

GREEN SAND EQUIPMENT AND PROCESS CONTROL

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

Green Sand Systems: Equipment and Process Control explores the science of producing quality green sand including the equipment, processes, process optimization, controlling variables, monitoring and interpreting data. Presented in THORS' highly visual and interactive learning format, this course is designed to improve the ability of foundry employees to recognize and correct green sand related defects.

Credit Hours **2.5**

Learning Objectives

- Identify the primary equipment utilized in green sand foundries.
- Understand the basics of sand reclamation.
- Distinguish the primary and secondary control processes.
- Demonstrate an understanding of derived properties for green sand systems.
- Assess the influence of green sand properties on the overall performance of the system.

Table of Contents

I. Green Sand Equipment

- Storage Silos
- Mullers
 - o Batch Mullers
 - o Continuous Mullers
 - o Control Systems
 - Compactability Controllers
 - Clay/Water Adders
- Aerators
- Shakeout Machines
- Sand Reclamation Systems
 - o Metal Separators
 - o Sand Coolers
 - o Screeners
 - o Dust Collectors

II. Green Sand Process Control

- Primary Control
 - o Methylene Blue Clay
 - o Compactability
- Secondary Control
 - o Green Compression Strength
 - o Sand Grain Distribution
 - o Combustibles and Volatiles
 - o Sand Temperature
 - o Permeability
 - o Sand Density
 - o AFS Clay and MB Clay

III. Derived Properties and Ratios

- Compactability to Moisture Ratio
- MB Clay to Moisture Ratio
- Moisture to Volatiles Ratio
- Mulling Efficiency
- Inventory Controls and Data Analysis

