



Electrical Wiring

This five-day course begins by describing conductors and their characteristics, classifications, and terms. Next, the types of conduit and fittings are reviewed, conduit fabrication and wiring, terminations, soldering, insulation of connections, and crane and hoist wiring are explained.

I. Conductors and Characteristics

- A. Introduction to Conductors
- B. Conductor Classification and Terminology
- C. Identification of Cables and Conductors
- D. Conductor Insulation

II. Types of Conduit and Fittings

- A. Conductor Protection
- B. Fittings
- C. Supports

III. Conduit Fabrication and Wiring

- A. Conduit Installation
- B. Cable Installation
- C. Wire Pulling Standards
- D. Receptacle Wiring

IV. Terminations

- A. Cable Preparation
- B. Terminations
- C. Solderless Mechanical Connectors
- D. Terminal Block Connections
- E. In-Line Butt Splice Connections
- F. Bolted In-Line Connections

V. Soldering and Exothermic Connections

- A. Solder
- B. Wetting Process and Dihedral Angle
- C. Soldering Flux
- D. Component Removal
- E. Component Installation
- F. Soldering Conductors to a Turret Terminal
- G. Soldering Bifurcated Terminals
- H. Soldering Pierced Terminals
- I. Soldering IC's
- J. Soldering Flat Packs
- K. Characteristics of a Quality Solder Joint
- L. Solder Joint Defects
- M. Printed Circuit Board Repair
- N. Conductor Repair
- O. Exothermic Connections

VI. Insulation of Connections

- A. Low Voltage Connections
- B. Insulating High Voltage Terminations
- C. High Voltage In-Line Splice

VII. Crane and Hoist Wiring

- A. Festoon Wiring
- B. Main Contact Conductors
- C. Collector Shoes
- D. Typical Crane Wiring