Lubrication Delivery Advances For Pumps And Motor Drivers

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Abstract
A ranking order is found in the Eschmann-Hasbargen-Weigand text "Ball and Roller Bearings" (ISBN 0-471-26283-8) for oil and grease-lubed bearings. The author re-assesses this ranking with input derived from the collective experience of a “Rotating Machinery Network.” It is found that, unless plant-wide oil mist systems are justified, the listing in Table 1 is encouraging; it recommends oil-air for rolling element bearings. Details on all oil and grease application methods referenced in ISBN 0-471-26283-8 and ISBN 978-1-4822-2864-9 are explained. Particular emphasis is given to (a) jet oil spray, (b) oil mist, now successfully used on approximately 26,000 electric motors and 130,000 process pumps world-wide, (c) shield orientation in typical grease-lubricated electric motor bearings and (d) good experience with PFPE-based (perfluoropolyether) greases in fully-sealed motor bearings. The PFPE experience completely up-ends prior notions regarding grease-filled (sealed) bearings.

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The Engine lubrication system is considered to give a flow to the clean oil at the accurate temperature, with an appropriate pressure to each part of the engine. The oil is sucked out into the pump from the sump, as a heart of the system, than forced between the oil filter and pressure is fed to the main bearings and also to the oil pressure gauge. The oil passes through the main bearings feed-holes into the drilled passages which is in the crankshaft and on to the bearings of the connecting rod.