperature of 315°C (599°F)
- Fully Loggable Telemetry Sensors for flow rate, temperature, pressure and weight
- Equipped with flowmeter which is able to measure up to 850L/min flowrate at system pressure & temperature

Location :
Offshore Okinawa Japan

Scope of Work :
Submarine Mineral Genesis Monitoring System (Generation 2)
⇒ 18-3/4" Subsea Wellhead
⇒ Casing Hanger & Flow Stopper
⇒ Submarine Mineral Genesis Monitoring Manifold
⇒ Submarine Mineral Genesis Monitoring Cell
⇒ Specialty Threaded Connector

