1 Day
Alignment Training course

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Module 1 Introduction

After successful completion of the module the student shall be competent to
- Discuss the benefits of precision alignment in plant reliability
- Discuss the adverse effects of misalignment upon machine operation
- Define alignment and its forms
- Identify the three stages of an alignment task
- Describe the advantages and disadvantages of each of the following alignment methods
  a) Straight Edge and Feeler Gauges
  b) Rim and Face Dial Indicator
  c) Reverse Dial Indicator
  d) Laser

Module 2 Pre Alignment Checks

After successful completion of the module the student shall be competent to
- Discuss the effects of each item in a provided Pre-Alignment check List upon the alignment process
- Properly perform each of the tasks in the Pre-Alignment Check List

Module 3 Soft Foot Analysis

After successful completion of the module the student shall be competent to
- Identify and discuss common types of foot and base related problems
- Describe the methods commonly used to detect, identify and correct foot and base related problems, along with the advantages and disadvantages
- Discuss the adverse effects of foot and base related problems on the alignment process and on machine performance

Module 4 Proaction Kit and Bar Sag

After successful completion of the module the student shall be competent to
- Demonstrate the preparation of the Proaction Alignment Kit for taking Reverse Indicator readings
- Demonstrate how to measure dial indicator Bar Sag
- Discuss the effects of Bar Sag on readings
- Describe two methods of Bar Sag compensation and discuss reasons for the favoured method.
Module 5 Conventions and Reverse Indicator Method

After successful completion of the module the student shall be competent to
- Describe the various conventions used in the alignment process
- Describe the use of the Reverse Indicator Data Sheet
- Discuss the precautions to be applied to ensure valid readings
- Describe the validation of readings

Module 6 Graphical Solution

After successful completion of the module the student shall be competent to
- Prepare and scale a graph sheet for reverse indicator alignment
- Take the information from a data sheet (not for thermal growth) and construct the shaft lines for horizontal and vertical positions
- Determine the horizontal and vertical movements required for correction of the misalignment
- Demonstrate the graphical process to identify the optimum moves in the case of base bound or bolt bound machines

Module 7 Moving the Machine

After successful completion of the module the student shall be competent to
- Describe the methods used to achieve controlled movement of machines in the horizontal and vertical planes
- Discuss the precautions required to achieve controlled movement to the amounts necessary to obtain precision alignment

Module 8 Alignment Tolerances

After successful completion of the module the student shall be competent to
- Discuss the relevance of tolerances for run out, bases, piping, and soft foot with regard to Alignment tolerances
- Discuss the common misconceptions related to Alignment Tolerances
- Describe the limitations of the various guidelines given for Alignment Tolerances and determine suitable tolerances relevant to the task at hand