

PERIODIC INSPECTION OF DISTRICT REGULATOR AND RELIEF VALVES

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Regulators and Over Pressure Protection Devices (OPPD) must be inspected in accordance to Federal and State Law and Company policy. Over pressure protection devices are devices that protect the downstream piping in the event of a regulator failure. These devices include a relief valve, a monitor regulator, or a positive pressure shut off. In Texas, inspection interval must be at least once per calendar year, at intervals of no more than 15 months.

Prior to inspecting a regulator or OPPD:

1. The person performing the inspection should have some knowledge of the system downstream of the regulator. Is the system a one way feed or is it a system that is fed by one or more stations.
2. Visually inspect all valves to make sure they are in the correct position (opened or closed).
3. Install a gauge upstream and downstream of the regulator. Be careful not to install gauges that have working pressures lower than the pressure you are checking. Make sure the gauge installed downstream of the regulator will handle the upstream pressure if the regulator fails while being inspected and will not lockup.
4. Service and operate all valves.

Some of our regulator stations have two separate regulator runs with only one regulator in each run. One regulator has the pressure set at the required pressure for the system it is feeding; we call it the primary run. The other regulator has the pressure set lower; we call it the standby run. The purpose of the standby regulator run is to assist the primary regulator if there is a heavy feed on the station or if the primary regulator fails. The standby regulator run should be inspected first. While doing the inspection continue to monitor the downstream pressure of the primary regulator.

A few of our regulator stations only have one regulator run. In this case we have a bypass run with a valve that we can operate to maintain the required pressure for the system. The person operating the bypass valve must continually monitor the gauge downstream and maintain the required pressure.

We have some regulator stations with multiple regulators in each regulator run. There are numerous reasons to use multiple regulators:

1. When the upstream pressure is very high and the pressure needed downstream is lower.
2. Keep from having to install a large relief valve.
3. To keep the regulator from freezing up due to a large pressure cut.

We use three Types of regulators:

1. Spring loaded
2. Pilot loaded
3. Pressure loaded from a controller

RAILROAD COMMISSION OF TEXAS-PIPELINE SAFETY RULES

192.195 Protection Against Accidental Over-Pressuring

A. General Requirement:

Each pipeline that is connected to a gas source so that the maximum allowable operation pressure could be exceeded as a result of pressure control failure or of some other type of failure, must have pressure relieving or pressure-limiting devices.

B. Additional Requirements for Distribution System:

Each distribution system that is supplied from a source of gas that is at a higher pressure than the maximum allowable operating pressure for the system must:

- (1) Have pressure regulation devices capable of meeting the pressure, load, and other service conditions that will be experienced in normal operation go the system, and that could be activated in the event of failure of some portion of the system and
- (2) Be designed so as to prevent accidental over-pressuring.

192.199 Requirements for Design of Pressure Relief & Limiting Devices

Except for rupture disc, each pressure relief or pressure limiting device must:

- (a) Be constructed of material such that the operation of a device will not be impaired by corrosion.
- (b) Have valves and valve seats that are designed not to stick in a position that will make the device inoperative.
- (c) Be designed and installed so that it can be readily operated to determine if the valve is free, can be tested to determine the pressure at which it will operate, and can be tested for leakage when in the closed position.
- (d) Have support made of non-combustible material.
- (e) Have discharged stacks, vents, or outlet ports designed to prevent accumulation of water, ice, or snow, located where gas can be discharged into atmosphere without undue hazard.
- (f) Be designed and installed so that the size of the openings, pipe, and fittings located between the system to be protected and the pressure relieving device, and the size of the vent line, are adequate to prevent hammering of the valve and to prevent impairment of relief capacity.
- (g) When installed at a district regulator station to protect a pipeline system from over-pressuring, be designed and installed to prevent and single incident such as an explosion in a vault or damage by a vehicle from affecting the operation of both the over-pressuring protective device and the district regulator; and
- (h) Except for a valve that will isolate the system under protection from its source of pressure; be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure limiting device inoperative.

