



It's a hard life but a long one for new NSK bearings



EVEN IN A TOUGH OPERATING ENVIRONMENT LIKE A QUARRY, MINE OR CONSTRUCTION SITE, THERE ARE SOME PLACES THAT ARE TOUGHER THAN OTHERS – AND ONE IS INSIDE VIBRATING MACHINERY. SOME EQUIPMENT MIGHT VIBRATE AS A SIDE-EFFECT OF ITS OPERATION, BUT MACHINERY SUCH AS VIBRATING SCREENS ARE ACTUALLY BUILT TO SHAKE, AND NEEDS BEARINGS WHICH CAN TAKE THE PUNISHMENT. THAT'S WHY NSK HAS DEVELOPED A NEW RANGE OF LONG-LIFE VIBRATING SCREEN SPHERICAL ROLLER BEARINGS.



Tim Cains
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By applying state-of-the-art technology to materials, lubrication, sealing and design, NSK has created a spherical roller bearing (SRB) for vibration-intensive machinery, which offers twice the service life of conventional bearings, as well as a load rating 1 ¼ times higher. So users can benefit not only from cost savings on bearing replacement, but also from reduced maintenance costs, greater seizure resistance and less downtime.

The knowledge and capabilities of NSK's technology centres have been applied with great effect to developing these new bearings specifically for harsh working environments. Sophisticated analysis techniques, the latest production technology, and stringent evaluation tests

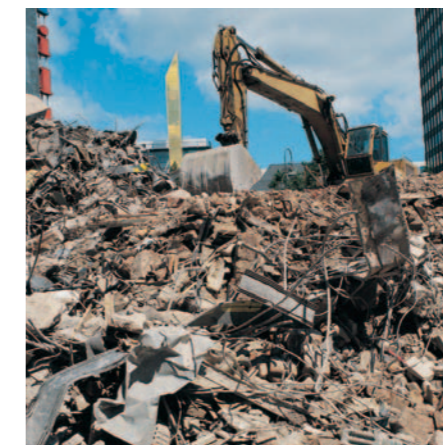
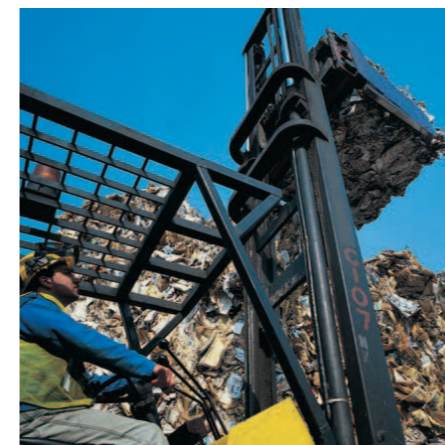
have all contributed to the bearings' high performance and long life.

The bearings feature a precision-machined, tough, one-piece brass cage, with contoured roller pockets. The surface roughness on the rollers and inner and outer rings is improved over conventional bearings, to control the slippage action of the rollers, and the rollers are also specially heat-treated to prevent cracks from vibrations and shock loads. The curvature factor between the raceway and the spherical roller has also been optimised to reduce slippage and initiation stress between the roller and the contact surfaces of the outer and inner ring raceways. All these improvements help to reduce raceway damage due to surface fatigue over the life of the bearing, which is why service life is so significantly longer than with traditional SRBs.

The design of the Vibration Screen SRBs also helps to stabilise load distribution, by controlling radial internal clearance and bearing dimensional tolerance factors. The internal radial clearance is set at two-thirds of ISO standard bearings, and the outer diameter and bore diameter tolerances are half that of ISO standard bearings.

With the need for continuous operation 24 hours a day, 6,000 hours a year, and failure of even a single component not an option when it can have a major impact on the entire mining or quarrying operation, the new NSK Long-Life Spherical Roller Bearings for Vibrating Machinery are a significant development in maximising uptime, reducing maintenance and improving productivity.

The bearings are available from ERIKS in twenty-two sizes, with outer diameters ranging from 90-400mm, and bore diameters from 40-190mm.



Not just tough, but MegaTuff™

MOST HYDRAULIC HOSE IS NOT REALLY THAT TOUGH. THAT'S WHY IT NEEDS SPRING GUARDS AND NYLON SLEEVING TO GIVE IT ANY CHANCE OF SURVIVING MORE THAN FIVE MINUTES IN AN ENVIRONMENT LIKE A QUARRY OR A MINE. BUT MEGATUFF HOSE FROM GATES IS TOUGH BY NAME AND TOUGH BY NATURE.



Abrasion is the enemy of ordinary hydraulic hose. Continually rubbing against metal or other hoses, a hydraulic hose will soon wear away, spring a leak and need replacing. Even with a spring guard or nylon sleeving, most hydraulic hose can't stand up to constant abrasion, day after day. Which means you end up replacing the same hose again and again, costing you money every time. However, there is an alternative.

Gates MegaTuff hose is designed and manufactured to withstand abrasion without any additional protection. It not only has a special cover construction, but also compounding that uses high-performance engineered plastics, in an innovative manufacturing process. The result is exceptional abrasion resistance, and a cover which – thanks to its special bonding – stays put even when abraded. Covers on some competitive hoses soon peel away, removing any protection and exposing the hose to damage and possible failure.

These design and manufacturing improvements make a massive difference to the performance of MegaTuff hose. During stringent abrasion tests MegaTuff lasted up to three hundred times longer than standard rubber-covered hose. Despite its toughness, MegaTuff hose is still flexible, maintaining minimum bend radius performance. And it's still suitable for bundling, when it will still last longer than any other hose. Although abrasion is the greatest threat to hose, and the challenge that MegaTuff is designed to beat, MegaTuff hose is also highly resistant to ozone and weathering, helping it to last even longer.

Available in internal diameters from 3/8 inch to 2 inches in spiral wire construction, and 1/4 inch to 1 inch in wire braid construction, MegaTuff™ hose not only saves on the cost of frequent hose replacement, but also on the cost of the downtime and lost

production that results, as well as on the cost of spring guards and nylon sleeving that lesser hoses require for protection.

MegaTuff Hose is part of the Gates MegaSys™ System, which offers hose and couplings with superior performance at a competitive price. From hose for high-pressure applications, to low-pressure and return-line hose, and couplings for leak-free connections, the MegaSys System means you can always find a Gates hose or coupling that's up to the job, however tough the job might be.

For more information contact the specialists at ERIKS.

