



MODEL SME-2270/2280

VIBRATING WIRE TYPE BORE HOLE STRESS METER

FEATURES

- * Long term stability.
- * Simple installation
- * Water proof.
- * Separate design for hard & soft rocks.
- * All steel construction.



APPLICATION

Bore hole stress meters are very suitable instrument for measurement of stress inside the precisely drilled holes. The main applications are as:

- * Stress measurement in rocks/ coals which changes during excavation of cavity at different depths.
- * Suitable to measure stress in long horizontal & vertical piles.

DESCRIPTION

The design is an improved version of stress meter developed for the U.S.B.M. for measurement of stresses in bore holes of 38 to 42mm size holes at different orientation and at different depth. Two designs are available one for soft rock & one for hard rock.

Model 2270 is suitable for soft rock application like coal etc. This stress meter basically consists of a pretension wire in a cylindrical cell flattened at the top to suit a wedge and platen assembly. In soft rock design platen has a bigger surface area to make proper contact with rock.

In the stress meter installation the wedge is pulled from outside to give a grip to stress meter and platen inside the hole to get a required tension to vib. wire.

Setting tool is withdrawn after installation. Further change in tension of wire will give the change in stress in bore hole.

MODEL SME 2280: This design with smaller platen area is suitable for hard rocks. This also has a cylindrical proving ring of high strength stainless steel with a wedge and platen assembly. Cylindrical body consists of a pretensions vibrating wire with a electromagnet which make the wire to vibrate when a pulse voltage is fed to coil through readout unit model SME 2460-S. Which intrun gives a frequency output display depending upon the variation in length of wire due to change in tension of wire under stress. Readout unit also capable of displaying the signal in time period, micro strains and also direct in engineering units i.e. kg/cm².

ADVANTAGE:

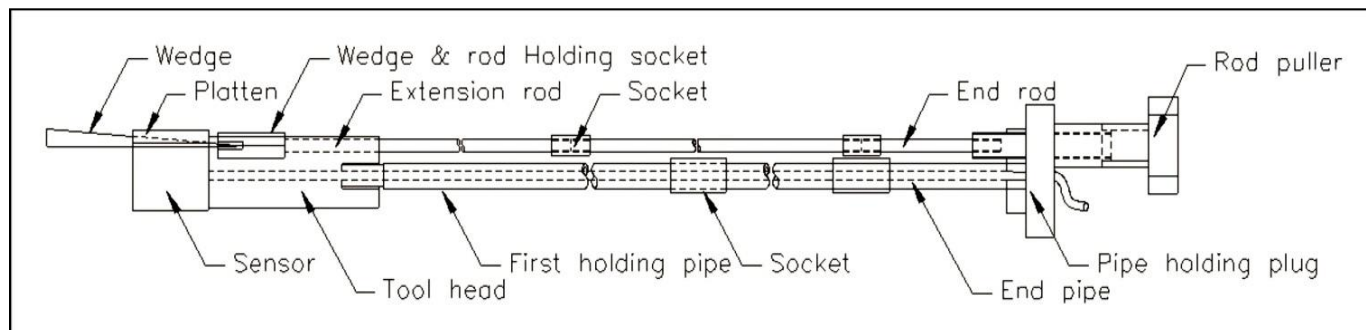
Vibrating wire principle make the stress meter most reliable as frequency out put makes the sensor suitable for long stability. The output of vibrating wire sensor is virtually unaffected by stray current, resistance of junction terminals or the impedance of the electrical cable. The basic advantage of vibrating wire sensor is, it can provide a reliable data for cable lengths as long as one kilometer.

SPECIFICATIONS

Model	:	SME	2270	2280
Range of compression	:	kg/cm ²	500	800
Sensitivity	:	kg/cm ²	0.1	0.1
Temperature range	:	°C	0-70°C	0- 70°C
Bore hole diameter	:	mm	38, 42	38, 42
Depth	:	meters	10, 20, 30	10, 20, 30

ACCESSORIES

- * Installation tools
- * Readout unit Model SME 2460-S.



Due to continuous development program the specification and dimensions are subject to change without notice. Our engineers do undertake the work for development as per the customer's requirement.

Sensors & Measurements Enterprises

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