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Rolling bearings — Methods for calculating the modified reference rating life for universally loaded bearings

*Roulements — Méthodes de calcul de la durée nominale de référence
corrigée pour les roulements chargés universellement*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Introduction

Since publication of ISO 281 in 1990, additional knowledge has been gained regarding the influence on bearing life of contamination, lubrication, internal stresses from mounting, stresses from hardening, fatigue load limit of the material etc. It is therefore now possible to consider factors that have influence on bearing life in a more complete way in the life calculation.

ISO 281:2007 provides a method to put into practice this new knowledge in a consistent way when the modified rating life of a bearing is calculated. However, the calculation method given in ISO 281:2007 cannot consider the influence on life of tilted or misaligned bearings and the influence on life of bearing clearance during operation. This Technical Specification describes an advanced calculation method, which also makes it possible to consider these influences, and by that in addition provide the most accurate support for estimating the influence of contamination and other factors.