to achieve torques of about 3000 Nm (200 ft-lb) at 10 rad/s, and about 550 Nm (400 ft-lb) at 50 rad/s. For heavy-duty, the torque values should be halved; for light-duty they may be increased by 2%. Section A51 recommends molded asbestos for industrial disc brakes, and for the disc: fine-grained pearlitic cast iron, Brinell 180-240, or cold-rolled or forged steel, Brinell over 200. The finish should be fine turned or ground, better than 2.5 μ m (100 μ in) cla.

It is hoped that these examples will serve to illustrate the depth and versatility of this practical handbook. As with all good handbooks, if used by engineers with some appreciation of the field, it can provide excellent guidance to what is generally considered good practice.

As a handbook, it has only one real drawback for use in the United States. That is in its reference to and listing of relevant standards. The listing is useful and complete, but lists only ISO and BSS standards. The publishers could well consider adding a supplementary listing of relevant USA industrial and DOD standards and specifications in order to increase the Handbook's attractiveness in the U.S. market.

Even so, this reviewer finds that its many virtues outweigh this particular disadvantage, and recommends its addition to the working library of lubrication engineers and tribologists.

Rolling Bearings by T. S. Nisbet, Engineering Design Guides No. 4, Published for the Design Council, the British Standards Institution and the Council of Engineering Institutions by Oxford University Press, 1974, Price $6.00—paper.

Reviewed by W. J. Anderson

This is listed as an Engineering Design Guide and its content fits that description. It is a 43 page paperback which presents information of two basic types: descriptive and quantitative.

Among the descriptive information presented are bearing types and their performance characteristics (load capacities, speed capability, misalignment tolerance, etc.), materials, internal design features (ball, cylindrical, tapered and spherical roller), and bearing preload. Also, lubrication techniques (grease, oil bath, oil drip, oil splash, oil wick and recirculating oil) and special bearings pre-mounted in housings (pillow blocks) airframe control bearings, rod end bearings, etc.) are illustrated.

Among the quantitative information presented are limiting DN values for various bearing types (both grease and oil lubricated), fatigue life calculations with varying speeds and loads, clearances and fits, permissible misalignments, and friction.

A list of British standards relating to rolling bearings is given. The information given emphasizes everyday bearing types and classes rather than high technology applications involving high speeds and/or temperatures. As such, information on limiting DN values are overly conservative for oil lubrication and on material correction factors for life calculations.

This reviewer takes exception to the authors assignment of higher limiting DN values to ball bearings with ball riding cages than to bearings with race riding cages. Oil lubricated ball bearings with race riding cages have consistently demonstrated superior high speed operating characteristics.

The average bearing user should find this a useful and handy reference, perhaps more so to engineers in the U.K. than in the United States.

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