



NSK



HI-TF AND SUPER-TF SERIES BEARINGS

NSK's High-Tough Steel (HTF) and Super-Tough Steel (STF) series bearings are designed to deliver outstanding durability in contaminated operating environments. Utilizing advanced material engineering and heat treatment technology, they perform with superior resistance to wear, seizure and heat. NSK Tough Steel series bearings provide dramatically longer service life, reduce total maintenance costs from unplanned downtime and improve machinery and equipment output.

PROVEN BENEFITS

- › As much as ten times the service life with contaminated lubrication conditions
- › Up to four times the service life at 160°C
- › Less than one-third the rate of wear
- › As much as 40% improvement in seizure resistance

CONDITIONS

- | | |
|----------------------------|------------------------------|
| HL HIGH LOADS | CO CONTAMINATION |
| HT HIGH TEMPERATURE | LU LUBRICATION STRESS |
| W WEAR | |

APPLICATIONS

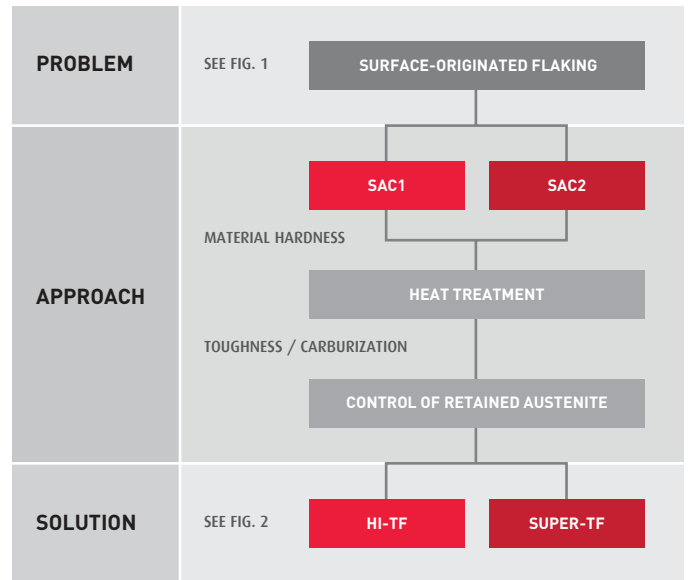
- › Gearbox / gear drives
- › Mining machinery
- › Steel mill machinery
- › Paper mill machinery
- › Wind turbines

STAY IN MOTION. STAY IN CONTROL.

DESIGN FEATURES

- › Advanced material composition containing appropriate levels of chrome and molybdenum for increased hardness
- › Innovative and patented heat treatment technology to optimize retained austenite and formation of finer carbide and carbonitride particles
- › Significantly outperforms standard bearing steel in seizure resistance, rate of wear and service life
- › HTF / STF technology can be applied to a wide range of bearing types, in conventional or special designs

RANGE OF AVAILABILITY



In service life testing conducted under contaminated lubrication conditions, Hi-TF and Super-TF Bearings offered over seven times and as much as ten times respectively the L¹⁰ life of ordinary carburized steel bearings.

FIG. 1 - SURFACE-ORIGINATED FLAKING IN CONTAMINATED ENVIRONMENTS

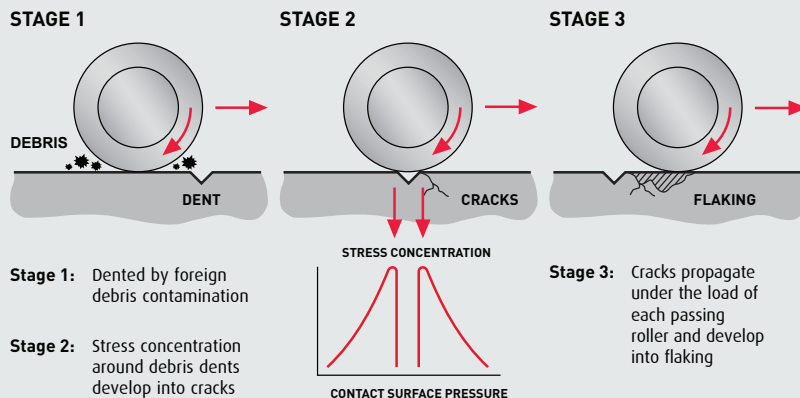


FIG. 2 - COMPARISON OF SERVICE LIFE

