

Sintered bearing Porite YBF

Porite YBF was developed to be a "Fe based sintered bearing having good corrosion characteristic".

[Purpose of development]

Fe-Cu type bearings have a superior cost performance compared to Cu type bearings; however, the reduction in the corrosion resistance due to the presence of iron is a disadvantage.

Porite YBF consists of a Zn system uniformly dispersed in a Fe based system by a special sintering process in order to impart good corrosion resistance to the bearing. Moreover, the addition of zinc promotes the adsorption of additive in the impregnated oil improving the boundary lubrication resulting in a low friction Fe-Cu type bearing.

[Characteristics]

1. Low cost compared to bronze bearing.
2. Superior corrosion resistance in spite of being a Fe based material.
3. Improved boundary lubrication results in low friction and superior corrosion resistance.
4. A further improvement in the sliding properties can be expected in combination with our recommended lubricant.

[Applications]

1. Car electrical parts
(Mirror motor, Door lock motor, Ventilation motor, etc.)
2. Spindle motor for optical disk drive used in MD, CD, DVD, etc. (Home appliance and Automobile)
3. Camera motor
(Auto focus motor, Zoom motor)
4. Office appliances
(Stepping motor, etc.)
5. Others
(Small brushless DC motor, Shaver motor, etc.)

[Chemical composition and Physical characteristics]

Chemical composition (weight%)

Cu	Fe	Sn	Zn	C	Others
Bal	32~52	0.2~2.0	11~17	2Max	1Max

Physical characteristics

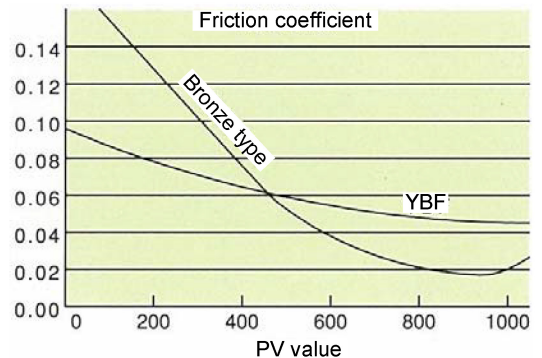
Density	: 5.8~6.6		[g/cm ³]
Porosity	: 18 Min		[Vol%]
Radial strength	: 160 Min		[MPa]
PV value	: 1.7		[MPa · m/s]

[Bearing properties]

1. Comparison of friction coefficient with bronze bearing

Condition

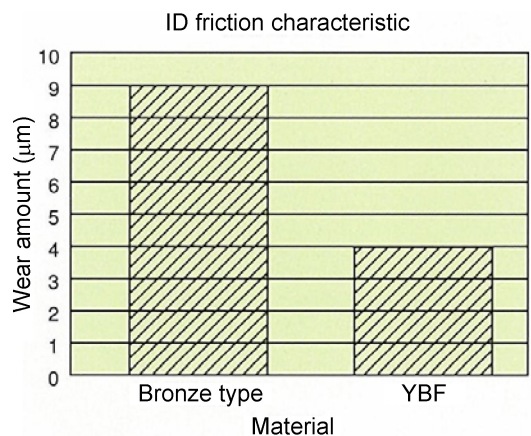
Impregnating oil : FBK turbine #32
 Shaft : S45C 0.8S φ6
 Rot. Speed : 2000rpm



2. Wear characteristics

Condition

Impregnating oil : FBK turbine #32
 Shaft : S45C 0.8S φ8
 Rotation speed : 3000rpm
 Load : 26→52→104→208N (stepped)



[Lubricating oil]

The impregnating oil may change depending on the various operating conditions, please discuss with technical department personnel.

Overseas:

Taiwan, Singapore, Malaysia, China, Hong Kong, Europe, Thailand, USA

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