

# Bearing Failures and their Causes



# Webtraining

## Bearing Failures and their Causes

Part # : RI-41

Modules: 23



Bearing Performance is directly related to Plant Reliability and Maintenance Costs. When we look after the bearing, we look after the equipment reliability. This course is about why bearings fail and it provides the knowledge to understanding and recognize the different types of failure modes. These skills learnt in this course help prevent the reoccurrence of bearing failures.

**We have three main goals in providing this training course.**

- The first is to understand why bearings fail, be it because of lack of maintenance, poor lubrication or simply bearing ignorance issues.
- The second is to learn how to recognize the different types of bearing failures and understand the causes of the damage.
- And the third is to learn about what we can do to prevent bearing failures happening and avoid the failures from re-occurring.

**Course participants will gain the following knowledge:**

- The importance of precision bearing maintenance so as to prevent bearing damage from occurring.
- An understanding for the reasons why bearings fail and what can be done about them.
- Learn some basic governing rules covering application and engineering design relative to why bearings fail.
- Individually learn each of the 10 failure causes. Why it happens, recognizing the type of damage and the prevention mechanism to stop reovurrence of the failures. These can be viewed in the list below:

- Lubriciation
- The Wrong Bearing
- Contamination
- Misalignment
- The Wrong Setup
- Bearing Overload
- Poor Fitting Practices
- False Brinelling
- Low Quality of Bearing Seating
- Electrical Erosion

Product Data



- Learn to recognize wear patterns for normal operations and abnormal operation
- Exposure to many bearing failure mode photos
- How to conduct a bearing failure analysis process

### Learning Methods

The course consists of 18 different online modules, each approximately 30 minutes in length, coupled with a test at the end of each module and direct dialogue with Per Arnold himself if needed.

The course is accessible on-line and can be completed at ones leisure or as time permits plus it is a voice over based innovative learning concept. The course can be individually taken in any of 12 different parts depending on the need, or can be taken as the complete whole program. Successful students will receive a **CoC** (Certificate of Competence) in bearing failure analysis.

### Who should take this course?

Maintenance Managers and Supervisors, Reliability Managers, Technicians and Condition Monitoring Staff, Maintenance Staff, Service Technicians. This course is a must for anyone who is involved with bearing maintenance and their reliability.

### About the Author

#### Per Arnold Elgqvist



Per Arnold Elgqvist is a Mechanical Engineer, having graduated at the University of Gothenburg in 1970.

He worked for SKF for 33 years and held many positions in both Sweden and Mexico, which included positions in Product Control and Product Engineering Manager.

In the period of 1990 to 2003, he held the position of Technical Services Manager for SKF Mexico, where he was responsible for Service and Reliability Support and Training.

In February 2003 he started his own company Servicios Tecnologicos Corporativos. SA de C.V. which continues today, with the main activities of Training and Consulting in Lubrication, Lubricants and Reliability of Rolling Element Bearings in different industrial applications.

He is a regular speaker at industrial maintenance seminars and his work covers the areas of Mexico, Venezuela and Brazil. Per Arnold is a fluent communicator in English, Swedish and Spanish.

See also introduction video on website:

<http://www.enluse.co.uk/en/course/bearing-failures-and-their-causes/41/>

