Tufcot® Structural Bearings

Tufcot’s range of materials have been developed to suit many different environments and applications such as subsea, Arctic temperature, high temperature, high loads, flame retardant, power generation, hydro, solar, wind turbines, nuclear, chemical processes, marine and structural.

Structural bearings are a key application which operate in many different market sectors and are an important part of Tufcot’s widespread application base.

Structural Applications

Conventional structural bearings use a combination of elastomers, polished stainless steels, dissimilar metals and a lubricant, such as PTFE, as the basic components.

In situations where dynamic or thermal movements occur the structural design must allow these movements in order to minimise internal stresses or fatigue problems. Tufcot® composite materials have a significant advantage over traditional materials and offer the possibility of a different approach to the bearing design.

Tufcot® composite bearing materials eliminate the need for steels that corrode, expensive polished steels, elastomers and PTFE all of which can deteriorate over time.

Tufcot® composite materials do not corrode are not affected by UV or changes in humidity, they are not bio-degradable, need no maintenance and have an infinite life span.

Our composite manufacturing and machining capability and our engineering design service are here to provide customers with the correct material selection, bearing design and specification for each application.

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Advantages of Tufcot® Composite Structural Bearings

- High load capacity
- Synthetic Composite material, no corrosion, no need for painting
- Electrically isolating, no bimetallic corrosion problems of dissimilar metals
- Dimensionally Stable and tolerant in high humidity environments
- The bearings are 1/6th the weight of Steel and therefore easier to handle and install than a steel bearing
- Built in lubrication system maintaining lifelong low friction characteristics
- Simple bearing assembly, each bearing has fewer moving parts than many conventional structural bearings
- Bearings are manufactured in-house; our specialist manufacturing capability makes one-off or prototype bearings possible

Types of Bridge Bearings Available

Fixed (Fixed in both X & Y -axis)
A fixed bearing is capable of supporting vertical load and accommodating rotation of up to 0.035 radians (2-degrees) about a fixed point.

Multi Direction (Free X & Y -axis)
Limited Freedom within plan size. Allows rotation of up to 0.035 radians (2-degrees) about a fixed point.

Single Direction (Fixed X, Free Y -axis)
Guided along one axis. Allows rotation of up to 0.035 radians (2-degrees) about a fixed point.

Tufcot structural bearings are typically manufactured from our material grade T100G. In many instances, special surface finishes or treatments can be applied to provide through life lubrication systems for the bearing assembly.

For more information on grade T100G please visit our website or ask us at info@tufcot.com for a copy of the Material Specification Sheet

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