



Regional Product Seminar

Course Duration

The duration is 5 days

TARGET AUDIENCE:

(Train the Trainer candidates)

This training is targeted to MinePro Electricians, Technicians and Engineers who service, maintain and deliver training on P&H Mining shovels.

Also

(Product Training)

This training is targeted to Electricians, Technicians and Engineers who will service and maintain P&H Mining shovels.

Description

The student is introduced to the operation and maintenance of the P&H Electrical mining shovel. Furthermore the course focuses on critical knowledge and skills required in supporting present day P&H Electrical mining shovels. The topics include, Shovel System Power Electronics, The Electrotorque Plus B Digital Drive System, and the Centurion Shovel Control System. The concepts that are covered in the classroom are reinforced in a laboratory environment that allow the students to load install and configure application software.

Prerequisites:

(Train the Trainer only):

Candidates should have attended the Centurion & Electrotorque Plus B course or have Centurion & Electrotorque Plus B field service experience.

(Product Training):

Students should have a basic knowledge of power electronics and computers.

Course Location

TBD

Course Objectives

Upon completion of this course the student will be able to:

- Identify and explain the purpose of all the major components utilized.
- Demonstrate proficiency in loading, configuring, usage and application of software programs as required.
- Remove and replace faulty components including a failure analysis.
- Explain the relationship to the rest of the shovel systems.
- Analyze schematics and control diagrams utilized for troubleshooting and repair.

Main Concepts

- Shovel & Power Systems Overview
- Electro-Torque Plus B Hardware Overview
- Drives Window Overview
- DW 2.1 Procedures
- Drive fault analysis
- AC800M (Advant Controller 800) Hardware Overview
- Remote I/O devices
- Control Builder Overview
- Control Builder Procedures
- System Maintenance and Troubleshooting



Course Plan

Monday

Train the Trainer

- Course content Overview
- Instructor guide overview
- Instructional Techniques Overview

Tuesday

Train the Trainer(cont.)

Wednesday

Course Introduction

- Class Objectives
- General Safety
- ESD

Electrical System Block Diagrams

- Systems Diagram Overview
- Shovel Schematics

Touch Panel & GUI Systems Review

- Touch Panel Navigation
- Touch Panel Software Tools
- Touch Panel Navigation LAB

Advant Controller 800 & Remote I/O Hardware Review

- AC800 Processor Unit
- Profibus DP-V1 Interface
- External Battery unit
- Interface Modules
- I/O Modules

AC800 Basic Software Overview

- Control Builder Introduction

Student Lab Activities

- Clearing & Loading AC800 Applications

Student Lab Activities

- I/O Tracing

Thursday

Electrotorque Plus B Hardware Review

- Circuit Board Operation
- Detailed Comparison to Previous Drive Systems

Electrotorque Plus B Software Overview

- Drives Windows Introduction

Student Lab Activities

- Loading Back Up Packages

System Troubleshooting

- Fault Finding Methods,

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- Fault Finding Methods,

System Troubleshooting

- Fault Finding Methods,

Friday

Review & Wrap up