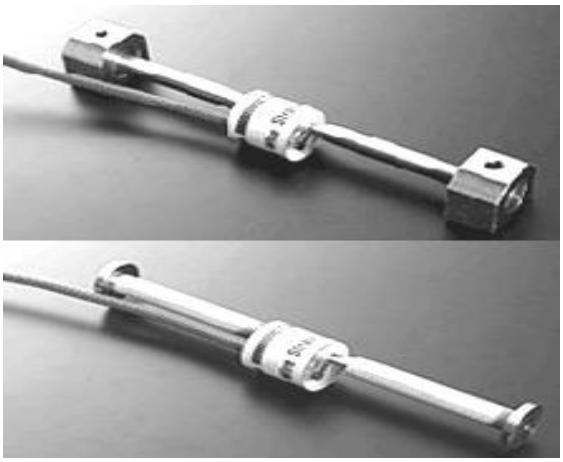
STRAIN GAUGES



Systel Series 1000 model Strain Gage is designed to measure the changes in strain in and on structural members associated with many types of structure.
Concrete Dams
Buildings over tunnelling works
Deep Excavations
Retaining Walls
Bridges
Pile caps
Suitable for portable readout equipment or automatic data acquisition.

Strain Gauges for Steel Structure:

For measuring the stresses in structural members of buildings, bridges, tunnel linings and supports during and after construction.
For measuring the performance of wall anchors & post-tensioned support systems.
For measuring the loads in strutting systems for deep excavations.
For measuring the strain in tunnel linings and supports.
For measuring the areas of concentrated stress in pipelines.
For measuring the distribution of load in pile tests.

Embedment strain gauges :

For measuring the strains in reinforced concrete and mass concrete.
For measuring the curing strains.
For measuring the changes in load.
For measuring the strain in tunnel linings and supports

Operating principle

The vibrating wire strain gauges/meter basically consists of a magnetic, high tensile strength stretched wire, one end of which is anchored and the other end is displaced proportionally to the variation in strain. Any change in the strain, directly effects the tension of the wire, resulting in a corresponding change in frequency of vibration of the wire.
The wire is plucked by a coil magnet, proportionate to the tension in the wire, it resonates at a frequency .To summarize, any variation in strain causes the strain gauges to deflect. This change in tension in the wire thus affecting the frequency of vibration of the wire when it is vibrating at its natural frequency. The strain is proportional to the square of the frequency and the read out unit is able to display this directly in με (micro strains).

Embedment Strain Gage is designed for measuring concrete curing strains and is commonly used for strain measurements in foundations, piles, bridges, dams, tunnel linings, etc. The Strain has a 150,250 mm gage length making it particularly suitable for use in large aggregate concrete. The gage has a 3000 με range and a 1 με sensitivity

Spiders for strain rosettes

SISPL manufactures spiders for five position strain rosettes. The spider is precision machined to the specified angles. The strain gauges are screwed on to the spider at the correct angular positions with the help of long screw & spacer.

The Model SI 1000-S five position spider permits precise and accurate installation in a concrete Dam or structure of four strain gauge at angles of 0°, 45°, 90°,135° in one plane and one strain gauges at right angles to this plane.

STRAIN GAUGE Model SIS 1000 **SPECIFICATION**	**EMBEDMENT STRAIN GAGES** Model SIS 1002 **SPECIFICATION**
Range ±1500 micro strains με Resolution 1.0 με Accuracy ±0.1% F.S. Temp. Range −20°C to+80°C Sensor material Stainless steel Gauge Length 150 mm Sensitivity 1.0 με	Range ±1500 micro strains με Resolution 1.0 με Accuracy ±0.1% F.S. Temp. Range −20°C to+80°C Sensor material Stainless steel Gauge Length 150 ,250 mm Sensitivity 1.0 με