

VW soft inclusion stress cells



Description

Model 1370 **VW soft Inclusion stress cell** is sensor for automatic measurement. It can be installed at the large borehole of HQ, PQ, and 6 inch. VW soft inclusion stress cell consists of round shape sensing part, wedge sensing the stress, and bearing plate for taking load. It can be installed in the precisely bored holes by using manual setting tools. In the VW sensor structured in the form of center hole, wedge sensing the scale of the impacted force transmits it to the sensor, and magnetic coil and vibrating wire are built-in. If there is any change in tension of vibrating wire caused by the changed scale of load, it shall be magnetized by the magnetic coil and generates the resonant frequency to be transmitted to the readout unit and recorded in the form of the necessary engineering unit. The VW soft inclusion stress cell is designed for water-proof, rustproof and is equipped with a temperature device for compensating for temperature variations in the transducers.

Applications

The model 1370 VW soft inclusion stress cell is designed to enable to measure the stress impacted on the elastic rocks upon working in the tunnel, mines, oil stockpiling facility, link canal for hydroelectric power plant, and concrete dam, it may easily measure the scale of stress and processing tendency.

Specification

| Model | 1370HQ | 1370PQ | 1370H | 1370M |
|-----------------------------|--|-----------|----------------|----------------|
| Borehole diameter | Ø93mm HQ | Ø123mm PQ | Ø152mm (6inch) | Ø152mm (6inch) |
| Setting tool type | Hydraulic | Hydraulic | Hydraulic | Torque wrench |
| Sensor element | Vibrating wire sensor | | | |
| Accuracy | ±0.1%FSR | | | |
| Linearity | ±0.5%FSR | | | |
| Range | ±35MPa (±350kg/cm ²) | | | |
| Resolution | 0.025% FSR | | | |
| Operating temperature | -40~80°C | | | |
| Built-in temperature device | Thermistor (3kΩ) | | | |
| Temperature device range | -40~105°C | | | |
| Temperature device accuracy | ±0.5°C | | | |
| Maximum borehole depth | 0~50m | | | 30m |
| Waterproof | 105m H ₂ O | | | |
| Material | SCM alloy steel, stainless steel | | | |
| Weight | 1.2kg | 2.0kg | 2.8kg | 2.3kg |
| Signal able | Ø4.5mm, 0.24mm ² × 4C shielded PVC sheath cable | | | |

Features

- 4 sizes available
- High precision and reliability
- Stability and reliability in extreme environment
- Not affected by cable length and resistance change, reproducibility are very excellence
- Direct measurement of stress change in solids
- Built-in temperature device
- Possible to automatic measurement

The readout

It is connected to the system such as the VW readout units, data loggers to be data logging and data acquisition system to monitor readings. It is compatible with other company' s readout unit.

- ACE-800 (VW readout)
- ACE-1000 (VW data recorder)
- ACE-1100 series (VW mini logger)
- ADL-16V (VW data logger)
- ADL-200A (Smart logger)
- VL Module (Smart LoRa system)

Ordering information

- Installation depth
- Dimension of the borehole
- Cable length
- Keeping VW readout unit

Ancillary equipments

- Universal terminal box (model 7012/7024)
- Manual setting tool kit (Former model of 1370 need it 1set per 1ea)
- 1370M setting tool kit



[1370 setting tool kit]