Control Equipment

**Duration:** 60 mins  
**Level:** Intermediate  
**Pass mark:** 80%

**Course Description:**

The components of a coal handling system are operated with control equipment. The proper operation of the control equipment ensures that the components are started and stopped in the correct sequence so that coal moves smoothly from one component to the next. If one of the components in the sequence is not operated properly, the entire system could come to a stop, and equipment could be damaged. This course describes how control equipment is used to operate coal handling components so that they work together smoothly as a system. Troubleshooting procedures that can be used to determine the cause of a coal handling system malfunction also are covered.

**Learning Objectives:**

- Explain how an operator can control the components of a coal handling system
- Summarize the purpose of the control equipment in a coal handling system
- Describe three different types of control equipment
- Name several types of indicators and controls commonly found on a typical control panel
- Identify different types of coal handling components and describe how they help move coal through the system
- Identify and describe different types of controls used to operate coal handling components, and explain how these controls are used to control the flow of coal
- Explain how controls operate motor controllers to turn motors on and off
- Describe how annunciators and computer graphics are used to indicate problems in a coal handling system
- Explain how an ammeter is used to monitor operating conditions in a coal handling system
- Identify several types of sensing devices and describe how they can be used with indicating devices to monitor and protect a coal handling system
- Describe the operation of an interlock system
- Describe a typical manual control system and explain the procedures for starting it up and shutting it down
- Describe a typical semi-automatic control system and explain the procedures for starting it up and shutting it down
- Describe a typical automatic control system and explain the procedures for starting it up and shutting it down
- Summarize the basic steps that can be taken when troubleshooting a coal handling system
• Determine how to troubleshoot a coal handling system in which the system is running, but a control panel indication is not normal