Howco Environmental Services

WORK INSTRUCTION	Oil Processing - Opening Thermal Valves (switching cookers 100 / 101)	HWI-501	12/7/09
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THIS IS AN ACTUAL TRUE OFFICIAL PROCEDURE AND SHALL BE FOLLOWED AS WRITTEN.

1.0 **Purpose:**

The purpose of this procedure is to describe the correct method to redirect the thermal oil coming from the burner to the correct processing tank (Tank 100 or Tank 101) for processing.

2.0 **Procedure:**

2.1 When the used oil in the process tank has met the required process parameters, the thermal oil valves must be switched between processing tanks to allow heated thermal oil from the burner to circulate through the waiting processing tank to begin processing.

2.2 The processing tanks 100 and 101 are equipped with rising stem valves that allow for the supply and return of thermal oil to and from the burner unit. Tank 101 has two (2) green rising stem valves, one return line and one supply line. Tank 100 has four (4) yellow valves. Two are supply lines and two are return lines. Depending on which process tank is being used, the thermal valves will be **opened** on the tank that is actively processing and **closed** on the other.

2.3 The burner unit is a closed loop thermal oil re-circulating system. It is equipped with a pressure differential switch that will detect sudden changes in the flow as it circulates through the system. This is a fail safe detection method that will shut down the burner in the event of sudden rise or fall in pressure during circulation.

NOTE: Opening and closing the rising stem valves to fast or quickly when switching cookers may cause the pressure differential to trip and shut down the burner. This method of shut down must be avoided due to the smoke that is produced from the burner when this shut down mode in triggered. The smoke may cause a public nuisance and must be avoided at all times when possible.

3.0 REDIRECTING THERMAL OIL FROM TANK 100 TO 101

NOTE: *For purposes of this procedure, **SLOWLY**, is defined as a quarter turn of the valve every 2 seconds.*

3.1 Begin by opening the two (2) green rising stem valves located at the front of tank 101 at the same time. This should be done ***SLOWLY*** for the first two turns. One valve is the supply line and the other valve is the return line. After the first two turns are completed, continue opening the valves until they are completely open.

3.2 Thermal oil will now be circulating through both processing tanks. Move over to tank 100 and begin closing the two yellow valves that are located to the right side of the tank when facing the front of tank 100. Once complete, close the remaining two yellow valves to the left.

4.0 REDIRECTING THERMAL OIL FROM TANK 101 TO 100

NOTE: *For purposes of this procedure, **SLOWLY**, is defined as a quarter turn of the valve every 2 seconds.*

4.1 Begin by opening the two (2) yellow rising stem valves located to the right when facing the front of tank 100. This should be done ***SLOWLY*** for the first two turns. Once complete, continue opening the remaining valves on the left side when facing the front of tank 100.

4.2 Thermal oil will now be circulating through both processing tanks. Move over to tank 101 and begin closing the two green valves that are located to the right side when facing the front of tank 100.

5.0 Responsibilities:

Oil Plant Operator
Supervisor/Manager