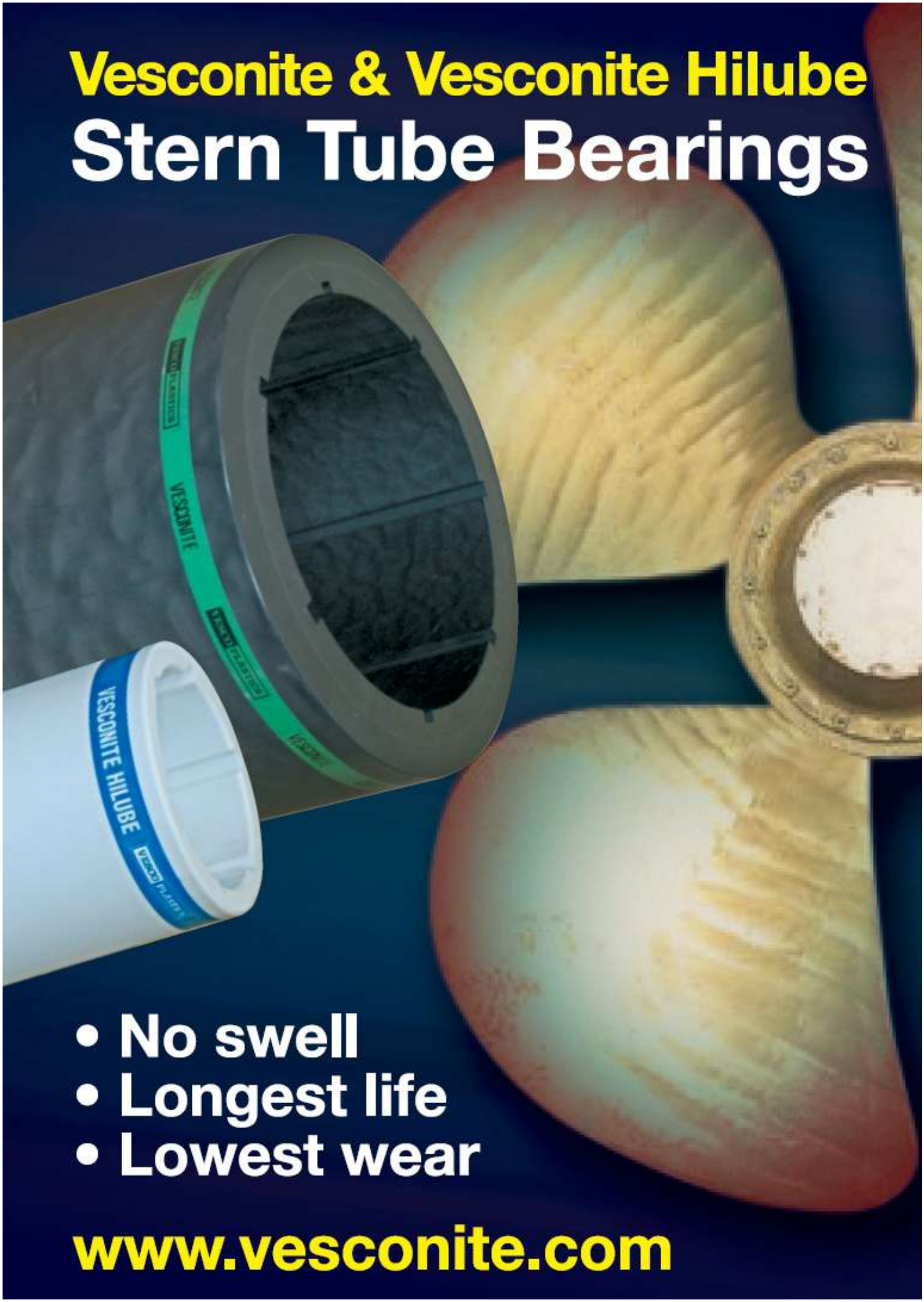
Vesconite & Vesconite Hilube
Stern Tube Bearings



- No swell
- Longest life
- Lowest wear

www.vesconite.com

Vesconite -
Ideal stern tube bearings

Vesconite combines unique properties to make it the preferred material for stern tube bearings.

