

## Application Profile



#### Application

### Highlights

- Torsionally-tuned spacers for reduced stiffness
- 301 Stainless steel discs
- Alloy steel component construction
- Machined hubs to suit customer shaft end details
- Easy to install and remove
- API 671 & ATEX compliant
- Spark-free overload protection
- Anti-flail design



# Turboflex HF Series Disc Coupling

### **FPSO Vessel Pump**

A leading industrial pump manufacturer needed high-performance couplings for a topside sea water injection pump package used on-board a floating production, storage and off-loading (FPSO) ship. The massive oil and gas refining vessel, with a 2M barrel capacity, is positioned over the Egina deepwater oilfield, 150 Km off the shore of Nigeria.

Couplings were required for the packaged pump drivetrain. Based on previous successful collaborations, the pump OEM contacted Bibby Turboflex for its extensive coupling engineering expertise, quality manufacturing and reasonable lead times.

Bibby supplied modified standard Turboflex HF Series disc couplings with tapered bores to meet the challenging application requirements. Hubs were machined to suit the shaft end details specified by the OEM, and spacers were torsionally-tuned to reduce the couplings' overall stiffness.

- An 810 mm (32 in.) long Turboflex HF low-speed coupling with a speed range from 750 to 6800 RPM connects the 10,600 Kw electric motor to the gearbox.
- An 824 mm (32.5 in.) long Turboflex HF high-speed coupling with a speed range from 750 to 4900 RPM connects the gearbox to a 7-stage centrifugal pump.

Turboflex HF Series couplings are specifically designed for high-performance applications. Models are API 671 compliant and ATEX certified. Plug-in spacers ensure shaft alignment is always maintained. They are easy to install and remove when maintenance is required, particularly on the bulkhead seal. Units feature alloy steel component construction and 301 stainless steel discs. The couplings also feature spark-free overload protection and an anti-flail design.

Europe +44 (0) 1924 460801 bibbytransmissions.co.uk Asia Pacific For a list of our AP sales offices: altramotion.com/contactus

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