

Ultimate life with Cronidur 30[®]

Tests document that rolling bearings of Cronidur 30[®] stand out for their substantially extended material fatigue life. At a contact pressure of 2,800 MPa under EHD conditions the calculated life values are exceeded by the factor of 80 without failure. In hybrid bearings incorporating ceramic balls, Cronidur 30[®] accepts a 25 per cent higher contact pressure. This would relate to a 40 per cent increase in rolling element with point contact.

Reliability under conditions of mixed friction

Even in the mixed friction range, Cronidur 30[®] proves its superiority. Tests carried out under a defined condition of mixed friction ($p_0 = 2,500$ MPa) have shown that bearings of Cronidur 30[®] reach a tenfold service life compared with bearings made of standard material 100Cr6. Furthermore, the wear behaviour of the bearing is considerably improved with Cronidur 30[®]. This becomes particularly apparent in the case of hybrid bearings with rings consisting of the new material and ceramic rolling elements. Here, the wear rate lies considerably below the former usual values.