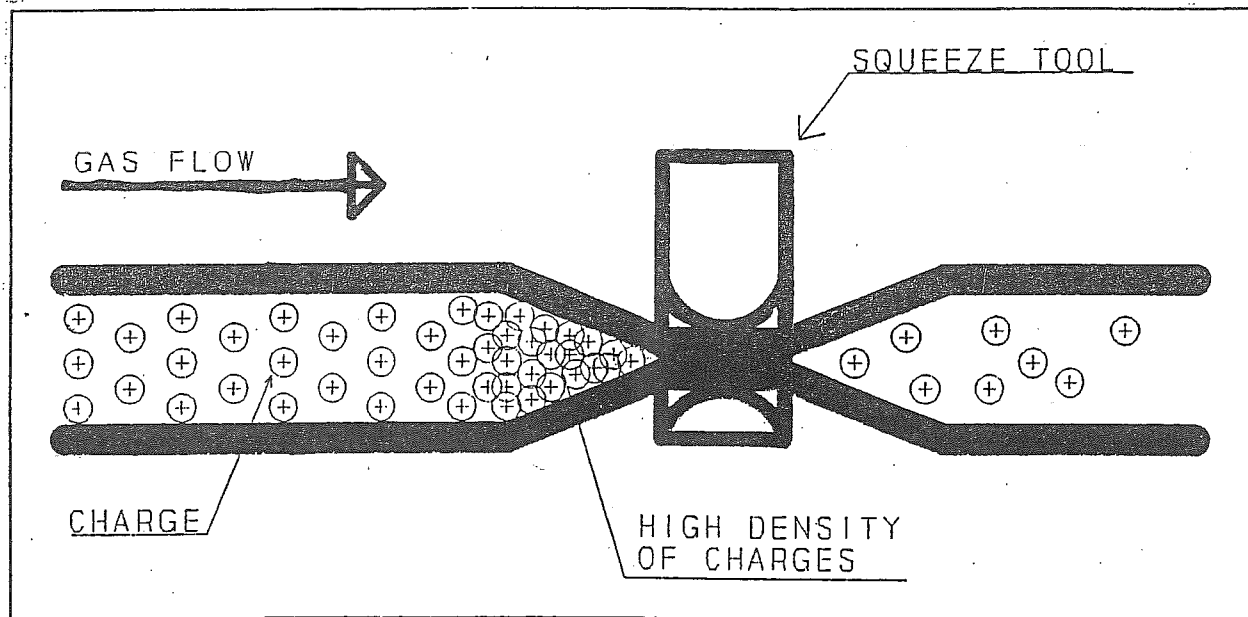


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Static Discharge Alarm- Operation Guide

Theory of electro static discharge

During the normal flow of natural gas in a pipeline, electric charges are moving in the direction of the gas. When squeeze off occurs, the velocity of the gas increases at the squeeze point. Because of the increase of velocity and the narrowing of the pipe, the charges become heavily concentrated at the squeeze point (See the drawing). As the charges increase in density on the inside wall of the pipe, the force increases between the charges inside the pipe and the opposing charges on the outside of the pipe. When this force exceeds the strength of the pipe, the charges move through the pipe and leave a small hole; this is called an "Electro Static Discharge" If the squeeze tool is properly grounded, the discharge will move through the squeeze tool to the earth.



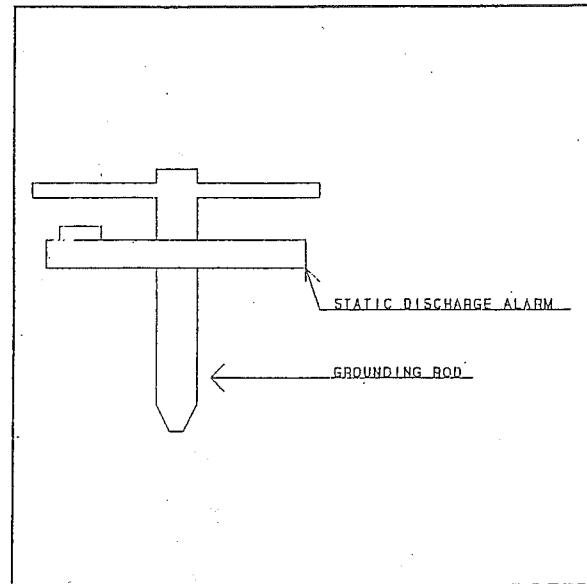
Theory of static discharge alarm

The "Static Discharge Alarm" will sense the discharging current as it moves through the center of the alarm. When the discharge is sensed, an audio alarm will sound. It is important to note, that a static discharge from the external wall of the pipe could cause an alarm. Follow proper procedures to remove external charges before starting squeeze off and applying power to the alarm.

Operation of Static Discharge Alarm

The "Static Discharge Alarm" must slide onto the squeeze tool's grounding rod (See Drawing). The grounding rod must be inserted into the earth and properly attached to the squeeze tool. Follow the procedure listed below for proper operation:

1. Use the on/off switch to turn power on.
2. Verify that the power light is on.
3. Press the test switch and verify that the audio alarm sounds.
4. While the audio alarm is sounding, verify that the **LOW BAT** light is **NOT** illuminated. If the **LOW BAT** light is on, replace the batteries and repeat steps 1 through 4.
5. Turn the power switch off to stop the audio alarm.
6. Turn the power switch on and begin squeeze off.



Remove the four screws on the back side to replace the batteries; be careful not to handle the circuit board.

Basic care of the Static Discharge Alarm

The following care is required to guarantee proper operation:

1. Keep the Static Discharge Alarm out of water.
2. Keep the audio alarm free of dirt or other obstacles.
3. Medium life batteries will last for approximately six hours of continuous use, in a non-alarm condition, until the **LOW BAT** light comes on. The alarm will fully operate for two hours after the **LOW BAT** light is illuminated.
4. Long life batteries (Duracell MN 1604). Long life batteries will last for approximately sixteen hours of continuous use, in a non-alarm condition, until the **LOW BAT** light comes on. The alarm will fully operate for two and a half hours after the **LOW BAT** light is illuminated.
5. Electronic equipment, **HANDLE WITH CARE.**