

Application Data

Flowlines testing (HTCIS)



HTCIS unit installed on Subsea 7 vessel, Normand Seven

General Description

Hughes Pumps have been supplying Hydrostatic Test & Chemical Injection Systems (HTCIS's) since 1999 to leading companies around the world to pressure test Flowlines (Flexible Lines/Risers) during installation offshore to depths of 2000m. Systems generally comprise of four modules.

The Filling System (FS) uses a stainless steel centrifugal pump at 50m³/hr at 10bar (150psi) to rapidly fill the Flowline with seawater.

The Mid Pressure System (MPS) typically operates at 3 to 11m³/hr at up to 207bar (3,000psi) using an HPS2200 pump to increase the Flowline pressure at the required rate.

The High Pressure System (HPS)

typically operates at 0.2 to 1.0m³/hr at up to 1035bar (15,000psi) using an HPS650 pump to raise the Flowline pressure to its maximum test pressure, normally 150% of working pressure, at a very finely controlled rate.

The Chemical Injection System (CIS) uses small dosing pumps to inject oxygen remover & biologic inhibitor into the discharge line, at controlled rates based on flow meter readings fitted to the FS, MPS & HPS pumps to maintain the required chemical concentrations.

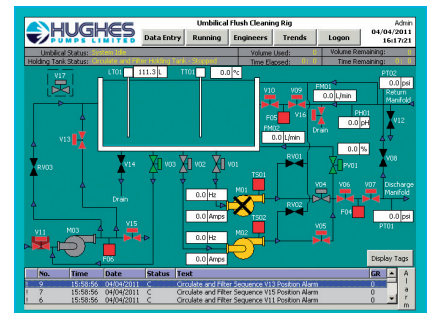
The system is closed loop which automatically controls flowrates, discharge pressures & chemical dosing rates. Data logging equipment can also be incorporated if required. Simpler systems with manual control are also available.

Benefits

- Hughes Pumps have a track record of delivering quality solutions on tight deadlines
- Hughes Pumps manufacture the pumps which are at the heart of the system
- The pumps are high quality, all stainless steel wetted parts, slow running & heavy duty
- Hughes Pumps has pump technology to 3000bar
- Flexible approach to clients specifications & budgets, able to supply a simple system to full turnkey, PLC control
- 40 years' experience in supplying pumping equipment offshore & subsea

References

- Subsea 7
- Technip
- Techdof
- Odebrecht
- CEONA
- MFX
- Marine Production (Oceaneering)



PLC systems can be used for flushing & testing applications (MFX, Brazil)



Flowline & Umbilical testing equipment aboard the CEONA vessel, Polar Onyx



HTCIS & FHTU installed on Subsea 7 Kommander 3000



HTCIS pumpset, 1035bar

This information is intended to be a guide only. The required pump size & performance can vary depending on many factors including rate of work required, hardness of deposit or work piece, operator skill, site access etc.

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