Monsanto	INSTRUMENT FUNCTION OUTLINE	CED LOOP NO. FIC-414-1	
	PLANT W. G. Krummrich	ISSUED BY C. J. Hans	DATE 7/23/71
DIVISION Organic	BLDG/DEPT 811.00	AUTH NO. 2471	REV. BY / DATE / REV / SHEET 1 OF

#8 CHLORINATOR CHLORINE FEED

1.0 NEED FOR LOOP

This new controller is required to accept the pneumatic output from the existing densitrol so as to make the required gravity Aroclor material in No. 8 unit for "mono" operation only. The Aroclor 1105 feed (for "mono") gravity is finished off in No. 8 chlorinator so that No. 9 chlorinator can be used for blowing (de-gassing).

1.1 DESCRIPTION OF LOOP

1.1.1 Function

The function of this loop is to control the flow rate of chlorine to #8 chlorinator by using the density measurement to reset the set point when on "mono" operation.

For operation on "1016" refer to IFO FIC-10.

1.1.2 System Performance Required

The flow rate should be ± 1% of set point.

1.1.3 Accomplishment of Function

The chlorine flow is controlled by measuring the rate of flow in the line using an orifice plate and a differential pressure transmitter. The D/P transmitter sends an air signal (3-15 PSIG) proportional to the flow rate to the indicating controller. The controller compares this signal with a set point flow rate which is determined by a density indicating controller (DIC-39). The controller sends a varying 3-15 PSIG signal to the chlorine control valve to compensate for variation from the set point.

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3.0 OPERATION

3.1 NORMAL OPERATION

Set the specific gravity controller for #8 chlorinator in "auto". The set point will be determined by supervision. The densitrol will adjust the chlorine feed automatically to #8 to maintain the indicated specific gravity.
Note: The range of the densitrol for "mono" operation is _____ to _____.

3.1.1 Startup Instructions

a. Open manual valves in chlorine feed line.
b. Bring specific gravity up to desired level with controller "local-remote" in "local" position and on "auto.
c. When desired level is reached switch to "remote" to allow DIC-39 to adjust set point.
d. Check specific gravity manually every 2 hours.

3.1.2 Shut-Down Instructions

a. Close chlorine valves to distributor.
b. Switch controller to local and move set point to "0".

3.1.3 Manual Operating Instructions

Place controller in "local" and "manual". Adjust air to regulate control valve opening.

3.2 INTERLOCKS

There are two interlocks on this system. (1) Cl_2 valve will not operate if circ. pump is down, (2) on high temperature the Cl_2 valve will not operate (Hi temp. is 205°C). The reset button on panel board must be pushed after interlock has come in.

3.3 ABNORMAL OPERATIONS

3.3.1 Air Failure

Air failure to the loop will cause the feed valve to close and instrument will indicate no flow.

3.3.2 Power Failure

Power failure to the loop will cause the feed valve to close due to the interlock with chlorine pump. The instrument will indicate zero flow.

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