



## STERNTUBE ARRANGEMENTS

**Clements Marine** can supply a wide range of sterntube arrangements according to customer preference, hull design, and engine performance and type. A range of recommended solutions are outlined below and on page 2 of this data sheet.

Generally, optimising cost and maintainability with durability and longevity of product life, the sterntube can be constructed using GRP, bronze or fabricated steel. Similarly, the shaft sealing arrangement is normally a dripless watercooled StrongSeal assembly, or a conventional bronze housing and packed gland.

## TUBE MATERIALS

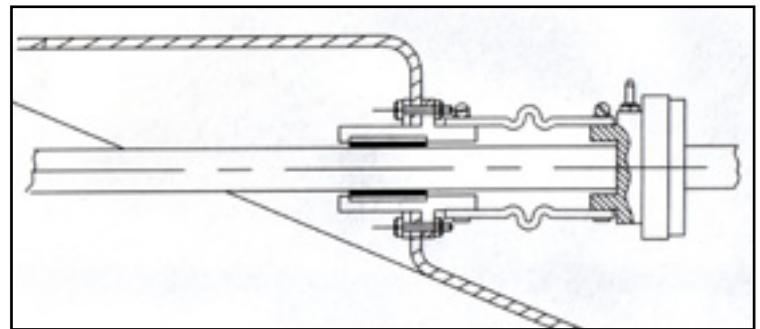
**Clements Marine** offer a range of materials for sterntube manufacture. These are as follows:-

1. Polyester resin GRP tube.
2. Non-ferrous metal tube.
3. Cast non-ferrous LG2 gunmetal tube.
4. Carbon steel tube.

Our Polyester resin GRP tubes can be machined to suit the type of shaft seal or packed gland to be installed. Refer to **TD02, Self Aligning Shaft Seals and Packed Glands**.

All GRP tubes are manufactured with sufficient accuracy for cutless bearings to be fitted without further machining of the tube.

Tubes can be supplied in a wide range of sizes and lengths to suit individual customer requirements.



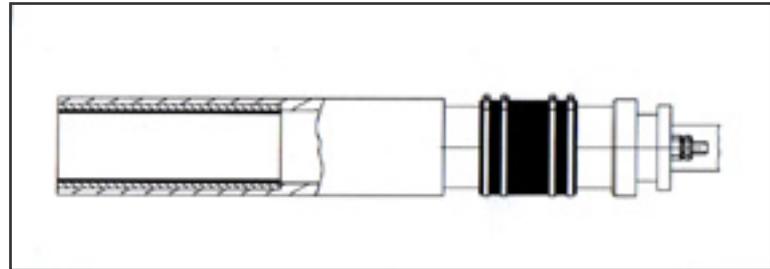
**-Clements Marine recommended half cutless bearing and dripless, water-cooled Strong Seal assembly suitable for high performance leisure and medium duty commercial craft to 35m LOA.**



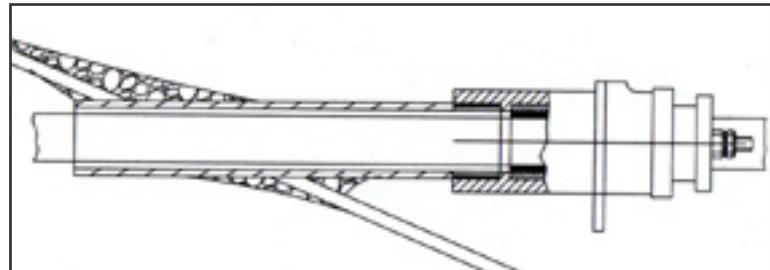
The **StrongSeal** dripless, self aligning seal assembly with its integral cast bronze hull fitting and cutless bearing housing. (see TD02, for shaft seal details)

## Further sterntube arrangements;

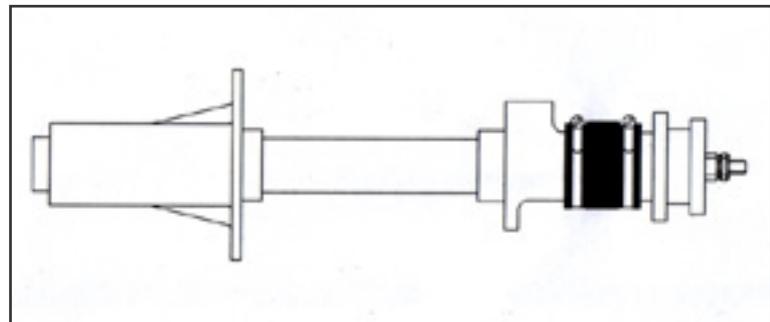
-**Standard G.R.P.** sterntube and cutless bearing with water-cooled flexible cast bronze packed gland, -this G.R.P. sterntube can equally be fitted with the water-cooled Strong Seal.



-**Standard metal** sterntube with rigidly mounted half-cutless packed gland assembly, or -metal sterntube equally can be fitted with the water-cooled Strong Seal assembly.



-**Cast bronze** sterntube (see photo page 1) and flexible half cutless bronze packed gland assembly, -this cast sterntube equally can be fitted with the water-cooled Strong Seal assembly.



**Bespoke systems** that are suitable for heavier duty commercial craft can be supplied by **Clements Marine**, based on proprietary equipment and adaptations of standard Company designs. Experience in this field has been developed in the supply of gear to commercial craft such as Pilot Boats, Ferries and Boats for Special Service Duty applications for Naval and other organisations around the World over 20 years. Specific designs should be submitted to our technical department to allow us to contribute to the design and development process, preferably before commitment is made to engine size and performance.