

# On-Demand Courses for the Valve Industry

THORS Academy courses reflect industry processes from start to finish. Every step of the way, **Think THORS™** for solutions that accelerate learning and improve effectiveness.

## MATERIALS



Aluminum Casting Fundamentals  
Ductile Iron Fundamentals  
Gray Iron Fundamentals



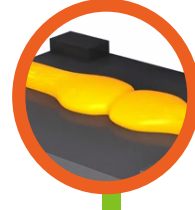
Steel Basics  
Steel Fundamentals

## PROCESSES



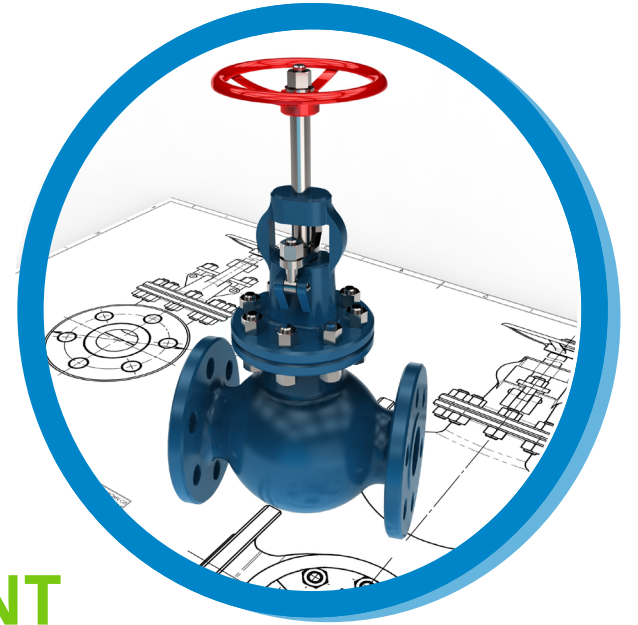
### CASTING

Bonded Sand Fundamentals  
Bonded Sand Iron Casting Basics  
Bonded Sand: Horizontally Parted Molds  
Bonded Sand: Mold Patterns  
Bonded Sand: Vertically Parted Molds  
Chemically Bonded Sand Basics  
Gating and Rising Basics  
Gravity Die Casting Basics  
High Pressure Die Casting Basics  
Low Pressure Die Casting Basics  
Investment Casting Basics  
Vacuum Process Fundamentals



### FORGING

Forging Basics  
Forgings: Closed Die Processes  
Forgings: Closed Die Terminology and Equipment



### Our solution creates value for the following functions:

Design Engineering	Purchasing
Manufacturing Engineering	Quality
Manufacturing Operations	Sales



### HEAT TREATMENT

Heat Treating Basics (available in Spanish)  
Heat Treating Processes and Equipment  
Heat Treating Safety  
Heat Treating Testing and Defects



## ADDITIONAL COMPONENTS

Hydraulic System Fundamentals  
Gearbox Basics  
Bearing Fundamentals  
Electronic Terminology  
Electric Power Introduction  
Electric Motor Fundamentals  
Bolted Joint Basics  
Threaded Fastener Specifications  
Threaded Fastener Terminology and Components  
Threaded Fastener Testing and Defects  
Oil Seal Fundamentals: Rotary Applications  
Welding Fundamentals



## SAFETY

Personal Protective Equipment (PPE) Selection  
PPE Scenarios for Forge Shops  
Lockout Tagout (LOTO)



## MACHINING

Lightning Learning: Turning Center Series 1 and 2  
Lightning Learning: Vertical Machining Center Series 1 and 2  
Lightning Learning: Horizontal Machining Center Series 1 and 2  
Lightning Learning: Honing Series 1 and 2  
Lightning Learning: Rotary Surface Grinding Series 1 and 2  
Lightning Learning: Gear Hobbing Series 1  
Cylindrical Grinding Fundamentals  
Cylindrical Grinding Process Strategy  
Fixturing Fundamentals for Machining  
Hole Process Fundamentals  
Machine Tool Fundamentals  
Surface Process Fundamentals  
Turning Tool and Process Basics



## QUALITY ASSURANCE

Engineering Drawing Fundamentals  
Engineering Drawing Castings  
Engineering Drawing Forgings  
Engineering Drawing Machining  
GD & T Fundamentals  
Measurements: Basic Concepts  
Measurements: Measurement Math  
Measurements: Measuring Processes  
Measurements: Measuring Tools  
  
Process Flow Diagrams  
Control Plan  
Production Part Approval Process (PPAP)  
Process Failure Modes and Effects Analysis (PFMEA)  
8D Problem-Solving Basics

Quality Inspection for Steel Castings  
Green Sand Defect Analysis  
Destructive Metallurgical Testing  
Non-Destructive Testing  
Affinity Diagrams  
7QC Tools: Check Sheets  
7QC Tools: Control Charts  
7QC Tools: Fishbone Diagrams  
7QC Tools: Histograms  
7QC Tools: Pareto Charts  
7QC Tools: Scatter Diagrams  
7QC Tools: Stratification



## MANUFACTURING EXCELLENCE

Valve Basics – Just Released!  
Contingency Planning Fundamentals  
5S Workplace Organization Method  
Value Analysis and Value Engineering (VAVE)  
Internet of Things: Manufacturing  
Robotics Fundamentals  
Purchase Order Fundamentals



The THORS Academy Course Library is constantly growing with 2-3 new titles being added each month. Please use the QR code to view our most current list with links for details about each course.

To access the online THORS Course Library: Scan this QR Code  
To search for any word: Use CTRL + F (or Command + F on the Mac)  
To view more information about a course: Click on the Course Name