



Trasfor
OFFSHORE



Introduction

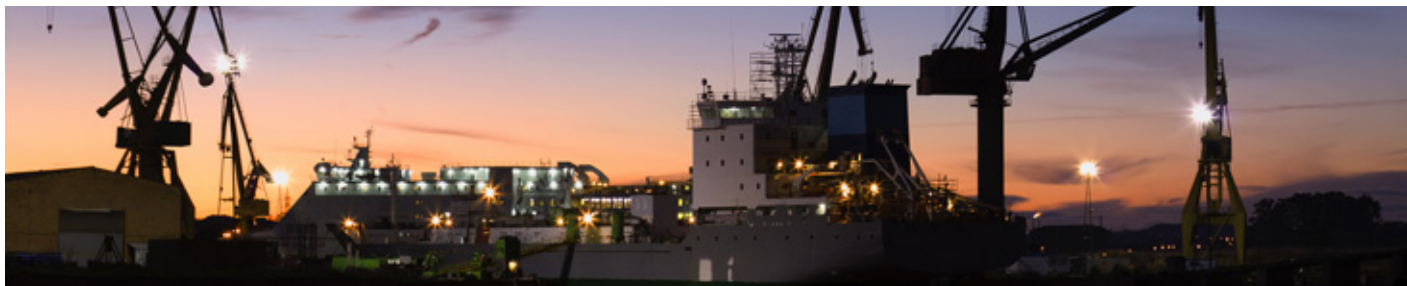
Trasfor's transformers for offshore applications ensure the highest performance level of reliability in any working condition.

More than 40 skilled engineers in our technical department, supported by "state of the art" software tools, together with the know-how achieved in more than 45 years, allow Trasfor to offer a wide product portfolio by manufacturing transformers and/or reactors from few kVA's up to 36MVA with any voltage up to 36kV.

The high level of customization, grant full customer satisfaction for both, new and existing installations, fulfilling all applicable international standards and class rules.

Trasfor skilled and certified field engineers are available 24/7 to provide fast and professional support whenever and wherever needed.





Drillships



Drillships are equipped with electric motors on the underside of the ships hull, capable of propelling the ship in any direction. These motors are integrated into the ships computer system, which uses satellite positioning technology, in conjunction with sensors located on the drilling template, to ensure that the ship is directly above the drill site at all times.

A typical drillship will have, in addition to all of the equipment normally found on a large ocean ship, a drilling platform and derrick located on the middle of its deck. In addition, drillships contain a hole (or 'moonpool'), extending right through the ship down through the hull, which allow for the drill string to extend through the boat, down into the water. Drillships are often used to drill in very deep water, which can often be quite turbulent.

Floating Production Systems



Floating production systems are essentially semisubmersible drilling rigs, except that they contain petroleum production equipment, as well as drilling equipment. Ships can also be used as floating production systems. The platforms can be kept in place through large, heavy anchors, or through the dynamic positioning system used by drillships.

With a floating production system, once the drilling has been completed, the wellhead is actually attached to the seafloor, instead of up on the platform. The extracted petroleum is transported via risers from this wellhead to the production facilities on the semisubmersible platform.

These production systems can operate in water depths of up to 6,000 feet.

Main distribution transformer

- Power 8,7 MVA
- Primary Voltage 11 kV 60 Hz
- Secondary Voltage 463 -720 V 60 Hz
- Protection IP23
- Cooling AF
- Weight 13500 Kg



Thruster drives transformer

- Power 4,4 MVA
- Primary Voltage 11 kV 60 Hz
- Secondary Voltage 2 x 2,2 kV
- Protection IP44
- Cooling AFWF
- Weight 9000 Kg





Semisubmersible Rigs



Semisubmersible rigs are the most common type of offshore drilling rigs, combining the advantages of submersible rigs with the ability to drill in deep water. Semisubmersible rigs work on the same principle as submersible rigs; through the 'inflating' and 'deflating' of the lower hull. The main difference with a semisubmersible rig, however, is that when the air is let out of the lower hull, the rig does not submerge to the sea floor. Instead, the rig is partially submerged, but still floats above the drill site. When drilling, the lower hull, filled with water, provides stability to the rig.

