

Product Name :

Study The Behaviour Of A 3d Model Solicited By A Static Charge

Product Code :

NLAB-TECHNICALAB30027

**Description :**

Study The Behaviour Of A 3d Model Solicited By A Static Charge

Technical Specification :

Understanding the complete geometry of this support, it's connections with the parts close and the efforts which are applied to it.

One can :

Measure displacements, the strains, the stresses in judiciously selected points.

Confront the experimental results obtained by the deformations recorded by each of the 5 gauges and the displacements measured by the 4 comparators with those obtained by the computation software by finite elements in the case of simple efforts.

The student will carry out a static justification of the dimensioning based on the simplified theory of beams.

Technical specifications

The apparatus includes :

The measuring bench accurately reproducing the conditions of connections and loading of the support of piping.

It comprises:

1 loading screw operating the swing bar by means of a strength sensor of capacity 500 daN. This one carries out a mechanical action on the support of piping and makes it possible to measure the static charge applied.

4 mechanical dial gauges allowing to measure the 2 components of displacement in 2 points.

Support of piping in aluminium AU4G equipped with 5 strain gauges:

4 gauges stuck on contour external of the part allowing to determine locally, the normal stress.

1 gauge stuck on the heart of a U-shaped section allowing to determine locally, the tangential stress.

1 connector 15 pins for connection with the strain bridge.

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