



## Sand Cleaning System

## **Product Summary**

The solids cleaning system uses a fluidised bed to actively separate oil from solids enabling clean sand to be disposed to sea. Hence, the sand cleaning system improves operators' carbon footprint and Environmental, Social and Governance (ESG) metrics.

The Solids Cleaning System (SCS) is designed to clean solids from the wellbore to less than 1 weight percent of hydrocarbon without the need for chemicals.

The SCS has a compact design that enables retrofit on offshore topside assets worldwide. The system provides a safe and efficient process that utilises a thermal multistage cleaning principle where the solids are fluidised. Once fluidised, steam is injected to release the hydrocarbon film covering the solids, efficiently separating valuable hydrocarbons from solids. The oil released from the sand is put through a filter package that cleans the oil from any particles before being transported to the Oil and Gas (O&G) production system.

In essence, the solids cleaning system ensures no valuable hydrocarbons are lost from production and provide a cleaner production process.



#### Market differentiating technology

- Sand cleaning to below 1% weight hydrocarbons on oilcontaminated solids
- Online flushing to dedicated disposal (sea of skip)
- Small footprint =  $2.0 \times 2.0 \times 2.7$  meter footprint
- Secure sampling point for collected sand
- Online data logging system of solids cleaned and disposed

#### Real-time information for better quality decisions

- Weight of solids collected & buffered
- Weighing accuracy within 100 g
- Oil in sand/water measurement verifying clean sand.
- Closed loop solids transportation system for no manual handling.

#### Reducing carbon emissions

Cleaning of solids to below government regulations as 1% weight hydrocarbons on contaminated solids, enables jetting to sea or skips with minimal environmental impact, also reducing logistical impact. while enabling alignment with activities regulation §68









# FOUR Sand Cleaning System

### **Technical Specification**

#### Pressure

Working Pressure: 1-20 bar (1 - 290 psi) Design Pressure: 20 bar (290 psi)

#### Capacity

Smallest particle size:: 20 micron Maximum flow rate (fluid): 10 m3/h Maximum sand rate: 1 000 kg/batch

#### **Dimensions**

Height: 2 700 mm (8.8 ft) Width: 2 000 mm (6.6 ft) **Depth**: 2000 mm (6.6 ft) Weight: 4 800 kg (10 600 lb)

#### Interfaces

Flow piping:: 2" Flanges:: 2" Techlok

Flanges flushing: 2" ANSI B16,5 150# Solids capacity: 8 00 litres volume

#### Temperature

Min operating temp: -28 °C (-18,4 °F) Max operating temp: +120 °C (+248 °F)

#### Certification

Pressure Vessel / PED NACE MR0175-97 CE Norsok Z-015 DNV GL 2.7-3 lifting equipment

#### Materials

Pressure vessel:: Duplex, UNS S31803 Seal rings: Viton / Duplex / 316L / 6MO

Valves: SS AISI 4130

Pipes: Super Duplex, UNS 31803 Frame: Carbon steel S355

Nuts, bolts: L7 + Standard galvanic 8.8



