

Vesconite Hilube for Renewable Power bearing applications

Ongoing climate change makes renewable power sources important in power generation.

New technologies and developments demand engineering materials that are equal to the increased demands placed on them.

What are Vesconite and Vesconite Hilube

Vesconite and Vesconite Hilube are advanced bearings materials designed for long life with minimal maintenance.



Vesconite is self lubricating and so the need for additional lubrication systems can often be eliminated.

Vesconite Hilube is a higher grade of Vesconite with additional solid lubricants for a lower friction and a longer life.

Vesconite makes ideal bearings for "green power" applications.

No grease

Traditional grease lubrication of bushings causes contamination of water and damage to the environment. Vesconite is self lubricating and in many applications does not require grease, oil or other additional lubrication.

Vesconite can be lubricated by a wide variety of available fluids – water, sea water, etc

Environmentally friendly

Vesconite does not contain any harmful components. Vesconite is suitable for drinking water. Vesconite does not contaminate the environment.

No swell in water

Many new power sources (hydro, tidal and wave power) are water based. Vesconite does not swell in water and so bushings and bearings can be designed to close tolerances without the fear of seizure.

Longest life and lowest maintenance

Renewable power source equipment is often in remote locations or difficult to access. Vesconite has a long life even in poorly maintained applications. Service intervals are longer and maintenance costs are less.

High load capacity

Vesconite carries a high bearing load. The load capacity of Vesconite is unaffected by water.

Applications for Vesconite

Vesconite and Vesconite Hilube may be the bearing material of choice for no maintenance, long life and environmentally friendly bearings and bushings.

Hydro Power

Vesconite Hilube has been used for Turbine bearings, wicket gate bushings, trash rake

bearings, control linkage bushings, segmented shaft weals, sluice gate bearings, thrust bearings and slides, pump bearings and wear rings ... and many more.

Wind Power

Vesconite Hilube used widely in pitch adjustment bushings and slew rings.

Wave Power

Various wave power designs require bushings and bearings with high load capacities and close clearances.

Tidal Power

Tidal power systems often use water lubricated bearings that must give a long life with no maintenance.

Alternative bearings materials

Vesconite Hilube offers significant technical advantages over other bearing materials

Elastomers

Elastomer generally have a low bearing capacity and swell in water. Elastomer bearings must be designed with large clearances to avoid seizure.

Elastomer bearings give a higher wear rate than Vesconite Hilube especially in slightly dirty or silted water.



Laminated materials

Laminated materials delaminate and swell in water.

Laminated bushings are noisy and this can scare marine life and have a high wear rate.

Vesconite is homogeneous and does not delaminate or swell in water. The low friction of Vesconite Hilube eliminates stick-slip and bearings operate quietly.



Bronze

Bronze must be greased regularly to avoid high wear rates. Grease contaminates water supplies and affects marine life.

Vesconite Hilube is self lubricating and so greasing can often be eliminated.



Rubber

Wears quickly in poorly lubricated conditions.

Rubber bearings exhibit stick slip which scares marine life and causes shaft vibration.

Applications in Hydro Power

Bearings used in Hydro Power plants and supporting equipment are required to have long life with little or no maintenance.

Vesconite Hilube is ideal for critical applications in Hydro Power plants.

- Vesconite Hilube does not swell in water

- Vesconite Hilube has a low friction because of internal lubricants

- Vesconite Hilube is environmentally friendly

- Vesconite Hilube gives a long life even without regular maintenance



Applications for Vesconite Hilube include:

- Turbine bearings

- Wicket gate bushings

- Trash rake bearings

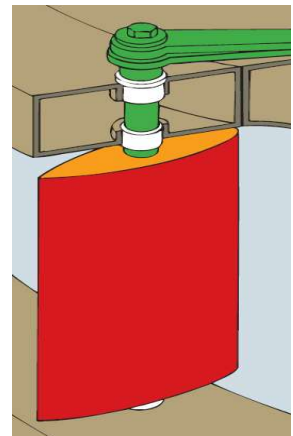
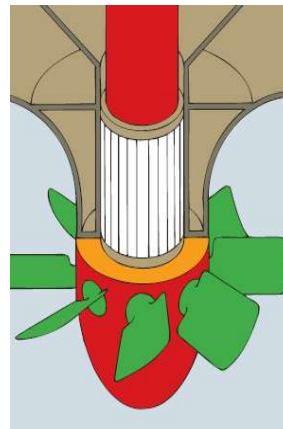
- Control linkage bushings

- Segmented shaft weals

- Sluice gate bearings

- Thrust bearings and slides

- Pump bearings and wear rings



Vesconite Hilube components fitted in Hydro Power Applications

