ELGETI ENGINEERING

ONLINE BEARING SEMINARS

Spring 2022

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

NEW

SPECIAL PACKAGES

Special Package Deals!

Designer‘s 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 chapters from Application Engineering and Supplier Development.

Included Sessions:

Basics of Bearing Technology:
Sessions 1 to 5 (complete)

Application Engineering:
Session 1 (advanced bearing design)

Supplier Development:
Sessions 1 to 2 (introduction, quality characteristics, technical specification)

Trader‘s 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:
Sessions 1 to 5 (complete)

Supplier Development:
Sessions 1 to 2 (introduction, quality characteristics, technical specification)

Bearing Failure Analysis:
Sessions 1 to 2 (introduction, lubrication, faulty bearings)

Complete Package

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:
Sessions 1 to 5 (complete)

Supplier Development:
Sessions 1 to 4 (complete)

Application Engineering:
Sessions 1 to 2 (complete)

Bearing Failure Analysis:
Sessions 1 to 4 (complete)

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Basics of Bearing Technology

Session I (free):

Introduction

April 5th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

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

Session II:

Properties I

April 12th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

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

Session III:

Properties II

April 19th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

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

NEW

Session IV:

Bearing Installation and Sealing

April 21st, 2022; 9:00-10:30 EDT/ 15:00-16:30 Central European Time

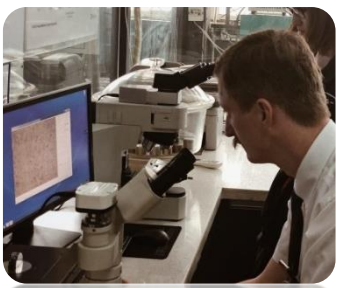
- Best installation practices
- General sealing methods
- Sealing properties and requirements

Session V:

Preventive Maintenance

April 26th, 2022; 9:00-10:30 EDT/ 15:00-16:30 Central European Time

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



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Application Engineering

Session I :

Advanced bearing calculation

April 20th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

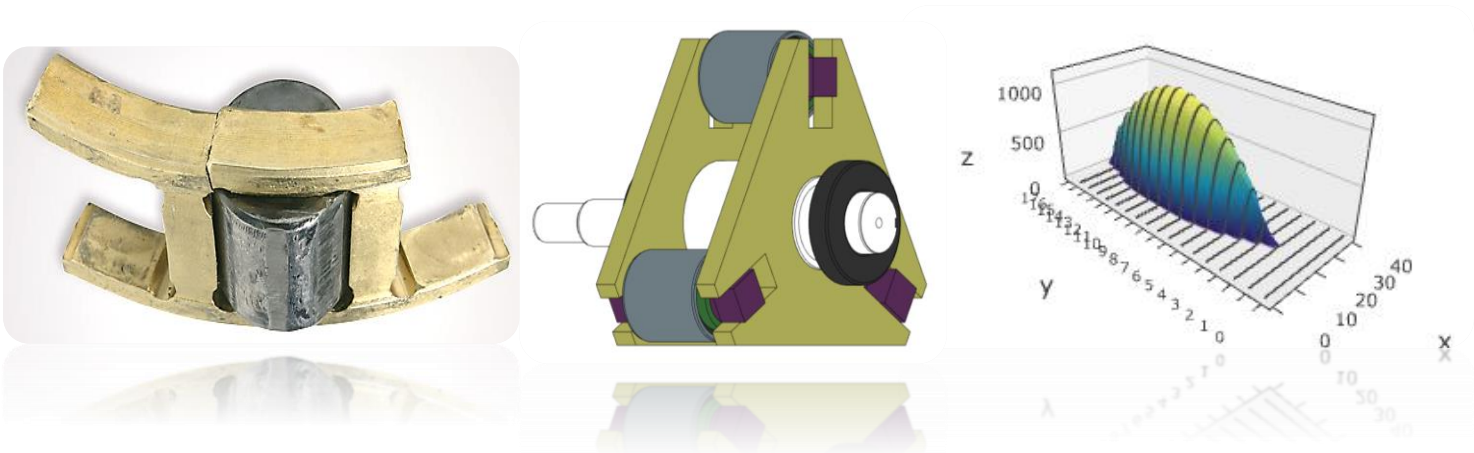
- General design recommendations
- Grease lubrication
- Example: electric motor with belt drive
- Example: helical gearbox considering local stresses

Session II:

Accelerations on bearings

April 27th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

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



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Supplier Development

Session I (free):

Introduction

June 7th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

- Motivation
- Definition of quality levels

Session II:

Quality Specification

June 14th, 2022; 9:00-10:30 EDT / 15:00-16:30 Central European Time

- Quality characteristics
- Technical description

Session III:

Production

June 21st, 2022; 10:00-11:30 EDT / 15:00-16:30 Central European Time

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

Session IV:

Quality Control

June 28th, 2022; 9:00-10:30 EST / 15:00-16:30 Central European Time

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

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Failure Analysis

Session I (free):

Introduction

June 8th, 2022; 9:00-10:30 EST / 15:00-16:30 Central European Time

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

Session II:

Faulty Bearings

June 15th, 2022; 9:00-10:30 EST / 15:00-16:30 Central European Time

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

Session III:

Electricity

June 22nd, 2022; 9:00-10:30 EST / 15:00-16:30 Central European Time

- Electric erosion
- White etching cracks

Session IV:

Additional causes for failure

June 29th, 2022; 9:00-10:30 EST / 15:00-16:30 Central European Time

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

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