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**VOITH**

**Turbo gears and  
gear technology  
Classroom training  
for customers**



# Basic information

Voith has been one of the leading manufacturers of high-speed gearboxes for more than 80 years. Today more than ever, engineers and companies operating turbo machinery need to understand the decisive factors for the reliability, operational safety and high efficiency of turbo gears. This half-day basic course provides participants with fundamental and practical knowledge about customized and durable turbo gear units.

## Who is the course intended for?

The course is designed for managers, technicians, engineers, graduates, operating and maintenance personnel and other employees who require basic knowledge of turbo gearboxes, particularly in the areas of specifications, engineering, operation and maintenance of rotating machines. It is also ideal for those who want to refresh their knowledge of turbo gears, such as experienced technicians.

## Who conducts the training?

The training is conducted by experienced engineers. If maintenance aspects are part of the program, they will be supported by a technician.



# Training agenda example

## Introduction to turbo gearboxes

- History and areas of application
- Definition and limitations
- Structure of the drive train, industries served

## Design and features of high-speed gearboxes

- Parallel shaft gearbox
- Integral gearbox
- Planetary gearbox
- Power distribution gearbox

## Types of gear faults causes and prevention

- Pitting, bending, seizure damage

## Internal gearbox standards and calculation methods

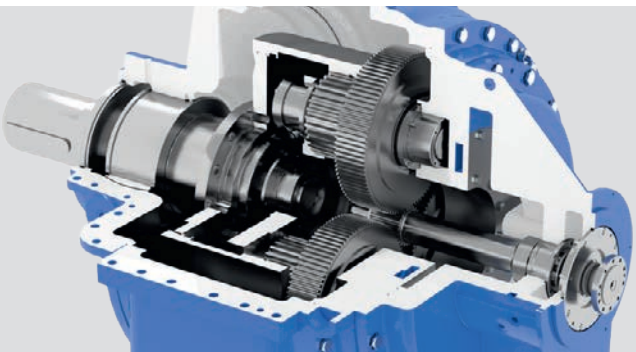
- Calculation and design of the gearing
- API613, API672, AGMA6011, ISO 13691, etc.

## Optimizing transmission system solutions

- Gear design
- Bearing
- Housing design

## Drive train

- Reducing space requirements and weight
- Increase in efficiency



# Good to know

Duration:	3–4 hours
Group size:	up to 25 participants
Training materials:	each participant receives materials for future reference
Adaptation:	the training program can be adapted to the needs of participants by prior agreement, e.g. extended or shortened
Location:	at the customer's site, at Voith (e.g. Sonthofen) or online

The training agenda is individually coordinated with each customer and adapted to their needs. Because the participants usually have different technical backgrounds, the training can be split in terms of length, content and number of participants, if necessary even over several days (e.g. if people participate in shift work).



# Some participant comments

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“An excellent seminar from gearbox specialists who know exactly what operators need to know. Other OEMs can learn a lot from Voith customer service.”

**Talisman, United Kingdom**

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“A useful and intensive discussion about gearbox technology. It felt more like a ‘gearbox school’ than a sales talk.”

**BP, United Kingdom**

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“The gearbox training was very useful for understanding how the machines are designed, manufactured, assembled and tested. ... I would recommend it to ... people with limited prior knowledge ... as an introduction. ... Just the right length.”

**Shell, United Kingdom**

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“The focus was on the latest innovative developments in gear design and construction rather than basic design and machining – just right.”

**Total, United Kingdom**

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BHS Turbo gears



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