Platform converter transformer

- Power 2,8-3,5 MVA
 - Uncoupled winding
 - Cooling AN-AF
-

Platform distribution transformer

- Power 2,5 MVA
 - Primary Voltage 11 kV 60 Hz
 - Secondary Voltage 690 V
 - Protection IP44
 - Cooling AFWF
 - 4 units
-





Offshore Drilling and Production Platforms

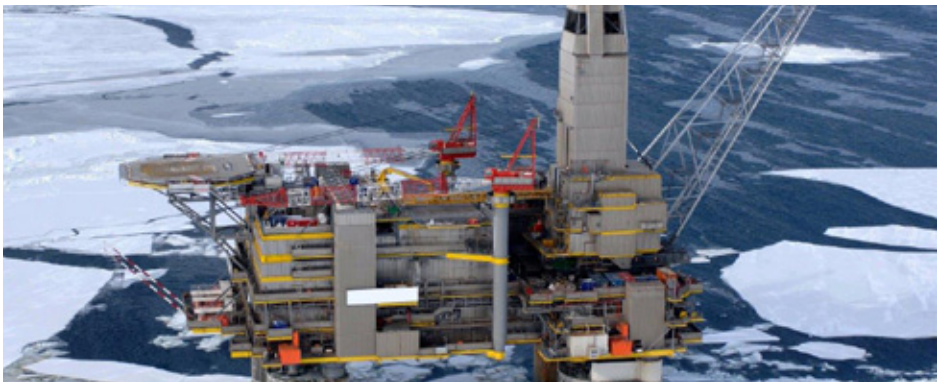
These large, permanent platforms are extremely expensive, and generally dedicated to large hydrocarbon deposits in order to be worth the investment. Some of the largest offshore platforms are located in the North Sea, where because of almost constant inclement weather, structures able to withstand high winds and large waves are necessary. There are a number of different types of permanent offshore platforms, each useful for a particular depth range. In certain instances, in shallower water, it is possible to physically attach a platform to the sea floor.

Thruster drives transformer

- Power 4,4 MVA
- Primary Voltage 11 kV 60 Hz
- Secondary Voltage 2 x 1753 V
- Protection IP44
- Cooling AFWF
- Weight 9000 Kg

Main distribution transformer

- Power 3,2 MVA
- Primary Voltage 11 kV 60 Hz
- Secondary Voltage 710 V
- Protection IP23 cooling AF
- Weight 7500 Kg





Platform Supply Vessel



A Platform Supply Vessel is a ship specially designed to supply offshore oil platforms. These ships range from 65 to 350 feet in length and accomplish a variety of tasks.

The primary function for most of these vessels is transportation of goods and personnel to and from offshore oil platforms and other offshore structures. In the recent years a new generation of Platform Supply Vessel entered the market, usually equipped with Class 1 or Class 2 Dynamic Positioning System Dynamic positioning.

Main propulsion transformer

- Power 3,8 MVA
- Primary Voltage 690 V 60 Hz
- Secondary Voltage 2 x 720 V
- Cooling AFWF
- Protection IP44
- Weight 6200 Kg
- Quasi 24 pulse

Distribution transformer

- Power 1,6 MVA
- Primary Voltage 680
- Secondary Voltage 400 V
- Protection IP23 cooling AN





Quality

- Quality as ISO certification 9001:2000
- Quality as total respect of environment with ISO 14001-2004
- Quality for the railway industry as IRIS - International Railways Industry Standard
- Quality of products and person through ISO EN 3834-2, EN 15085, UL File E172880 and UL File E216928 certification
- Certificate of conformity to GOST R

Quality through entrustment by the following certifying bodies:

ABS - American bureau of shipping

DNV - Det norske veritas

GL - Germanischer Lloyd

Standards: all int. standards such as IEC, BS, CSA, UL, VDE/ DIN, ABS, BV, ANSI, DNV, LRS, etc.

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