# LOW PRESSURE DIE CASTING BASICS

## eLearning courses designed to increase productivity and profits



## Learning made Simple, Visual, and Interactive

Low Pressure Die Casting Basics provides an introduction to the terminology, equipment, and processing steps associated with low pressure die casting. Presented in THORS' highly visual and interactive learning format, this course will improve process knowledge for employees in low pressure die casting foundries.

Credit Hours 2

## **Learning Objectives**

- Identify the important aspects of an LPDC die or mold.
- Ø Recall the basic LPDC processing steps.
- Ø Recognize the defects common to the LPDC process.
- Recall important troubleshooting steps to increase LPDC process efficiency.

## Table of Contents

#### I. LPDC Foundries

- LPDC Foundry Terminology
- LPDC Machine Terminology
- LPDC Die Terminology
- Advantages and Disadvantages
- Types of LPDC Processes
  - o Conventional LPDC
  - o Counterpressure Casting
  - o Vacuum Riser-Less Casting
- Common LPDC Alloys

#### **II. LPDC Processing Steps**

- Mold Production
- Core Production
- Aluminum Melting
- Permanent Mold Coating
- Mold Closing
- Injection, Cooling, and Ejection
- Finishing

#### **III. Casting Inspection**

- Visual Inspection
- Defects
  - o Hot Tears
  - o Shrinkage Porosity
  - o Gas Porosity
  - o Misruns
- Sprue Regulation
- Seal Maintenance
- Preventing Losses
- LPDC Operator Focus