- **No water swell** - Close clearances can be maintained with confidence – with no risk.
- **Internally lubricated** – Low friction, no stick-slip.
- **High compression strength** – Remains strong and hard even in water.
- **Long life** – Increased periods between dry docking.
- **Exceptionally low wear** – Low wear to bearings and to expensive shafts. Lower overall costs.
- **No harmful components like asbestos** - Safe to use and no harm to the environment.

Vesconite Hilube is an advanced grade of Vesconite. Lowest friction, longest life.

Vesconite Hilube has the same mechanical properties as Vesconite. The lower friction means a longer life to bearings and expensive shafts. Vesconite Hilube is especially suited to dirty / brown water applications giving longer when used with hard shafts.

Vesconite, the specialized bearing material for long life applications with minimal maintenance.

Convert oil systems to water lubricated systems

Oil lubricated stern tube bearings are potentially hazardous to the environment, costly, as well as more difficult to operate and maintain.

Using Vesconite bearings, oil systems can easily be converted to water, reducing maintenance and the risk of oil leakage.

Vesconite is internally lubricated and water is an effective lubricant.

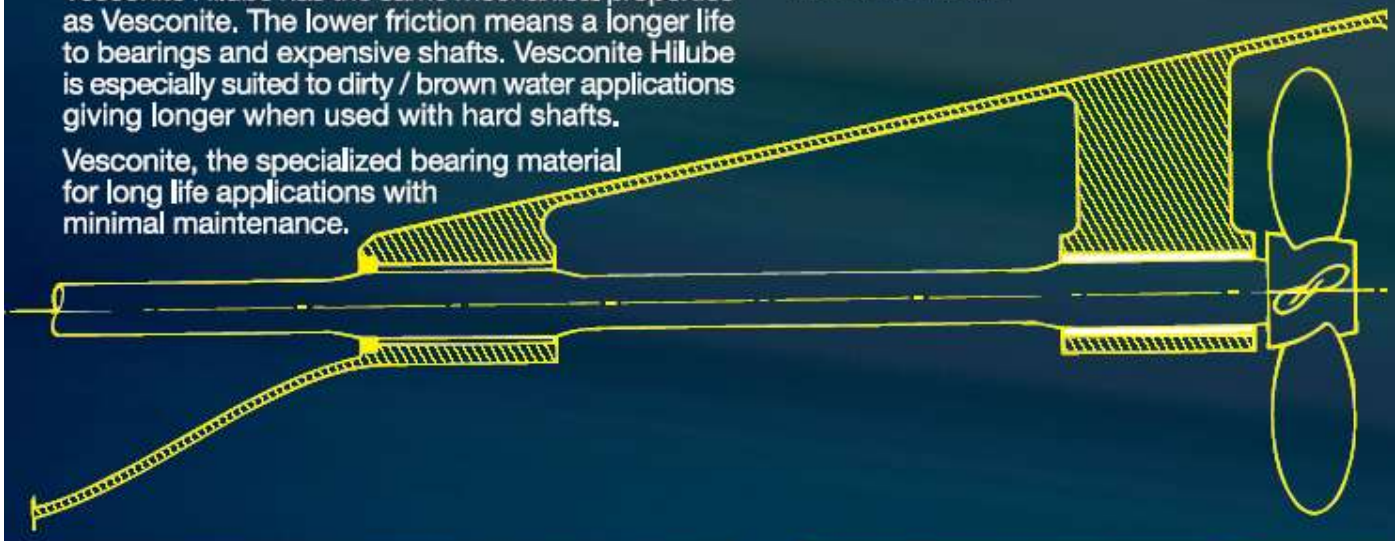
Shaft sleeves should be non corrosive.

