



ELGETI
ENGINEERING

Online Bearing Seminars

Spring 2024

- ❖ Basics of Bearing Technology
- ❖ Application Engineering
- ❖ Supplier Development
- ❖ Failure Analysis

Special Package Deals

Designer Package

For those who design and develop machinery:

You will learn about advanced bearing design as well as gain the knowledge to support purchasing in sourcing appropriate bearings for a given application.

This package combines the fundamentals from our Basics of Bearing Technology series with the most relevant sessions from Application Engineering and Supplier Development.

Included Sessions:
Basics of Bearing Technology
complete

Application Engineering
Session 1: Advanced bearing design

Supplier Development
Sessions 1+2: Introduction and quality specifications

Trader Package

For those who buy and sell bearings:

You will gain a greater understanding of the product, the customer's needs, and the most frequent failures that confront bearing vendors.

This package combines the fundamentals from our Basics of Bearing Technology series with the most relevant sessions from Supplier Development and Failure Analysis.

Included Sessions:
Basics of Bearing Technology
complete

Supplier Development
Sessions 1+2: Introduction and quality specifications

Bearing Failure Analysis
Sessions 1+2: Introduction, lubrication and faulty bearings

Complete Package

For those who want expertise:

Attend our complete seminar program to build a broad and solid knowledge base. This package comes in with a special price for all the sessions!

Included Sessions:
Basics of Bearing Technology complete

Supplier Development
complete

Application Engineering
complete

Bearing Failure Analysis
complete

Basics of Bearing Technology



Session I (free)
February 20th, 2024

Introduction

- Bearing types
- Cages
- Bearing arrangements
- Interfaces (design requirements)



Session II
February 27th, 2024

Properties I

- Tolerances (clearance, precision, etc.)
- Lubrication (grease and oil)
- Materials

Session III
March 5th, 2024

Properties II

- Internal geometry (profiling, osculation)
- Life calculation acc. to ISO 281
- Sample inspection (including quick testing)



Session IV
March 12th, 2024

Bearing Installation and Sealing

- Best installation practices
- General sealing methods
- Sealing properties and requirements



Session V
March 19th, 2024

Preventive Maintenance

- Oil sample analysis
- Regular inspection and endoscopy
- Condition monitoring by vibration measurement

Sessions last 90 minutes and are offered at two different times:

- 09:00 Central European Time / 16:00 China Standard Time (15:00 after Mar 31st)
- 17:00 Central European Time / 11:00 EST-EDT (12:00 EDT from Mar 10th to Mar 31st)

Session I
March 13th, 2024

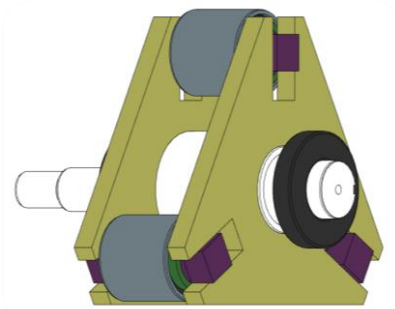
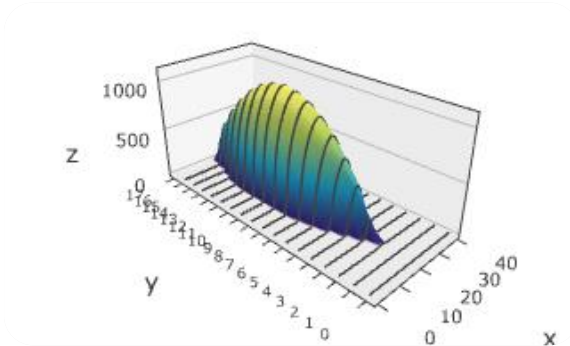
Advanced Bearing Calculation

- General design recommendations
- Grease lubrication
- Example: electric motor with belt drive
- Example: helical gearbox considering local stresses

Session II
March 20th, 2024

Properties I

- Planetary gearboxes, eccentric rotors
- Cages exposed to vibrations
- Failure modes, design and testing methods



Sessions last 90 minutes and are offered at two different times:

- 09:00 Central European Time / 16:00 China Standard Time (15:00 after Mar 31st)
- 17:00 Central European Time / 11:00 EST-EDT (12:00 EDT from Mar 10th to Mar 31st)

Supplier Development

Session I (free)

April 8th, 2024

Session II

April 15th, 2024

Session III

April 22nd, 2024

Session IV

April 29th, 2024

Introduction

- Motivation
- Definition of quality levels

Quality Specifications

- Quality characteristics
- Technical description

Production

- Approach during factory visits and audits
- Requirements for the documentation of production

Quality Control

- Methods for sample inspection and incoming control
- Approach for initial approval
- Concepts for quality control



Sessions last 90 minutes and are offered at two different times:

- 09:00 Central European Time / 16:00 China Standard Time (15:00 after Mar 31st)
- 17:00 Central European Time / 11:00 EST-EDT (12:00 EDT from Mar 10th to Mar 31st)

Session I (free)
April 9th, 2024

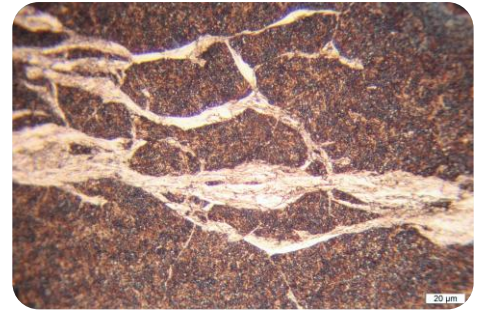
Introduction

- Methods for inspection
- Examples of failures related to poor lubrication
- Premature failure due to contamination

Session II
April 16th, 2024

Faulty Bearings

- Typical failure patterns of faulty bearings related to:
 - Crowning
 - Cracks
 - Poor material
 - Undercuts



Session III
April 23rd, 2024

Electricity

- Electric erosion
- White etching cracks

Session IV
April 30th, 2024

Additional Causes for Failure

- Premature failure due to faulty installation
- Improper fits
- Shape errors of surrounding parts
- Cage fracture



Sessions last 90 minutes and are offered at two different times:

- 09:00 Central European Time / 16:00 China Standard Time (15:00 after Mar 31st)
- 17:00 Central European Time / 11:00 EST-EDT (12:00 EDT from Mar 10th to Mar 31st)