

## **POWDER LUBRICATED BEARING OPERATION TO PV OF HALF A MILLION**

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### **ABSTRACT**

Based on the Quasi-hydrodynamic analytical developments and some preliminary experimental work, a large size self-contained powder lubricated journal bearing was designed and developed to operate at high record breaking PV values (PV=532,000psi.ft/sec). Self contained backup bearings are essential and required for magnetic bearing supported rotors in flywheel energy storage systems, auxiliary power units/integrated power units, and gas turbine engines.

**Keywords** Quasi-hydrodynamic lubrication, Molybdenum Disulfide, Triboparticulates, Friction, Wear