

Borescope Inspection Procedures

Course Number

10400

Course Duration

The course can be scheduled over 3 or 4 days, depending on the number of students and amount of hands-on inspection opportunities.

Audience

This course has been designed for end-users of Solar turbo-machinery who perform borescope inspections during routine maintenance. Technicians should have a thorough understanding of proper inspection procedures to perform a first-line evaluation of the condition of the equipment, and be able to identify abnormal conditions that require further evaluation or inspection by a qualified Solar Field Employee.

Prerequisites

None

Course Description

This course focuses on the practical execution of borescope inspection of Solar turbine engines. The student will learn the principles of operation and care of borescope inspection equipment; principles of digital photography; recommended inspection procedures on multiple engine types; inspection criteria on multiple engine types; and inspection report completion. The majority of the course will comprise practical borescope inspection exercises. These will be completed on both gas turbine components located in simulator containers, and a gas turbine engine with known damage. The course will conclude with the completion of a very detailed inspection report that will include digital images; basic analysis of the damage noted; and recommendations for further analysis or inspection.

Course Objectives

On completion of this course, the student will be able to:

- Use standard borescope inspection equipment to complete an inspection of Solar turbo-machinery
- Record borescope inspections using digital photography
- Evaluate the results of the inspection and identify abnormal conditions that require further evaluation or inspection
- Complete a borescope inspection report to a high standard of professionalism

Course Topics

- Principles of operation and care of borescope inspection equipment
- Principles and applications of digital photography
- Practical exercises in borescope inspection of turbine engine components located within simulator containers
- Practical exercises in borescope inspection of a Solar gas turbine
- Completion of a borescope inspection report, including digital photography, basic evaluation of data recorded, and recommendations for further analysis or inspection

Reference Material

Comprehensive Student Workbook

Variations

An alternative to this 3-day Instructor-Led training course is a blended-learning solution. This comprises a series of eLearning modules that cover the theoretical aspects of the course, followed by a 2-day hands-on workshop conducted at a Solar Global Training Center.

The relevant course numbers for this option are as follows:

- 50092** - Introduction to Borescope Inspection
- 50094** - Borescope Component Descriptions
- 50095** - Borescope Product Line Description
- 50096** - Borescope Component Failure Modes
- 50097** - Borescope Inspection Reports
- 10409** - Borescope Hands-On Workshop