FETY

During normal operation, the vaporizer/pressure is approximately that of the tank car to which it is connected. This pressure varies with outdoor temperature and has never exceeded 160 psig in the experience of this plant. Tank car safety valves are set at 225 psig. Pressure on both vaporizers is indicated in the control room. In the event of simultaneous blockage of vaporizer inlet and outlet lines, pressure of the confined chlorine ~~will~~ rises rapidly. Instrumentation is provided to minimize this danger as follows:

At 200 psig pressure on either vaporizer, an alarm sounds in the control room and steam supply to both vaporizers is automatically shut off. Vaporizer inlet and outlet valves are checked for accidental shut-off.

At 225 psig pressure on either vaporizer, the IMMEDIATE rupture disc bursts. This is indicated by pressure registering on the diaphragm pressure gauge installed between the disc and the relief valve. The chlorine vapor is contained by the relief valve while the vaporizer is emptied to the tank car by carefully applying steam. After the vaporizer is empty and cool, the rupture disc and relief valve are replaced.

At 275 psig, the relief valve functions. The chlorine vapor is discharged to the atmosphere 50 ft. above ground permitting access to chlorine shut-off valves at the vaporizer. After any contact with chlorine, the steel relief valve is replaced.

OPERATION

Starting vaporizers:

1. Turn on steam to both vaporizers.
2. Set desired pressure on controller.
3. Open vapor line valves from both vaporizers.
4. Open liquid feed valves to both vaporizers.

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Reduced load - vaporizer output throttled to zero.

1. Indicated by chlorine plant pressure equal to or greater than vaporizer set pressure.
2.

Shutting down vaporizers - chlorinators in use.

1. Close liquid feed line valves.
2. Empty vaporizers by steam heating for 1/4 hour.
3. Shut off steam.
4. Close vapor line valves while watching internal pressure closely.

Shutting down vaporizers - ~~xxpx~~ chlorinators not in use.

1. Close vapor line valves.
2. Empty vaporizers by steam heating for 1/4 hour.
3. Shut off steam.
4. Close liquid feed line valves, watching pressure closely.

Shutting down vaporizers - chlorinators not in use, tank car empty, no full tank car spotted.

1. Close vapor line valves.
2. Shut off steam.
3. After cooling, close liquid feed line valves.

Change tank cars.

1. Make sure vapor lines are open.
2. Close valve from used car, open valve for new car.

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