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April 2017

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World Trends and Technology for Offshore Oil and Gas Operations

BP's Thunder Horse expansion project

Africa update

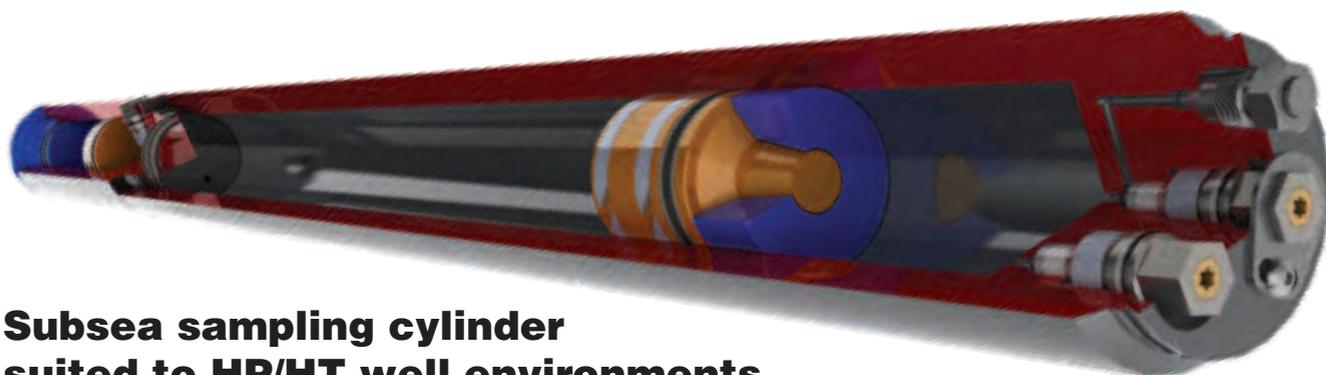
FPS market forecast

TurkStream pipeline

Heavy lift



INSIDE:
RSS survey



Subsea sampling cylinder suited to HP/HT well environments

Proserv has introduced the subsea sampling cylinder (SSC), claimed to be the world's first fully qualified and certified 'for shipping' sample cylinder to be deployed subsea. It is designed to capture well properties throughout a field's lifetime.

Subsea cylinders allow operators to take representative production samples from a subsea system for direct transfer to a laboratory.

Proserv says its system eliminates the risks associated with handling and transferring

samples on the surface, reducing the risk of containment loss, and exposure to hydrogen sulfide and carbon dioxide.

Andrew Anderson, the company's senior vice president for Production Equipment Services, said: "With operators facing increased challenges in maximizing production from geologically complex, high pressure and temperature and often remote and inhospitable fields, being able to generate accurate and reliable information from wells is critical in

The subsea sampling cylinder is designed to capture well properties throughout a field's lifetime. (Courtesy Proserv)

establishing its status and prospects."

The Proserv SSC is suitable for severe service applications and has a large two-litre sample volume. Cylinders can be rented or used with existing systems, and can also be integrated with Proserv's established subsea sampling systems. ●

Oil spill clean-up material effective in all conditions

**G. De Vitalis
A. Taini
TEST-1 S.r.l**

PUFF (Polyurethane Foam Flex) is a material developed by Italian company TEST-1 S.r.l as a first-response solution for oil spill clean-up operations. The material can be stored on offshore vessels and deployed in any weather conditions, in any polluted area and for all types of spill, from routine to potentially catastrophic.

The patented oleophilic, hydrophobic open-cell flexible polyurethane foam is registered on the Italian Environment Ministry's official list of adsorbent products.

Tests have shown that PUFF can adsorb around 23 times its own weight of various kinds of hydrocarbons, including 10w40 oil, light and heavy fuel oils, and crude oils of various API gravities. The material can also be reused about 100 times; after regeneration, it is wrung out using machinery engineered and built by TEST-1, which



PUFF wringing machinery during a practical trial at the port in Barcelona. (All images courtesy TEST-1 S.r.l)

allows recovery of the adsorbed oils uncontaminated by water.

Tests in a wave simulation tank have shown that the material's rate of absorption of fuel oil is considerably higher when waves are present. This allows operation even in adverse weather conditions, where most existing clean-up methods are ineffective.

In comparison with polypropylene, the standard adsorbent normally used for clean-up operations, PUFF's performance is superior both in terms of its adsorption capacity and the potential reuse of the material after wringing-out.

In addition, PUFF's overall cost is three to eight times lower than that of adsorbents currently available on the market, and the recovery of the unadulterated product means a significant reduction in the amount of product to be disposed of. Quantities for disposal are thereby reduced by at least 10-fold, and above all product from the spill can be reused.

Eni has co-operated during the PUFF testing phase. ●



Sample of PUFF during absorption of oil from water.