

Chapter 6 CONTROL OPERATION

6.1 Main Control Panel (Alarm & Pump Control)

On outside Control Panel you can choose between ‘Filtration’ mode or ‘Fire mode, No Filtration’ mode. The selector should always be on ‘Filtration’ mode. In case of fire flow demand, the operator needs to select ‘No filtration’ mode.

The main control panel inside the truck fill station has red indicating lights to warn of any trouble with the system. When one of these lights is on, the operator must acknowledge the problem, find and resolve the problem according to the alarm:

The control panel houses all necessary control relay and supervision relay for alarm purposes.

As long as the alarm condition is not acknowledged by the operator, the control panel sends an alarm condition to the auto-dialler.

The possible alarm conditions are as follows:

- a. Generator Trouble
- b. Chlorination Alarm
- c. Domestic Cold-Water Tank Empty/Domestic Water Pump Failure
- d. Water Tank Full
- e. Pump Room High Temperature
- f. Pump Room Low Temperature/Heat Trace Trouble.
- g. Filter Block
- h. Pump Trouble

The main control panel in truck fill station building also manages the following items:

2. Motorised Valve No.1
3. Motorised Valve No.2
4. Motorised Valve No.3
5. Motorised Valve No.4
6. Starter Pump No.1 (SS1)
7. Starter Pump No.2 (SS2)
8. Solenoid Valve No.1
9. Solenoid Valve No.2
10. Relay for outdoor Operator Stations (Start & Stop)
11. Selector for mode of operation.

6.1.1 Filtration Mode Selection

On the outside control panel, the operator must select the desired method of operation for the plant.

Following modes are available

1. -Operation with filtration plant (normal operation with filter line
2. -Operation without filtration plant (fire mode two truck can be filled at same time.

With filtration plant mode selected motorized valves MV3 and MV4 automatically divert water flow to the filtration building. Here are the other automatic actions that are undertaken.

If filtered water circulation is detected in the filtration loop by the flow meter, the chlorine injection pump is activated. As required, the process water tank fills up.

Following the selection of operation, if it is without filtration plant mode, the motorized valves MV3 and MV4 automatically isolate filtration plant.

6.2 **Pump Sequencer**

The pump sequencer's main goal is to alternate working pumps after each truck fill. In case of pump failure an alarm sounds off. If the flow switch of its relevant pump is not "ON" within 15 seconds, the pump sequencer will turn that pump "OFF" and turn the next pump "ON". This will cause the affected pump to be taken out from the sequence of the "NEXT PUMP". It will also turn "ON" a "Pump Trouble No. X". Latching of a failed pump "OFF" can be reset by pressing a "RESET" button on the pump sequencer.

The possible alarm conditions are as follows:

- 1) Pump No.1 No Flow
- 2) Pump No.2 No Flow
- 3) Water Pump No.1 Fail
- 4) Water Pump No.2 Fail

For more information, refer to **Chapter 38**.