

# CATHODIC ELECTRODEPOSITION (CED) PAINTING BASICS

*eLearning courses designed to increase productivity and profits*



## Learning Made Simple, Visual, and Interactive

The THORS *Cathodic Electrodeposition (CED) Painting Basics* course is relevant for learners who are new to the industry, as well as experienced learners who require a deeper knowledge of the systems and equipment involved in the painting processes. The CED painting systems function in a coordinated way ensuring optimal productivity. This introductory course offers an interactive learning experience that allows learners to gain an in-depth understanding of the CED process including the pretreatment, painting, and support processes.

Credit Hours **2**

## Learning Objectives

- Identify the different systems involved in CED painting.
- Recognize the equipment used in CED painting.
- Identify the various CED support equipment used.
- Recall the major processes carried out in the CED plant.
- Gain a broader understanding of the painting process steps.
- Understand the ultrafiltration (UF) process steps for paint and permeate recovery.

## Table of Contents

### I. CED Painting Systems and Equipment

- CED Painting Systems
  - Part Transport System
    - Transporter
    - Monorail
  - Power Supply System
  - Fresh Paint Supply System
  - Bath Circulation System
  - Ultrafiltration (UF) System
  - Paint Temperature Control System
  - Control System
  - Anolyte Circulation System

### I. CED Painting Systems and Equipment (Continued)

- CED Painting Equipment
  - Bus Bar
  - CED Tank
  - Baking Oven
  - Flash-Off Equipment
- CED Support Equipment
  - Demineralized (DM) Water Plant
  - Chiller Unit
  - Thermic Fluid Heater

### II. CED Process

- Pretreatment Process
  - Part Cleaning
    - Methods
    - Systematic Procedure
  - Surface Activation
  - Phosphating
- Painting Process
- Support Processes
  - Ultrafiltration (UF) Process
  - Flash-Off Process
  - Curing Process

