

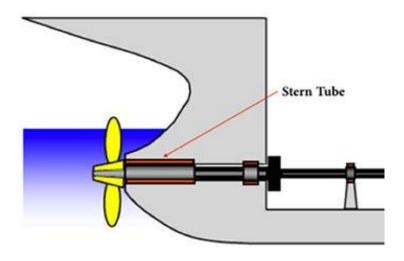


## **Marnie Stern Tube Bearing**

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## Marnie Stern Tube Bearing

A Marine stern tube is a hollow tube that passes through the lower part of the stern with a stern shaft that is connected to the <u>marine propeller</u> at sea and provides bearings, lubrication, and seals for the stern shaft.



The arrangement and sealing of marine stern tube bearings play an important part in the operation and pollution prevention of ships.

Pictures of Stern Tube Bearing



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Two main uses of stern tube bearings

Bear the load

The propeller suspended at the rear end applies a load to the shaft, which is supported and carried by the stern bearing. Bearings are cast iron bushings lined with white metal, with excellent load processing and lubrication.

The stern tube is mounted on the stern tube frame and the internal frame of the hull at the aft peak.

This allows the smooth rotation of the tail shaft in the bearing region to achieve uninterrupted propulsion.

Seal

Stern tube bearing comprises a seal, to prevent the entry of water and avoid oil leakage into the sea.

Stern tube bearings Construction and operation

Stern tube arrangement with oil lubrication system as shown. There are grooves in the bush of the white metal bearing. Oil is pumped into the bush of the bearing through these external axial grooves. The oil then passes through holes on each side through internal axial passages. The return line at the end of the bushing helps oil flow back to the pump. A pump with a cooler constantly pumps oil into the bearings to maintain the necessary pressure. In the event of a pump failure, the required back pressure oil is supplied to the bearing system in two header tanks under gravity pressure. Therefore, the hydraulic oil level in each sump must be well maintained. In addition, both tanks should be equipped with low-level alarms.



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Pressure in the system should be kept above the static sea head to prevent water from seeping inside if the seal fails. The system also provides low-pressure alarms to prevent any type of accident.

3 types of Stern Tube Bearings

- Non-Metallic Sleeve Bearings
- Stern tube flange bearing
- Stern tube split flange bearing

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