NSK SWR™ Spherical Roller Bearings are designed to meet the challenges of operating bearings in the harsh environment of continuous casting machines. Utilizing innovative material and heat-treatment technology, they offer superior resistance to wear and the onset of progressive bearing damage. With extreme durability and core toughness, SWR™ Spherical Roller Bearings are an advanced solution that promote extended operating life and reduce unexpected maintenance downtime and costs.

PROVEN BENEFITS

› Superior wear resistance – three times that of conventional bearing steel
› Improved flaking life property – five times that of conventional bearing steel
› Higher toughness of material core (prevention of crack damage) – five times that of conventional bearing steel
› Improved bearing durability extends roll segment operation, reducing maintenance costs and preventing unplanned downtime

CONDITIONS:

- HL: HIGH LOADS
- LS: LOW SPEEDS
- HT: HIGH TEMPERATURES
- LU: LUBRICANT STRESS
- CO: CONTAMINATION
**SWR™ SPHERICAL ROLLER BEARINGS**

**DESIGN FEATURES**

- Manufactured with an innovative steel composition
- Applied proprietary heat-treatment process
- Available in a wide range of sizes with high strength pressed steel (EA, CD) or one-piece machined brass (CAM) cage
- Superior wear resistance – 3 times that of conventional bearing steel (Fig. 1)
- Improved flaking life property - 5 times that of conventional bearing steel (Fig. 2)
- High toughness of material core (prevention of crack damage) – 5 times that of conventional bearing steel (Fig. 3)

**FIG. 1 - IMPROVED WEAR RESISTANCE**

Uneven wear caused by improper lubrication and differential sliding

**FIG. 2 - IMPROVED FLAKING / BEARING LIFE**

Flaking of the pure rolling section as a result of stress concentration

**FIG. 3 - IMPROVED STRENGTH / CORE TOUGHNESS**

Progress of vertical cracks caused by bending stress

**DESIGN SPECIFICATIONS**

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- **DIMENSIONAL SERIES**
  - 222, 230, 231, 240, 241

- **BORE DIAMETER**
  - 40 to 240 mm

- **MATERIAL SERIES**
  - SWR: Super Wear Resistant

- **INTERNAL DESIGN**
  - EA, CA: high load capacity

**CARBURIZATION**

- **C2**
  - g2: outer ring
  - g5: inner and outer ring
  - g: complete bearing

**CAGE**

- Blank, CD: high strength pressed steel
  - M: heavy duty machined brass

**LUBRICATION FEATURES**

- **E4**
  - groove and holes, outer ring

**INTERNAL CLEARANCE**

- Blank: normal
  - C3: > normal
  - C4: > C3

*additional series / sizes are available - contact NSK*