

# PRECISION SHAFT ALIGNMENT

## COURSE OVERVIEW

Precision-aligned machines run more smoothly and suffer fewer failures - plus they consume less energy. Precision alignment must be part of your reliability improvement strategy. Precision Shaft Alignment makes it easier to gain knowledge, confidence, and competence.

## TOPICS

- An overview of precision alignment
- A detailed introduction to alignment including the reliability benefits
- The basics of dial-indicator calculations
- Rim-and-face and reverse-dial dial-indicator alignment overview
- Pre-alignment checks
- Soft foot detection and correction
- The rim-and-face method in detail
- The reverse-dial method in detail
- Laser alignment methods in detail
- Moving the machine (and how to deal with the bolt bound and base bound situations)
- Dealing with dynamic and thermal growth
- Machine train alignment

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## OBJECTIVES

### Introduction to Alignment

- Understand misalignment
- Understand why it is important to align your machines
- Understand how to align your machines

### Alignment Mathematics

- Explain the terms "angularity", "offset" and "slope"
- Discuss often-used mathematical rules

### Dial Indicator Alignment

- How dial indicators work
- The limitations of dial indicators

### Pre-alignment Checks

- Demonstrate the benefits of pre-alignment checks

### Soft Foot Detection and Correction

- Understand soft foot and its importance

### Rim-face Method

- Understand the procedure for taking alignment measurements using the rim and face alignment method

### Reverse Dial Method

- Understand the bracket and dial setup
- Understand the test procedure
- Understand the calculations and graphical method required to determine the final foot moves required

### Laser Alignment

- Understand how laser alignment systems work
- Understand how to use laser alignment systems

### Moving the Machine

- Understand the guidelines to follow to ensure the machine is moved and aligned correctly and in the shortest possible time

### Dynamic and Thermal Growth

- Understand the changes that occur when a machine is running
- Understand the tests that can be performed to indicate how the machine will perform when running
- Understand how to align the machine to compensate for these changes

### Machine Train Alignment

- Understand how to align machines with three or four components

Contact for pricing

Printed course manuals included



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