



Features

Tesca Tension Coefficient Apparatus consists of a jib restrained by two chain ties making a triangulated three dimensional structure. The jib and both ties are fitted with spring balances so that the internal forces can be measured.

The bottom of the jib is pivoted to the wall mounted plate and the tie attachment locations can be varied independently at their wall ends.

A load is hung from the jib end, and the geometry returned to its unloaded state using a knurled collar before taking the spring balance readings

Specifications

- Determination of forces induced in individual frame members; find theoretical forces by method of tension coefficients; study of three dimensional equilibrium.
- The wall mounted apparatus consists of a jib pivoted to the wall, and two ties. All incorporate direct reading spring balances to measure the internal forces.
- Equipped with two units of dynamometers of range 100N @ 300mm x 20mm
- A load is hung from the jib by a load hanger.
- The vertical springing of the ties independently variable.
- The jib and ties re-adjustable to original lengths.
- Dimensions: 500x600x450mm
- An instruction manual for student and lecturer

Note: Specifications are subject to change.

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provided.

- Set of weights.
- 1m ruler supplied

Experiments

- To determine experimentally forces induced in individual frame members
- To calculate the theoretical forces induced, using the method of tension coefficients
- To compare the experimental and theoretical results
- To repeat for other frame configurations

Operating Conditions

- Operating environment: Laboratory
- Storage temperature range: -10oC to +55oC (when packed for transport)
- Operating temperature range: +10oC to +50oC
- Operating relative humidity range: 80% at temperatures < 31oC decreasing linearly to 50% at 40oC