VI. TENTATIVE OPERATING INSTRUCTIONS

B. CONTINUOUS BLOW TANK

1. Synopsis

Crude Aroclor 1142 is fed continuously from #9 chlorinator to the continuous blow tank. Here the crude passes over four baffles which divide the blow tank into five compartments. In each compartment the crude Aroclor comes in contact with air from the blower. This removes HCl and helps improve the quality of the Aroclor and is the only purpose for the tank. The air goes out the top of the blow tank to the #1 intermediate storage tank and then to the blow tank demister tank. From the blow tank the crude Aroclor goes to the #1 intermediate storage tank.

2. Equipment

a. Continuous blow tank (Item 422)
b. Blow tank transfer pump (Item 423)
c. Sutcbilt air blower (Item 432)

3. Equipment Function

a. The function of the continuous blow tank is to receive crude 1142 from #9 chlorinator and provide a place where air can be sparged into the crude to remove HCl.

b. The function of the blow tank transfer pump is to continuously pump crude 1142 to the #1 intermediate storage tank.

c. The function of the air blower is to blow ambient air into the crude 1142 to remove HCl.

4. Control Loops, Interlocks, and Alarms

a. Control Loops

1) Level (LCA-17)

The function of this loop is to control the level of crude Aroclor in the continuous blow tank and to activate an alarm if the level should go above 36" or below 12". The only level indication on this tank is the air gauge on the controller. Normal level is 9# on the gauge; 4# is 12", and 12# is 36".

b. Interlocks - None on this system.

PCB-ARCH-EXT0374451

VI. TENTATIVE OPERATING INSTRUCTIONS

B. CONTINUOUS BLOW TANK

c. Alarms

1) High or Low Level in tank. If the air gauge on the controller at the tank hits 12# (36") or 4# (12"), the alarm will sound and the light will go on in the telelarm window marked, "Hi or Low Level, Air Blower Off, Blow Tank".

2) Blower Off - If the air blower motor stops, an alarm will sound and the window marked "Hi or Low Level, Air Blower Off, Blow Tank", will light on the Telelarm panel.

3) Blow Tank Transfer Pump Off - If the blow tank transfer pump motor stops, an alarm will sound and the window marked, "Hi or Low Level, Air Blower Off, Blow Tank", will light.

5. Start Up Instructions

a. As soon as there is some material in the blow tank, start the air blower with all valves open to all five compartments.

b. Align the valves for circulation and start the transfer pump.

c. When the level in the blow tank is high enough to produce a 9# air signal and the continuous chlorinators are feeding into the tank, the valves can be aligned to feed crude to the #1 intermediate storage tank.

6. Normal Operations

During normal operations the following conditions should exist.

a. Transfer pump on and circulating line open.

b. Blower on, rotameter reading 20-40%, and air going to all five compartments.

c. Tank level at 9# on the air gauge.

d. Temperature on tank should be 150°C. to 180°C.

PCB-ARCH-EXT0374452

VI. TENTATIVE OPERATING INSTRUCTIONS (contd.)

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7. Shutdown Instructions

a. Emergency

1) Shut off transfer pump

2) Close manual valves on feed lines to the blow tank and transfer pump.

3) Shut off air blower.

b. and c. Normal - Short Time and Long Time

Close manual valve in feed line to the blow tank.

d. Electrical Power Failure

If a power failure occurs close the manual valve in the line from #9 chlorinator.

When power is restored do the following to start up:

1) Start circulating pump.

2) Start the city water booster pump and make sure there is water on jet.

3) Start air blower

4) Open manual valve in the line from #9 chlorinator.

8. General Information

a. Keep the blower on to prevent ferric chloride from settling out in the blow tank.

b. If the level float sticks, the tank can run over or empty without the air gauge changing. If it runs empty and you are feeding #3 or #4 still, the still vacuum will be lost. If it runs empty and you are feeding the #1 intermediate storage tank, the intermediate storage tank level will fall if the column is being fed or remain constant if the column is not being fed. If the tank runs over the air lines to all 5 compartments will be full of hot crude and will be hot if you touch them.

PCB-ARCH-EXT0374453

VI. TENTATIVE OPERATING INSTRUCTIONS (contd.)

B. CONTINUOUS BLOW TANK (contd.)

8. General Information (contd.)

c. If the tank runs over, the crude will go to #1 intermediate storage through the air discharge line.

d. The blow tank can be by-passed when charging a straight take-over still (#3 or #4) but not when feeding the intermediate storage tank with crude to go to the column. Notify supervision if you are going to by-pass the blow tank.

9. Critical Control Points

Control Point	Expected Reading	Deviation Limit and Effect	Correction
Level	9# Air	5-12# air. Tank can run over or empty.	Raise or lower level 2 times. If it won't control, notify supervision.
Air Supply	30%	More than 20% HCl will not be removed. Possible damage to column.	Make sure globe valves by rotameter are open enough. Notify supervision if this is not the problem.

10. Other Control Points

Control Point	Expected Reading	Deviation Limit and Effect	Correction
Temperature	160°C.	150-180°C. No effect if storage feed is OK.	Check temp. of #9 chlorinator.

11. Trouble Shooting

Symptom	Problem	Cause	Possible Solution
1. Lost vacuum on take-over still.	1. Air going from blow tank to still.	1. Blow tank is empty.	1. By-pass blow tank (notify supervision). 2. Check to see if level control is hung up. Raise and lower couple times Allow chlorinators to fill blow tank to #9 level & try again.

PCB-ARCH-EXT0374454