

# Online / e-Learning Course

## Iron & Steel Casting

'Practical knowledge to use in your company'

### Summary of Contents

#### Module 1: Vision of the Foundry

- Sector vision
- Global vision of a foundry
- Energy-environmental vision
- Types of foundries (iron and steel)

#### Module 2: EAF

- Introduction to foundry at EAF
- Foundry Chemistry at EAF
- Electrodes and Refractories
- Chemical composition and alloying elements
- Foundry phases in EAF
- EAF parties and operations
- The use of DRI in an EAF
- Dephosphorization and Desulfurization
- Energy balances, productivity and quality

#### Module 3: Ladle Refining

- Ladle refining process and operations

- Slag control
- Deoxidation and addition of alloying agents
- Other additions and control of inclusions
- Gas control and decarburization
- Homogenization and temperature control
- Refractories
- Productivity and quality

#### **Module 4: Foundry in Induction Furnace, and rotary furnaces**

- Characteristics of the induction furnace
- The melting process in an induction furnace
- Chemistry in the induction furnace

#### **Module 5: The Cupola Furnace and Other Furnaces**

- Characteristics of the furnace and the process in
- Chemistry and DRI in cupola furnace
- Productivity and Efficiency
- Crucible furnaces

#### **Module 5: Casting in Molds**

- Planning and foundry processes
- Casting processes and mold types
- Molds and model building
  - o sand casting
  - o Wax casting and lost foam
  - o Plaster and metal molds
  - o Shell Molding
- In-mold die-casting process

- Die casting molds
- Centrifugal casting and combinations
- Alloys and treatments
- FOUNDRY 4.0

## **e-Learning – Online Training**

This modality is called tele-Training, and is taken on our platform where the participant can access contents according to his preferences. To get registered, please send an e-mail to [info@atecid.com](mailto:info@atecid.com), or use our [contact web page](#), so we can book your seat.