

Offshore retrofit projects made simple

An oil platform run by a major North Sea Operator is located 210 km (130 miles) North East of Aberdeen in the UK North Sea Sector. Since commissioning in the late 90's the LP Flare Drain Drum Pumps had been problematic. A temporary pumping solution had been running between frequent pump failures for almost 10 years. It was time for the platform to resolve this issue once and for all.

The starting situation

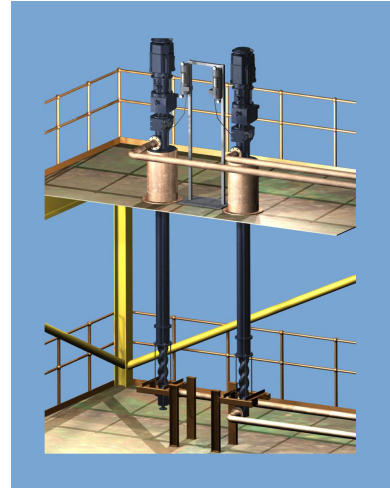
The original LP Flare Drain Drum Pumps were a pair of vertically mounted progressive cavity pumps from a manufacturer no longer in business. The pump design had been inappropriate from the start. A small pump operating at high speeds employed a flexi shaft principle to take drive from the concentric bearing to the eccentric motion of the rotor within the stator. The inherent faults of the design resulted in large shaft run out, leading to continual shaft sealing issues and regular failure of the flexi shaft. The high rotor speeds were particularly unforgiving when the drain drum liquid level was low, resulting in low NPSHa.

The solution

seepex were able to provide a pump which would be reliable and could be retrofitted into the same dimensional space. A seepex vertical BEO pump was selected to address the failings of the existing pump. The new pump would run at much slower speeds, lowering the NPSH requirements. The coupling rod employed an encapsulated universal pin joint with replaceable hardened tool steel bushes. The diameter of the pump shaft was three times that of the original, making it particularly robust. seepex took samples of the drain drum liquid and used its own research and development laboratory to establish the correct elastomer selection. The selection of metallurgy type Zeron 100 super duplex, as opposed to 254SMO used in the original pump, offered both excellent corrosion resistance and a cost saving. To ensure correct construction dimensions a seepex engineer surveyed the installation offshore, and following manufacture, seepex commissioning support engineers were able to complete a clean and simple installation.

The benefit

The platform now has a reliable LP Flare Drain Drum Pump. The adoption of a consultative approach of listening and understanding the problem has resulted in a solution with proven results. The continual emergency maintenance requirements have been removed and the platform will benefit from ongoing support by seepex service engineers qualified to work in North Sea offshore waters.



BEO 35-12V

Key Facts

- LP Drain Drum Pump
- 22m³/hr, 16 bar deltaP
- Zeron 100, Super Duplex
- Retrofit design
- seepex offshore commissioning support

Significant Cost Savings

- Whole life cost saving
- Minimal maintenance required
- Replaceable coupling rod bushes

Please visit www.seepex.com for further information and contacts.