



CHLORINE GAS LEAK DETECTOR ABSORPTION  
SYSTEM

## CHLORINE GAS NEUTRALIZATION SYSTEM DESCRIPTION

Chlorine gas leak neutralization system consists of:

- FRP PP CAUSTIC SOLUTION STORAGE TANK
- FRP PP ABSORPTION TOWER HAVING PALL RINGS
- CAUSTIC PUMPS
- MS FRP BLOWERS
- FRP PARTIAL HOODS
- FRP DUCTING
- CHLORINE GAS LEAK DETECTOR
- RELAY BASED CONTROL PANEL

The moment the Chlorine leak is detected by any of the sensors, the blower would start automatically sucking the Chlorine air mixture through the hood on leaking ton container and only air through the other hoods on the non-leaking ton containers or through the ducting laid in Chlorine Ton Container room. Simultaneously the caustic re-circulation pump would start working, taking the caustic solution from the tank and pumping it to the top of the tower. This caustic solution gets sprayed through the nozzles in the tower over the PP pall rings. The gas air mixture travels in the tower from bottom towards the top whereas the caustic solution travels from top towards the bottom. Hence with this counter current travel, the Chlorine gas gets neutralized by the caustic solution as the packed portion provides the required contact tank. The air discharging at the blower outlet is practically free of Chlorine gas.

The Suction of Blower is connected at the Tower Outlet on top of the Tower. In this way the complete system is under small vacuum which is much safer. The over flow pipe of caustic tank is just dipped in a water level more than the suction capability of blower. This creates a seal so that air cannot be sucked through the pipe dipping in water seal tank.

By any chance if the first blower does not start automatically, there is a provision through the control panel that the damper on the suction of this blower closes and the standby blower starts when its damper opens automatically. Similarly for the caustic re-circulation pumps if one does not start, the other would start automatically.

In this way the leaked Chlorine gets automatically neutralized without any manual operation. However, the system is to be switched off manually when sensor does not show presence of Chlorine in the atmosphere. We have number of installations of Chlorine Gas Leak Absorption Systems in India safeguarding the chlorine storage & chlorine in the process.

This system is designed for neutralizing chlorine gas leaking from one ton container in one hour time.

The tank and the scrubber fabrication is as per BS4994.



**TANK WITH TOWER AND PUMP BEING TESTED IN FACTORY**



**WATER SEAL TANK**



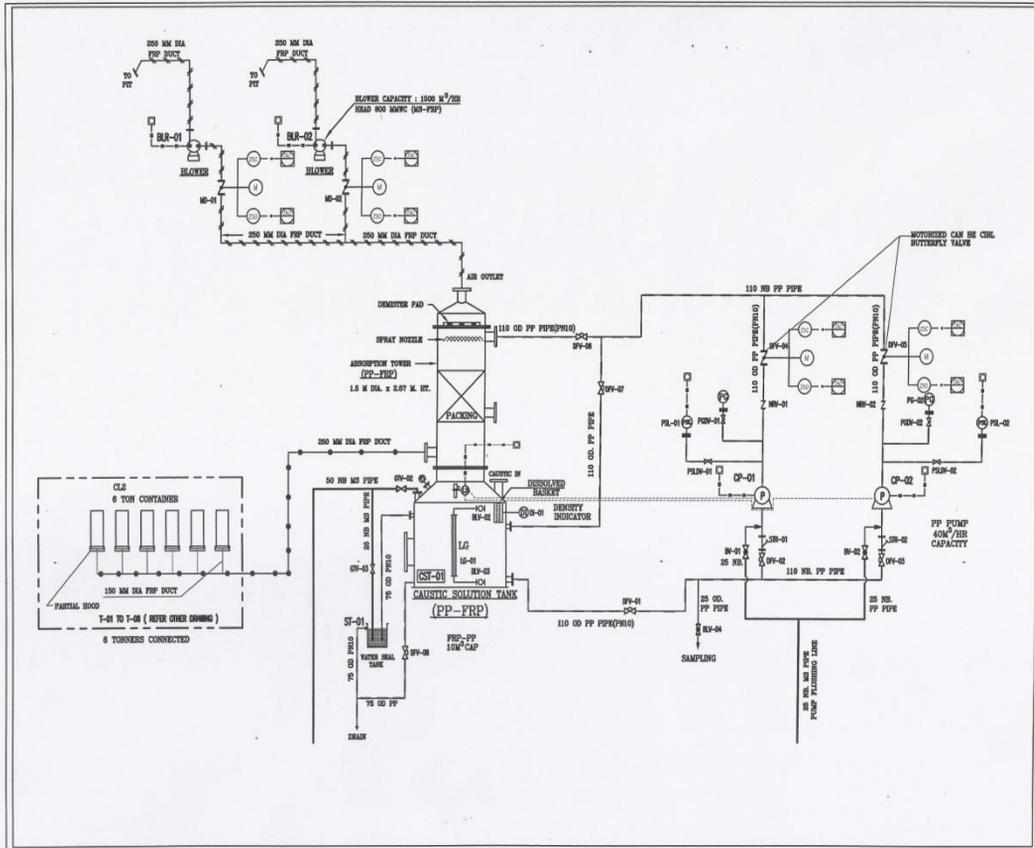
**P.P PUMPS**



**M.S - F.R.P BLOWERS**



**F.R.P DUCTING**



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