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

<table>
<thead>
<tr>
<th>230</th>
<th>40</th>
<th>SWR</th>
<th>CA</th>
<th>g2</th>
<th>M</th>
<th>E4</th>
<th>C3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONAL SERIES</td>
<td>BORE REFERENCE NO.</td>
<td>MATERIAL</td>
<td>INTERNAL DESIGN</td>
<td>CARBURIZATION</td>
<td>CAGE</td>
<td>LUBRICATION FEATURES</td>
<td>INTERNAL CLEARANCE</td>
</tr>
<tr>
<td>222, 230, 231, 240, 241</td>
<td>g2: outer ring</td>
<td>g5: inner and outer ring</td>
<td>g: complete bearing</td>
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<tr>
<td>40 to 240 mm</td>
<td>Blank, CD: high strength pressed steel</td>
<td>M: heavy duty machined brass</td>
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<tr>
<td>SWR: Super Wear Resistant</td>
<td>E4: groove and holes, outer ring</td>
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<tr>
<td>EA, CA: high load capacity</td>
<td>Blank: normal</td>
<td>C3: &gt; normal</td>
<td>C4: &gt; C3</td>
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</tbody>
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* additional series / sizes are available - contact NSK