

## **PEABODY ELECTROSTATIC OILERS**

### **Automatic Oil Change**

The automatic oil change feature allows the type of oil being applied to the strip to be changed while the Oiler is operating. The oil supply to the metering pump(s) is controlled using supply and return solenoid valves on each tank. Excess oil collected at the bottom of the Oiler enclosure is pumped (recirculated) to the active tank with a sump pump. A “sump to process waste” solenoid valve is used to drain “mixed” oil from the sump to a waste drain port instead of back to a tank during an oil change-over.

#### **Tank “Feed”, “Recirculate”, and “Sump to Process Waste” Solenoid Valves:**

All tank “feed” (supply), “re-circulate” (return), and “sump to process waste” solenoid valves are wired to individual PLC outputs. When an operator selects a different oil supply tank, the PLC will coordinate the oil change-over as described in the following sections.

#### **Automatic Oil Change Sequence**

- The “feed” (supply) solenoid valve of the current oil tank is de-energized.
- The “feed” (supply) solenoid valve of the new oil tank is energized.
- The “re-circulate” (return) solenoid valve of the current oil tank is de-energized.
- The “sump to process waste” solenoid valve is energized.
- The metering pump motor/drive is run at high speed.
- All “adjustable spray width” blade solenoid valves are energized (ASW Oilers only).
- The sump pump motor is enabled (or continues to operate if already active).
- The drip (catchment) trough is retracted to under the blade position (regardless of the status of the “line run” interface signal).





WORLD LEADER IN COIL PROCESSING EQUIPMENT

## **Peabody Oilers Automatic Oil Change**

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At approximately 30 seconds after the oil change has been requested, or depending on distance between Tank (Valve) Stand and Oiler Enclosure, the PLC program performs the following actions:

1. The metering pump motor (drive) speed returns to the standard operating speed (as calculated by the coating weight formula or idle speed because Line Run has not been selected).
2. The number of active “adjustable spray width” blade solenoid valves returns the width specified. (ASW Oilers only)
3. The drip (catchment) trough operation returns to the “regular” operation (extended (away) if “line run” signal true, otherwise retracted).

After the oil change sequence, the PLC program performs the following actions:

1. The “sump to process waste” solenoid valve is de-energized.
2. The “re-circulate” (return) solenoid valve of the new oil tank is energized.  
The sump pump motor operation returns to the “regular” operating cycle (5 minutes on, 25 minutes off).