CRANE MAINTENANCE

OVERHEAD CRANE ELECTRICAL MAINTENANCE

#805 3 DAYS
#807A 2 DAYS

HANDS-ON TRAINING

GENERAL DESCRIPTION

This course highlights electrical maintenance procedures for all types of A.C. crane controls including A.C. full magnetic, stepless and adjustable frequency drives and is considered the basic orientation to electrical maintenance.

COURSE OUTLINE

- Overhead Crane Electrical Safety
- Overhead Crane Electrical Regulations
- Electrical Tools
- OHMS Law
- Motors
  - AC Motors
  - Wound Rotor Motors
  - DC Motors
  - Motor Maintenance & Troubleshooting
- Power Distribution
  - Crane Electrical Components
  - Fuses & Circuit Breakers
  - Motor Overload
  - Contactors
  - Mechanical & Electrical Interlocks
  - Transformers & Rectifier
  - Limit Switches
  - Motor Thermistors
  - Resistors
  - Encoders
  - Brakes & Electric Load Brake Magnetorque (TM)
  - Master Controller, Radio Controls & Crane Pendants
  - PLC & Crane Monitoring Equipment
- Crane Overload Limiter
- Variable Frequency Drives (VFD)
- Basic Speed Control
- Hands-On Student Labs (#805 in Milwaukee)
- Tour of motor manufacturing facility (#805 in Milwaukee)

COURSE OBJECTIVES

- Identify the function and operation of single speed, two speed, step type, and adjustable frequency A.C. crane controls
- Analyze power and control circuits
- Identify problematic motor symptoms and correct their causes
- Perform control system inspections, tests and adjustments
- Analyze operating characteristics for troubleshooting control system failures
- Test, adjust and troubleshoot control components
- Recognize how the plugging, overload and travel limit protection circuits operate individually and in combination
- Perform brake electrical inspections, tests, adjustments and trouble shooting
- Perform electrical inspections
- Perform electrical preventive maintenance procedures

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