

Maintenance Training

PLC Controls Advanced

General Information

Course Number: 2-176
Length: 2 days
Maximum Students: 10

Audience

This course is for conveyor maintenance electricians and technicians, managers, maintenance and computer room technicians and operators who support the conveyor system.

Customer Requirements

A room with a TV/VCR, an "In-Focus" or equivalent style projector, and a marking board with markers.

Prerequisites

- A working knowledge of electrical systems and drawing sets.
- A working knowledge of safety and Lockout/Tag out procedures.
- A working knowledge of electrical test equipment.
- The ability to navigate through Microsoft Windows.
- Course 2-110 Controls or the equivalent knowledge recommended.

Benefits

This course is designed to increase knowledge in the areas of PLC (GSMi - if applicable) hardware and software, the preventive maintenance and troubleshooting of the conveyor system logic and some types of electrical components.

Course Objectives

Upon completion of this course, the student should be able to:

- Identify information and components inside electrical drawing sets as well as on the conveyor system.
- Understand operational issues that affect system uptime.
- Navigate through the PLC software
- Safely perform electrical preventive maintenance, testing, and repair procedures on PLC hardware.

Topics

1. General

- a. Safety
- b. Nomenclatures and Abbreviations
- c. Drawing and Wire Standards

2. Devices

- a. Pulse Position Indicators (PPIs)
- b. Photoeyes and Air Valves
- c. Motors - Three Phase - Servos
- d. "APC" type Conveyor

3. Programmable Logic Controller Hardware

- a. Backplanes
- b. Power Supplies
- c. CPUs
- d. I/O Cards
- e. Network Cards

4. Programmable Logic Controller Software

- a. Understanding/familiarity
- b. Navigating
- c. Testing and Troubleshooting

5. Networks

- a. Ethernet
- b. Data Highway Plus
- c. Local I/O
- d. Remote I/O
- e. Distributed I/O

6. Graphical System Monitor (GSMi) (if applicable)

- a. Computer Based and Instructor Led Training
 - Explanation of GSMi
 - Display and Navigation
 - Colors and Symbols
- b. Alarms
 - Fault Conditions
 - Events
 - Alarm Message Components
 - Filtering
- c. Generating Logs
 - Printing and Analyzing