CARBON AND GRAPHITES FOR MECHANICAL APPLICATIONS

Avoid lubrication and reduce your costs!
Material solution:
• Thermal shock
• Tribologic
• Lifetime
• Corrosion resistance
• Temperature resistance
• Weight (1.8 to 2.5 density)
• Low thermal expansion

Applications:
• Guiding and friction: bearings, thrust bearings, rotors, vanes, ...
• Dynamic sealing: rotating shafts, pistons, ...
• Aerospace - Main shaft seals, valve and telescopic seals, Flex tubing seals, APV seals,...

Where and when carbons and graphite should be used

Compressor and ventilator shaft seal

Integrated components for pumps, valves and vanes

Self aligning bearing
Carbons products are better than other friction reducing materials

For example
At high temperatures:
Up to 600-650°C (in oxidising atmosphere). Temperatures exceeding 100°C to 150°C prohibit the use of standard oils and grease. The thermal stability and self-lubricating features of carbon allow its use as a bearing material in this temperature range. Applications include (but are not limited to) furnaces, dryers, heated mixers, chemical installations, and the manufacture of paper pulp.

In corrosive fluids or atmospheres:
Carbons and graphites are chemically inert and corrosion resistant. Wherever ordinary lubricants are not recommended, carbons and graphites perform well, either dry in a corrosive atmosphere or immersed in corrosive liquids.

To avoid contamination by lubricants:
Carbons and graphites are critical in applications where the presence of oil or grease, even in vapor form, is prohibited. Examples can be found in the food, pharmaceutical and textile industries.

When lubrication is difficult or expensive:
Carbons and graphites are efficient dry self-lubricants, which is an attractive property in applications such as control instruments, telephone equipment and meters.

Where moving parts are inaccessible:
Without carbons and graphites, the maintenance of certain types of equipment becomes virtually impossible due to difficult access to moving parts.
A few examples: marine equipment, pumps, metering pumps and certain equipment in the textile and chemical industries.

When weight saving is required:
The density of carbon is about 1.8 to 2.5, much lower than metals.
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