

Conduit Bending and Wiring

OEM: Rockwell Automation • Duration: 5 Days (40 hrs) • Code: EMS-125

COURSE MODULES & TOPICS

Objectives

- Identify and describe the purpose for the various types of conduit used for electrical runs
- Interpret rigid metal conduit data
- Explain conduit fill and spacing requirements
- Explain and demonstrate proper methods to cutting, reaming, bending, and installing conduit
- Identify between conductors, insulators, and semiconductors and describe the key characteristics of each
- Describe cable construction and characteristics of the different components used in construction of cables
- Discuss the operating characteristics of electrical cables
- Describe the different methods of cable installation and their advantages and disadvantages over other methods of installation
- Demonstrate the proper techniques to pull wire or cable
- Describe the precautions that must be observed when splicing wires and demonstrate how wire and cable is spliced
- Discuss the differences between low and medium voltage splicing

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course

Next Level Learning

- Motor Control and Troubleshooting course (EMS-230)

Course Agenda

Day 1

- Distinguishing Conduit Types and Functions
- Recognizing Materials and Their Uses In Conduit Application
- Interpreting Conduit Data
- Bending Rigid Conduit (IMC)

Day 2

- Using Liquid Tight Flexible Metal Conduit

- Following Fill and Spacing Requirements
- Applying Conduit Cutting Methods

Day 3

- Conduit Reaming and Threading
- Calculating Bend Radius
- Following Support Requirements
- Offset Bending

Day 4

- Describing the Electrical Characteristics of Conductors, Semiconductors and Insulators
- Differentiating Construction Material Characteristics
- Selecting Cable Jackets

Day 5

- Characteristics
- Using Proper Installation Methods
- Pulling Wire And Cable
- Slicing Wires
- Low and Medium Voltage Splicing
- Lab Exercises
- Review
- Written Exam
- Final Lab