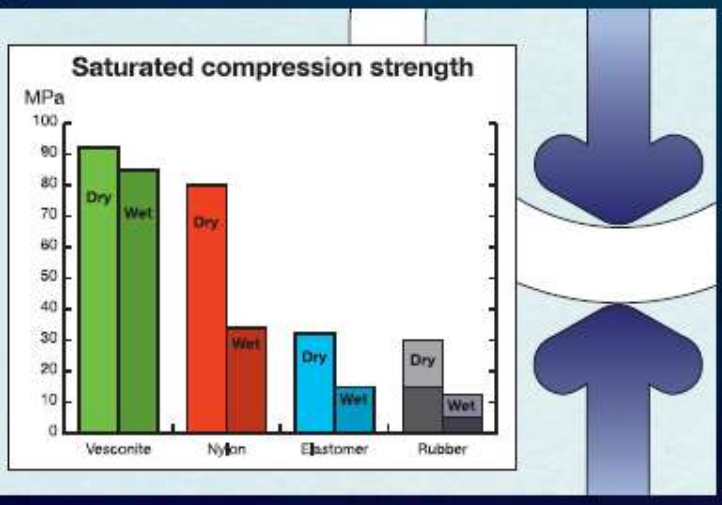
Simply convert to water lubricated Vesconite bearings and...

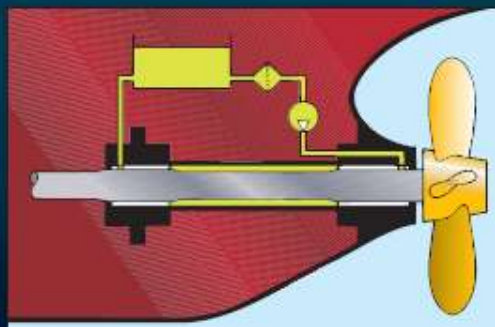
Reduce pollution by avoiding oil leakage.

Simplify design, ease maintenance and save time.

Save money by eliminating expensive white metal bearings.







Oil lubricated stern tube bearings

Vesconite can be used in oil lubricated stern tube bearings.

Oil is a good lubricant for Vesconite.

Provide active oil circulation through bearings. Oil temperature should not exceed 60°C.

ISO 9001 QUALITY

SABS

Vesconite – An ideal material for misalignment / edge loading

Avoid shaft misalignment to maximize bearing life. Since this is not always possible, choosing the right bearing material is essential.

Vesconite is a rigid and dimensionally stable bearing material.

Vesconite does not swell and can be designed with close running clearances without the fear of seizure. This reduces the edge loads caused by misalignment and overhung loads.

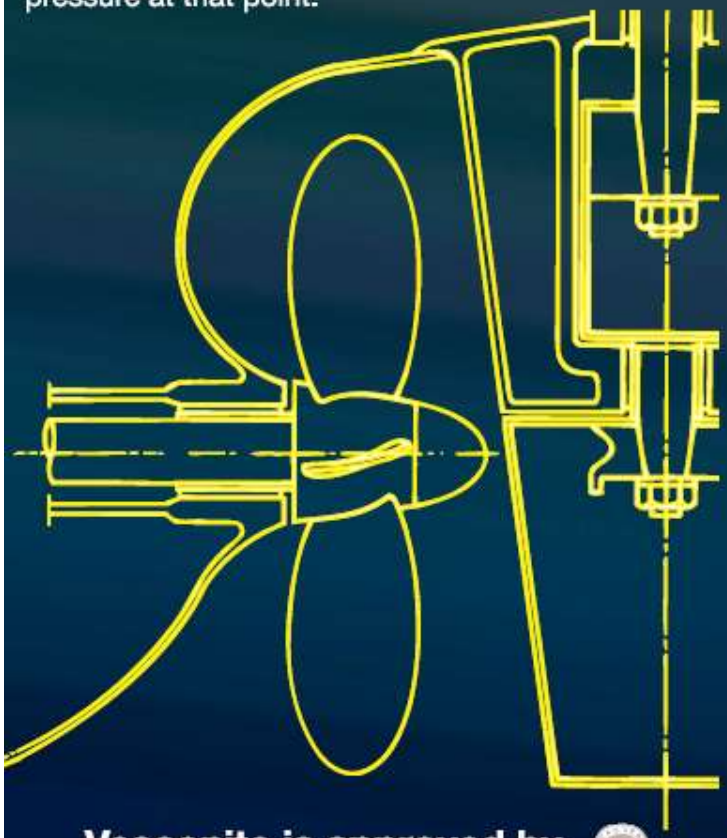
Large assembly clearance - High point loads

Close assembly clearance - Distributed loads

Vesconite carries high loads without permanent deformation. Vesconite is not as rigid as metals and so does have a small amount of deformation under load that is able to distribute an edge load over a larger surface area and reduce the bearing pressure at that point.

