

Electromagnet Specification
For

BC-10 and BC-11 Magnetic Separator

PWO 31407362

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1. 0 Project Definition

Two identical electromagnets must be acquired for two separate coal conveyors. The following sections describe the requirements these electromagnets must fulfil.

2. 0 Conveyor and Material Specification

Below outlines the conveyor and conveyed material conditions that the magnet must be specified around:

- Conveyor
 - Speed: 500 feet per minute
 - Width: 36"
 - Troughing Idlers: 45 deg
 - Conveyor incline: 0 deg
 - Belt thickness: ½"
- Material
 - Coal and petroleum coke
 - Consistency: fine and coarse (1" to 3" diameter)
 - Feed rate: 600 tons per hour
 - Burden Depth: 6"

3. 0 Electromagnet Specification

Below outlines specifications and options required for the acquired electromagnet:

- Plant power supply: 480VAC, 60Hz, 3 Phase
 - Rectifier/Control panel required
 - Voltmeter/Ammeter
 - DC undercurrent Relay
 - Remote operation
- Mounting Configuration
 - Cross-belt configuration
 - 4-point suspension
 - Suspension height: 12"
- Options:
 - Zero speed switch
 - Dust/Explosion proof and protection (NEMA 9)
 - Self-cleaning
 - Turnbuckle adjustment
 - Outdoor rated
 - Ambient temperature: 95 deg F

4. 0 Pictures

The following sections show pictures for visualization of material and tramp metal.

Material Consistency Example 1



Material Consistency Example 2



Metal Consistency Example 1 (Combined with other material)



Metal Consistency Example 2



Metal Consistency Example 3



Metal Consistency Example 4

