

Installation of a Low Shear Typhoon valve at Troll C

As part of the final qualification process, an angled Low Shear Typhoon valve was installed on Troll C (Fram Vest) in 2016. An average 60% improvement of the water quality was found when using the Low Shear valve, compared to that of the standard choke. No difference in oil quality was observed; both valves gave export quality oil after separation. Noise and vibration measurements did not show any difference between the Typhoon Valve System and the conventional choke valve.



INSTALLATION AT TROLL C

60% reduction of oil in the produced water

Pilot test of a Low Shear Typhoon valve at Oseberg C

An angled Low Shear Typhoon choke valve was tested at Oseberg C in 2011. The results showed an average of 45% improvement of the water quality and 35% improvement of the oil quality, compared to that of a conventional choke valve.



OFFSHORE PILOT TEST AT OSEBERG C

> 45% reduction of oil in the produced water

Prototype test of a Low Shear Typhoon valve in Porsgrunn

In 2009, at Equinor's multiphase flow loop in Porsgrunn, an axial choke valve test compared the Low Shear Typhoon valve with a conventional choke valve for multiple water cuts, gas liquid ratios and differential pressures. The results showed 60 to 90% improvement of the water quality, and an average 25% improvement of the oil quality.



PROTOTYPE TEST

> 50 - 90% reduction of oil in the produced water

Niels van Teeffelen Engineering Manager P.O. Box 6, 4349 Bryne, Norway Phone: +47 48278442

Niels.Teeffelen@typhonix.com www.typhonix.com