Hard materials - High point loads

Soft materials - Lower/distributed point loads



Vesconite is approved by major classification societies:

Vesconite vs other materials

Vesconite vs Elastomers

Elastomers swell due to high water absorption and thermal expansion. This requires larger clearances that giving unstable shafts and reduced life.

Unstable shafts, place stress on shaft seals, reducing their life.

Vesconite does not swell in water. Close clearances can be used without the risk of seizure. Vesconite reduces vibration and gives longer life to bearings and shaft seals.

Vesconite vs Rubber

Rubber bearings exhibit stick slip, especially a problem at low shaft RPM. For example when fishing boats are trawling, stick slip causes squeaking and knocking, which chases fish away.

Rubber wears expensive shafts.

Rubber swells in water. Larger clearances are required resulting in an unstable shaft.

Fishing line damages rubber bearings.

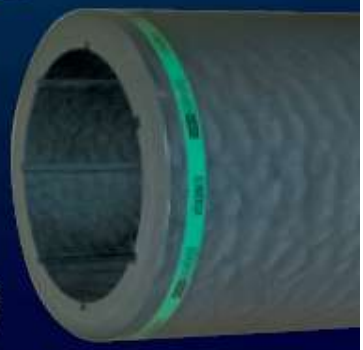
Electrolytic corrosion of bronze sleeved rubber bearings makes removal difficult.

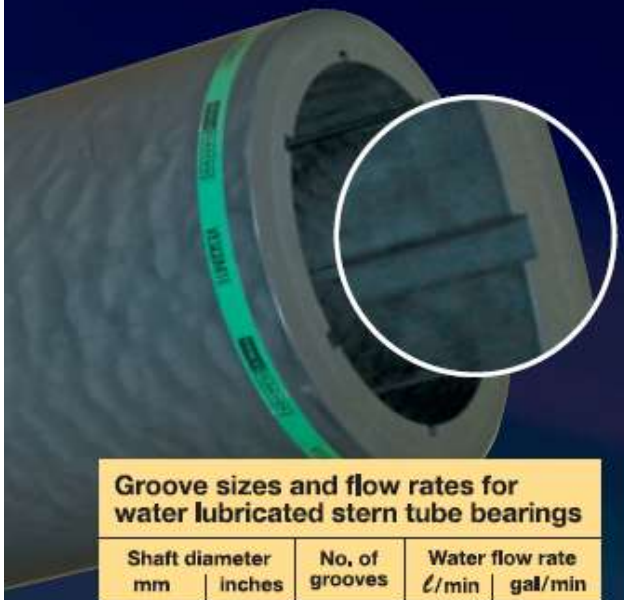
Vesconite is internally lubricated - no stick slip giving a smooth quiet operation and long life.

Vesconite vs Laminated Materials

Laminated materials tend to swell and delaminate in water and give high shaft wear.

Vesconite is a no swell, homogenous material with no delamination.





Correctly designing Vesconite for the longest life

In open (blue) water operation
Vesconite gives a fantastic wear life.

In silty (brown) water operation
Vesconite Hilube with hardened shafts gives the longest wear life for bearing and shaft.

Selecting the best shaft

Non-corrosive.
316 stainless steel or duplex stainless steel commonly used for clean water

Use as hard as possible.
(> 30 Rockwell C), especially for dirty water applications

Choose a smooth shaft.
0.5 µm Ra (20 microinch Ra) is ideal. Roughness should not exceed 2.5 µm. (100 microinch Ra)

Groove sizes and flow rates for water lubricated stern tube bearings

Shaft diameter mm	Shaft diameter inches	No. of grooves	Water flow rate ℓ/min	Water flow rate gal/min
60-79	2-3	7	12	3
80-119	3-5	7	18	5
120-159	5-6	7	24	6
160-199	6-8	7	30	8
200-249	8-10	7	38	10
250-299	10-12	7	45	12
300-349	12-14	8	53	14
350-399	14-16	8	60	16
400-499	16-20	9	75	20

Application assessment and design.

Use the online Design-a-Bearing calculators for easy sizing of Vesconite bearings.

Fax back to +27 11 616 22 22

Please send me ☐ Marine Design Manual ☐ Vesconite Sample

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