



Training course description

Advanced Rolling Bearing Analysis

Content

The seminar gives a comprehensive insight in modern rolling bearing analysis methods and tools for safe dimensioning, friction minimization, performance enhancement or downsizing and for noise minimization. Beside the theoretical fundamentals the application of the methods is shown with practical examples. Thus the participants get a deep understanding of differences and application limits of the different methods, are able to interpret calculation and simulation results correctly. In addition they learn to choose reasonable system boundaries for rolling bearing simulation and to understand the interaction between rolling bearings and the surrounding structure. Furthermore the seminar gives an insight in the modern possibilities of reliability prediction for economic operation and maintenance (Industry 4.0).

Learning objectives

- Load distribution and contact loading
 - Advanced, non-Hertzian contact analysis
 - Consideration of edge pressures
 - Consideration of elastic shafts and housings
- Load capacity and life
 - static load carrying capacity
 - Rolling contact fatigue
 - Advanced life models for consideration of lubrication, contamination, material characteristics, ...
- Service life
 - Risk of surface initiated damages (micropittings, wear)
 - WEC
 - Grease service life

- Application limits
 - Minimum load
 - Risk of smearing and slippage
 - Speed limits
- Friction
 - Advanced models for friction prediction
 - Consideration of load distribution, lubricant characteristics (non-Newtonian), inner bearing geometry, local slippage
- Dynamic and cage behavior
 - Prediction of kinematic and slippage distribution inside the bearing
 - Dynamic cage loading
- Noise behavior
 - Influencing factors and impact assessment
- Industry 4.0
 - Reliability prediction for economic operation and maintenance

➤ Target group(s)

Engineers
Rolling bearing experts
BEARINX-users

➤ Prerequisite

Engineering degree or comparable training
Training "Rolling Bearing Know-how – from the application to rolling bearing practice" or comparable knowledge

➤ Duration

3 days

➤ Venue

Schaeffler Standort Eltmann, Industriestraße 2, 97483 Eltmann

➤ Booking reference

course title

➤ Registration

Registration Schaeffler Technology Center – Training -: Ms. Karin Morgenroth
Phone: +49 (0)9522 71 503
E-Mail: schulungszentrum@schaeffler.com

➤ Further information

Possible accommodation expenses need to be paid by the participants. We will gladly assist you with selection of an accommodation.

➤ General Terms and Conditions of Participation

Please refer to our website:

http://www.schaeffler.com/remotemedien/media/_shared_media/05_products_services/training/training_conditions_en.pdf

Registration no later than 14 days before start of the training course.

We reserve the right to cancel training courses on the grounds of undersubscription up to 14 days before the start of the training course.

If training participant cancels attendance at the course after registration has been confirmed, 40€ processing fee will be charged. Cancellation less than 2 weeks 50% of the course fee is charged. If the client nominates a substitute, this rule does not apply.