Cathodic Propeller Protection System
The importance of shaft earthing

It is essential that the cathodic protection current provided by the sacrificial anodes or the ICCP system is correctly earthed from the shaft line back to the hull. The earthing arrangement for the cathodic protection needs to be located as far along the shaft line as possible to earth the current at the location nearest to its source. The ideal location is between the stem seal and the furthest aft bearing.

Damage which can be caused

- Spark erosion resulting in damage to the bearings.
- Cavitation damage to the tips of the propellers.
- Formation of deeper pits in propellers due to the corrosion/erosion cycle.
Trade Engineering - high quality brushes and slip rings

The effectiveness of the shaft earth arrangement relies on the quality of the shaft earthing brushes and slip ring. That is why it is very important for customers to only use Trade Engineering OEM replacements which are designed to give them optimum level of performance. Trade Engineering brushes are made from 65% silver and 35% graphite, a specification that provides the best combination of conductivity and wear resistance.

The high proportion of silver provides low resistance, whilst the graphite element gives the strength to withstand friction, ensuring a longer life and greater economy. Equally important is the design of Trade Engineering’s sprung brush holder which ensures that the correct amount of pressure is applied to the slip ring at all the time.

The slip ring itself, is made from cooper with a solid silver inlay track to provide excellent conductivity when in contact with the brushes. All of those features ensure that damaging stray currents are safely conducted to earth without causing damaging ‘spark’ erosion in bearings.

- Generally, silver graphite brushes need to be replaced every 3-6 months.
- Ordering in bulk saves time, money and the risk of running out.
- Generous discounts are available from Trade Engineering for bulk purchases.
- Timely renewal protects bearings against damaging ‘spark’ erosion.

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• Double Clamp Brush Holder
• Silver brushes for grounding shaft