Preload Pumps on Oil Jack Up Rig

Application market	Industry
Market segment	Oil & Gas
Pumped medium	Seawater
Pump product	Submersible
Country	Worldwide

Challenge

Jack-up rigs are mobile platforms that stand firmly on the seabed with the help of lowerable legs. When the, with tugboats provided, desired position of the jack-up platform is reached, the legs are lowered. With the controlled intake of ballast water, pressure is built up on the legs and the platform is raised to the required height above sea level. This creates a unit that is firmly attached to the seabed, in this case an oil rig that is finally ready for operation. Required, fully in seawater submerged so-called ballast pumps must have the necessary approvals for marine equipment, be able to cope with large and highly variable heads and be completely resistant to seawater.

Solution

A **Hidrostal Screw Centrifugal Submersible Pump**, made entirely of Duplex stainless steel for operation in seawater, was precisely configured and certified according to the special requirements. Testing of and compliance with the applied technical and design requirements, as well as compliance with the required life cycle costs, was carried out step by step by the classification society **ABS** (**A**merican **B**ureau of **S**hipping). Thanks to the steep pump characteristic curve, the widely varying heads can be covered without difficulties.

Benefits

Ballast pumps must not fail, their reliable function is vital for a proper operation of the jack-up platform. For many years, on an increasing number of platforms worldwide, this has been ensured with the **Hidrostal Screw Centrifugal Pump** to the great satisfaction of the operators.

Quantity of units sold	82 units, distributed on 16 Jack Ups
Pump type	F10K-SS6 + FNVV4
Motor data	75 kW / 4-pole / 60 Hz / 480 V / variable speed drive
Material combination	Pump hydraulic and submersible motor made complete of Duplex stainless steel
Duty point	Flow : 250 to 325 liters per second / Head : 15.3 to 19.0 meters
In operation since	2015