

USGasTech Inc

Providing gas-related technologies to the American Gas Industry

Pipe coating defects detector: DDRC



USGasTech Inc

Providing gas-related technologies to the American Gas Industry

➤ Presentation

The DDRC is delivered in a high quality carrying case and comes with:

- ✓ 1 DDRC
- ✓ 1 SR-DDRC
- ✓ 2 electrode holder sticks
- ✓ 2 electrodes
- ✓ 1 bag of copper sulfate
- ✓ 2 electrode foams
- ✓ 2 spare electrode tips
- ✓ 2 stick wires
- ✓ 1 synchronization wire
- ✓ 1 DDRC-holder belt
- ✓ 1 DDRC shoulder-trap
- ✓ 8 Duracell batteries type C
- ✓ 1 explanatory leaflet

USGasTech Inc

Providing gas-related technologies to the American Gas Industry

➤ Functioning principle

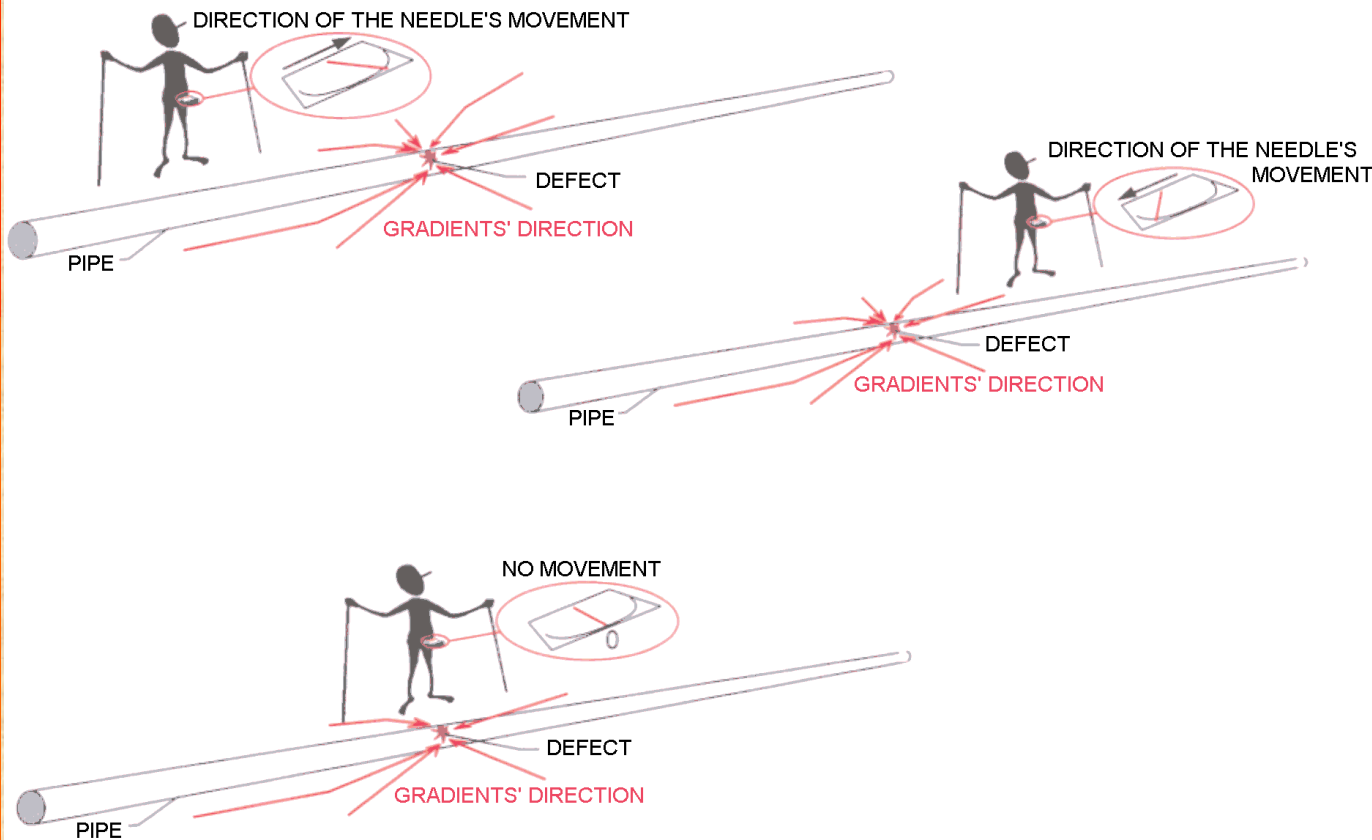
This equipment was developed to look for defects on pipe coating.

Its principle is to dissociate the electric gradients sent out by a withdrawal station from the parasitic gradients (stray currents, telluric currents). This measurement is done through two electrode sticks. A cyclic switch with a frequency of 1 Hz is put in the withdrawal's negative contact. This pulsation can also be found in the gradients circulating underground. It is read on the DDRC.

The DDRC synchronizes itself in relation to the cyclic switch and will analyze the gradients only when the withdrawal is cut off in order to display the difference of value between running withdrawal and down withdrawal. Thanks to the patented synchronization process, the value displayed is glitch-free, as far as glitches due to the difference between the two electrodes' potentials, stray currents or telluric currents are concerned. Therefore, tedious settings or needle calibrations in the center are no longer necessary. The DDRC allows efficient, precise and rapid measurements.

USGasTech Inc

Providing gas-related technologies to the American Gas Industry



The operator stands with outstretched arms in line with the shoulders, parallel to the pipe and puts the electrode sticks on the ground. The DDRC has a voltmeter with a central zero. So the voltmeter's needle ticks either on the left or on the right, giving the gradients' direction (the gradients are proportional to current entries in the pipe). Then, the operator walks sideways along the controlled line so as to obtain increasing gradient amplitudes. The gradients' direction is reversed. The operator retraces his steps to equalize the gradients on the electrode sticks. The pipe coating defect is located midway between the two electrode sticks.

USGasTech Inc

Providing gas-related technologies to the American Gas Industry

➤ Technical characteristics

- ✓ **Dimensions:** 8.3" x 11.8" x 2.4"
- ✓ **Weight:** 5 lb
- ✓ **Battery life:** 70 hours using Duracell batteries type C
- ✓ **Input sensitivity:** 20 mV
- ✓ **Input impedance:** greater than 20MΩ
- ✓ Maintains synchronization for 8 hours of use

This device is marketed by ADCA.