



HCR Wear Resistance Bearings

Wear resistance coating on rolling element helps to avoid metal to metal contact in dry and low lambda lubricated condition.

AUTOMOTIVE & INDUSTRY

Features

- ✓ Optimized coating with metal-containing amorphous carbon coating with a multilamellar structure
- ✓ No columnar structure provides high adhesion strength
- ✓ Provides wear protection even in dry contact condition
- ✓ High dimensional accuracies

Benefits

- ✓ Higher operational reliability
- ✓ Low COF even in dry condition with steel
- ✓ Resistant to adhesive wear and micro pitting
- ✓ Enhanced low lambda fatigue life
- ✓ Debris tolerance - removes dents created in the contaminated application

Application

- ✓ High speed roller bearings for automotive application
- ✓ Industrial bearings (contaminated lubrication condition)

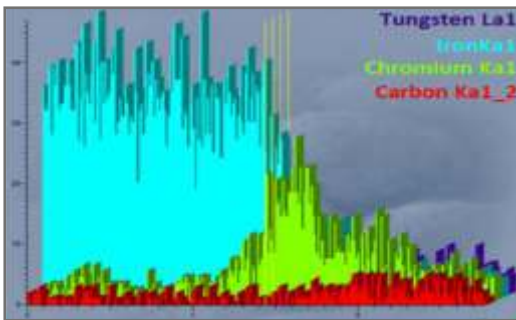
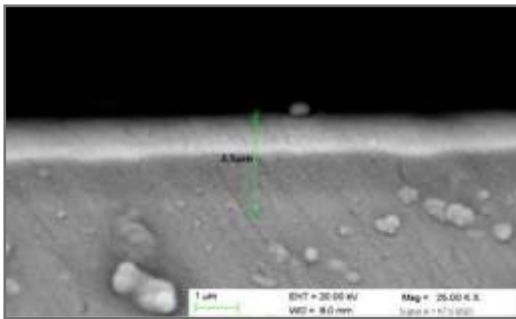
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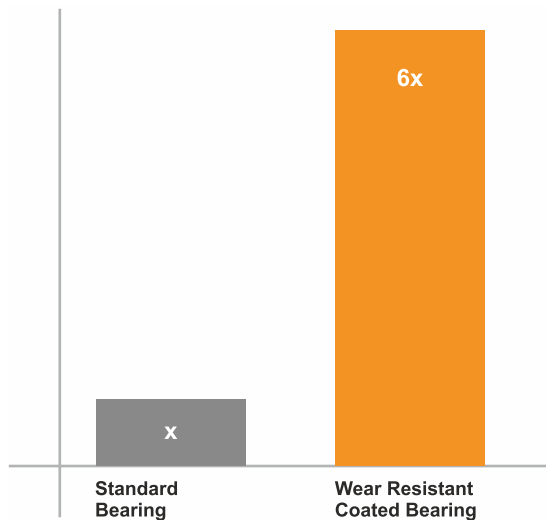
Specifications

- ✓ Coating thickness of 2-3 μm
- ✓ Low coating temperature ($<200\text{ }^{\circ}\text{C}$)
- ✓ High dimensional accuracy after coating
- ✓ High adhesion strength (HF1 to HF2 grade)
- ✓ Low COF and high wear resistance
- ✓ $>6\text{x}$ improved in bearing endurance life test
- ✓ Can be applied to any kind of roller bearing

Technical Data



SEM Coating Thickness



Roller Bearing Endurance Test Comparison