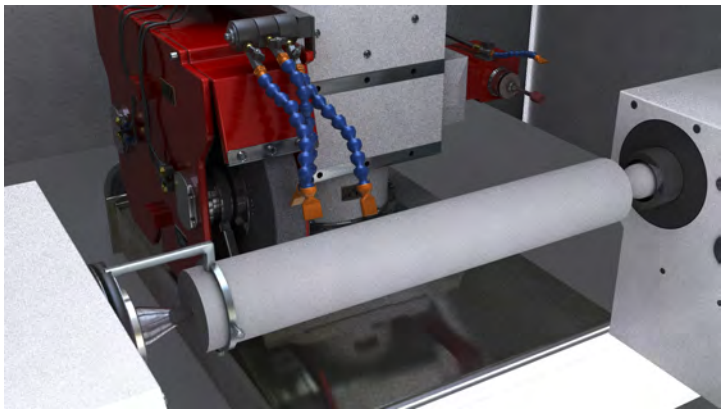
CYLINDRICAL GRINDING PROCESS STRATEGY

eLearning courses designed to increase productivity and profits



Learning made Simple, Visual, and Interactive

Discover the strategies that drive the choice of tools and processes for cylindrical grinding operations. The THORS Cylindrical Grinding: Process Strategy course expounds the factors that play a crucial role in cylindrical grinding and guides the learner to apply the principles to develop a grinding strategy. This practical introduction, enriched with real-life examples, provides actionable strategies for better outcomes in cylindrical grinding.

Credit Hours **2**

Learning Objectives

- Identify grinding requirements from an engineering drawing.
- Understand grinding wheel construction.
- Evaluate grinding wheels and select an appropriate wheel for the grinding operation.
- Determine the dressing tool to be used.
- Choose the workholding method based on the part shape and geometry.
- Demonstrate proper application of grinding fluid.
- Develop a grinding strategy.

Table of Contents

I. Tooling Selection

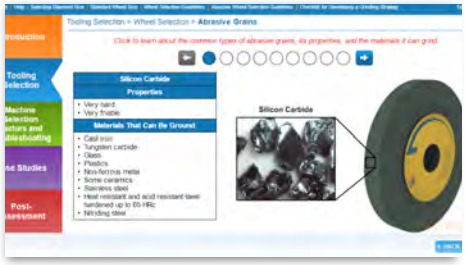
- **Wheel Selection**
  - o Grindability, Wheel Hardness
  - o Abrasive Grains, Grit Size, Bond
  - o Wheel Specifications
- **Wheel Profiles**
  - o Types of Grinding Operations
  - o Straight Wheels, Profiled Wheels
  - o Wheel Modification
- **Dressing Tool Selection**
  - o The Dressing Process
  - o Fixed Dressers, Rotary Dressers

II. Machine Selection Factors and Troubleshooting

- **Machine Selection Factors**
  - o Machine Capacity
  - o Workholding
  - o ID Grinding Considerations
  - o Grinding Fluid Selection
  - o Grinding Fluid Delivery
    - Nozzle Design
    - Temperature,
    - Flow Rate, Filtration
  - o Troubleshooting

III. Case Studies

- **Case Study: OD Grinding**
- **Case Study: ID Grinding**
  - o Step 1: Identify Grinding Requirements
  - o Select Grinding Wheel
  - o Select Dressing Tool
  - o Select Workholding and Order of Grinding Operations
  - o Establish Fluid Delivery



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