

Bonded Sand Aluminum Casting Basics

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

The THORS Bonded Sand Aluminum Casting Basics introduces the learner to the world of aluminum alloys and bonded sand molding, including the properties, processes, and terminology associated with aluminum casting production. Presented in THORS' highly visual and interactive learning format, this course will help foundry employees become familiar with the important equipment processing steps associated with their profession.

Credit Hours **1.5**

Learning Objectives

- Understand the basic production methods used to cast aluminum.
- Identify the various parts of a bonded sand mold.
- Examine the different types of melting furnaces used for aluminum.
- Differentiate between the important molten metal processing steps.
- Recognize the post molding processes involved in aluminum casting.
- Identify common defects associated with bonded sand aluminum castings.

Table of Contents

I. Bonded Sand Molding

- Aluminum Casting Processes
- Parts of Bonded Sand Molds
- Types of Bonded Sand
- Sand System Equipment
- Post Molding Processes

II. Furnaces and Molten Metal Processing

- Furnaces
 - Crucible Furnaces
 - Stationary Furnaces
 - Tilting Furnaces
 - Lift-Out Furnaces
 - Resistance Furnaces
 - Induction Furnaces
 - Reverberatory Furnaces
 - Wet Bath Furnaces
 - Dry Hearth Furnaces

II. Furnaces and Molten Metal Processing (continued)

- Molten Metal Processing
 - Degassing
 - Grain Refinement
 - Silicon Modification
- Common Defects

