Carboplan Surface – water-lubricated fwd seal

General description

• Mechanical face-type seal for water-lubricated sterntubes
• Silicon carbide sealing ring material: corrosion- and wear-resistant
• Equipped with an additional inflatable static seal (Pneumostop)
• No wear to the shaft
• Housing material is bronze

Advantages

Design
Sealing rings made of silicon carbide (SIC) → harder than sand → extremely wear-resistant
Pneumostop made of NBR with excellent mechanical properties → reliable operation at very low water temperatures, exact recovery when vented for no shaft contact

Installation
Delivered fully assembled and tested → easy installation by the shipyard

Operation
No wear to the shaft → practically maintenance-free
Easy handling due to uncomplicated setup → reduced risk of operating failure
Constant sealing pressure by pressure springs → absorbs axial shaft movements

Services
Designed for in-situ overhaul as per certified and approved Simplex repair standards
Worldwide service network and availability of spares
Function

- A stationary ring (1) and a rotating sealing ring (2) are pressed against each other by pressure springs (3) and form the axial seal.

- The static part of the seal unit is bolted against the sterntube flange and supplied pre-assembled.

- The rotating part of the seal unit consists of liner, spring support ring with slide ring, secondary sealing ring (4) and clamp ring. The rotating part is also supplied pre-assembled.

- The seal is equipped with a pneumatically actuated standstill seal (Pneumostop) (5) to assist during inspection (no docking of the vessel required) and as an emergency seal with the shaft at standstill.

- The Pneumostop can be inflated by an air supply line (V1 open, V2 shut).

- During seal operation, the Pneumostop is always vented (V1 shut, V2 open).

- A water supply line provides the sterntube bushes (6) with a constant supply of water.

- A small amount of fresh water is needed for flushing the permanently vented seal chamber.

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**Function**

- **PI** = Pressure indicator
- **VP** = Vent for Pneumostop
- **V S/T** = Vent for sterntube
- **CL** = Shaft centre line
- **A** = Air supply for Pneumostop
- **W** = Water supply line

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