

Course Syllabus for:

Introduction to Coreless Furnace Operation



Course Code	CEUs
5-110	0.4 CEUs

Course Introduction

This course provides participants with best practices for safe operating techniques for induction melting. Topics include furnace components; the sequence of operations for daily start up; "normal" furnace operation; types of induction furnaces; differences between small versus large induction furnaces; emergency situations and action plans.

Learning Outcomes:

1. Identify furnace components.
2. List the sequence of operations for daily start up.
3. Describe a normal furnace operation.
4. Describe safe operating techniques of induction melting.
5. List the types of induction furnaces.
6. Identify an emergency situation and determine action plan.
7. List the daily maintenance tasks for induction furnace operations.

Lesson Outline

- Introduction
- Module 2: Furnace Components
- Module 3: Basics of Induction Melting
- Module 4: Furnace Startup
- Module 5: Induction Furnace Daily Operations
- Module 6: Induction Furnace Daily Maintenance
- Conclusion

Instructional Methods:

- Facilitator led discussion
- Group discussion
- Individual/Small group activities
- Q&A

Assessment Methods:

No formal assessment will take place in this course; however, attendees will participate in informal activities such as knowledge check and Q&A sessions with the facilitator to verify that learning outcomes are being met. Assessment of successful achievement of learning outcomes must be included throughout the course in order to meet the ANSI/IACET 1-2013 standard for continuing education programs and for CEUs to be awarded.

Course Prerequisites:

- None

Attendee Requirements to Earn CEUs:

1. Present at least 3 hrs of the total 3.5 hrs of instructional time (90%), which does not include lunch or breaks.
2. Active participation (can include asking questions, communicating with other attendees during and taking part in group activities, providing responses during whole class or group discussions).
3. Successful achievement of learning outcomes.

Who Should Attend?

The target audience for this course consists of individuals responsible for:

- Furnace operation
- Furnace maintenance
- Safety policies for furnace operation