MTWB

Customized Bearings

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Solid Lubrication Bearing

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Solid Lubrication Bearing, how it works...

Polymer material is injected into the bearing in a special way. The polymer material adsorb saturated lubricating oil, ensuring that the plastic oil is tightly and continuously in contact with the raceways and rollers, effectively preventing contaminants from entering the bearing interior; the lubricating oil is “stored” in the micro-pores within the polymer based on surface tension. During operation, a small portion of the lubricating oil slowly moves to the material surface due to capillary action, and when the operation stops, the lubricating oil re-adheres to the polymer for “storage”.

Types of Solid Lubricant

Lubricant Model	Food Grade	Technical Grade						
	E mould	G mould	Type F2	Type F1	D mould	C mould	B mould	A mould
Ultimate temperature	150℃	155℃	155℃	150℃	200℃	150℃	120℃	120℃
6205 Injection molding process limit speed	3000 RPM	3000 RPM	4500 RPM	4500 RPM	1000 RPM	3000 RPM	5000 RPM	3000 RPM
Viscosity of base oil	custom made	custom made	custom made	custom made	custom made	custom made	custom made	custom made
Solid lubricant color	white	black	red	red	black	blue	yellow	green

Note: Lubricating oil (grease) content: 40-95%

MTWB Solid Lubrication Bearings ...

Solid Lubrication
DGBB

Solid Lubrication
CRB

Solid Lubrication
TRB

Solid Lubrication
NRB

Solid Agricultural
Bearing

Solid Lubricant
SRB

Solid Lubricant
Rotary Support

Advantages of Solid Lubrication Bearing

✓ Lifetime maintenance free

With polymer matrix adsorption saturated lubricant technology, a lubricant seamlessly adheres to the raceway and rolling elements without the need of an external oil supply system, which means re-greasing is completely eliminated. The embedded sealing design effectively prevents invasion of pollutants, improves water flushing resistance by 80%, and reduces significantly the risk of downtime caused by lubrication failure.

✓ Long service life

Solid lubricant content is 2-4 times higher than traditional lubricants, baaring service life can be extended by more than 3 times, that significantly reducing the frequency of spare parts replacement.

✓ Prevent contamination

Solid lubricant is in close contact with the raceway and rollers, almost filling the whole bearing. The remaining space in the body can effectively prevent pollutants from entering the bearing, so as to protect the bearing from maintenance.

✓ Eliminate lubricant leakage

Lubricating oil is stored in the micropores inside the polymer based on surface tension. During operation, lubricating oil is transferred to the material surface under capillary action. When operation stops, lubricating oil is reabsorbed into the polymer for "storage", so as to prevent environmental pollution caused by lubricating oil leakage.

✓Clean and less polluted

Solid lubricant is suitable for high ambient temperature (up to 200 ℃), high humidity, dust and chemical corrosion environment, and therefore has an excellent performance in metallurgy, mining, food processing, ships and other scenes. The solid lubrication bearing leaves the oil in the bearing and has an integral bearing seal Further improve the preservation of oil.

✓Anti-rinsing

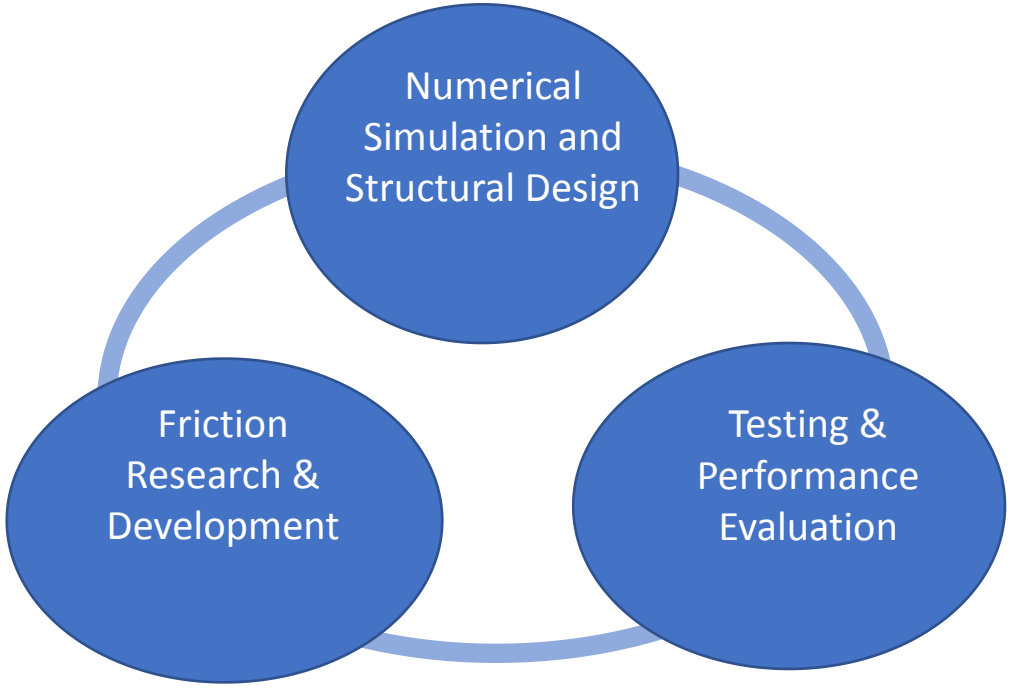
Solid lubricants can support integral seals and has very good anti-rinsing ability.

✓Precaution

Solid lubricant cannot be used in organic solvents (acetone, petroleum benzene, white kerosene, etc.)

MTWB Understands Solid Lubricants …

The end goal of structural optimization is to improve the bearing performance to the best application costing



Low frictional composite materials are researched to improve the reliability and durability of solid lubricant

The end goal of this process is to predict and extending solid lubricated bearing life.

Solid Lubrication Bearing Application ...

Food and beverage machinery

The application in food machinery is to solve the pollution problem caused by the leakage of traditional bearing lubricating oil (grease), and improve the food safety level and pollution problem.

Elevator

The application in elevator traction and transmission parts is to prevent oil leakage.

Ferrous Metallurgy

The application in iron and steel metallurgical equipment is to prevent the failure of grease caused by iron oxide dust and water spray pollution hence reducing the consumption of grease.

Petrochemical Machinery

The application in petroleum machinery is to improve the production efficiency hence reducing the maintenance cost under harsh environment.

Construction, mining & ports machinery

The application in construction machinery, mining machinery and ports is to reduce intrusion of dust, particles, water vapor and other debris to the bearing that will lead to bearing failures hence equipment reliability is improved.

Agricultural machinery

The application in agricultural machinery is to reduce the failure of bearings caused by dust, particles and other debris intrusion and improve the reliability of equipment.

Papermaking equipment

The application in papermaking machinery to reduce intrusion of dust, particles and other debris to the bearing.

Cement machinery

The application in cement machinery is to reduce bearing failures due to high temperature, moisture and smoke in the working condition. There are other factors such as vibration that will affect the service life of bearing.