

STUDY OF THE EULER BUCKLING AND BEAM DISTORTIONSETUDE DU FLAMBEMENT D'EULER ET DES DEFORMEES ASSOCIEES



Experimental capabilities

- articulated / articulated buckling mode
- Articulated / recessed buckling mode
- Built-in / recessed buckling mode
- Built-in / free buckling mode

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SFB200



- Impact of transversal loads on the critical effort
- Measure deformed in 1 point

Operating principle

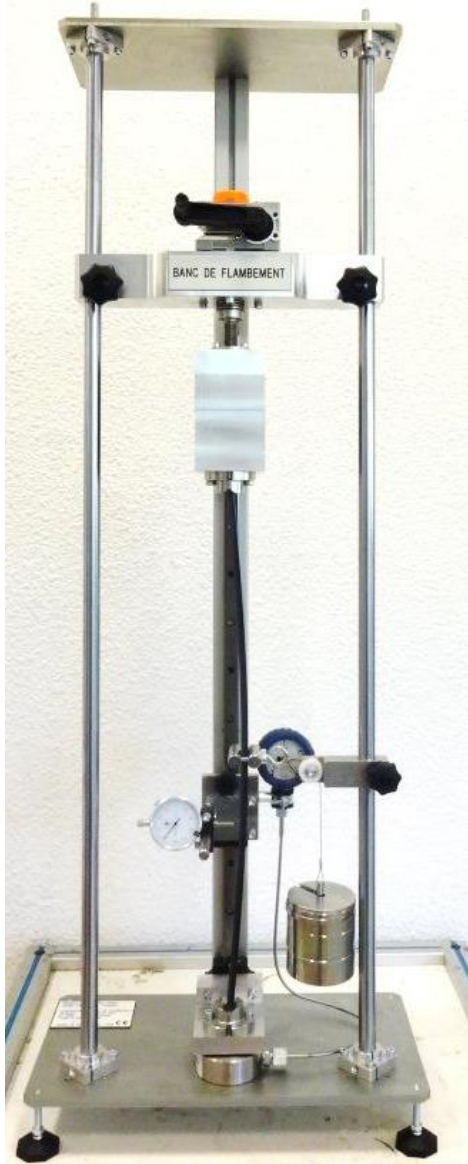
The SFB200 is a bench dedicated to the study of different cases of Euler buckling.

It allows to experiment different cases of buckling by acting on the parameters

- dimensions of the beams (ratio between the different main dimensions of a beam),
- the material of the beam
- the types of links at the interface between this beam and the external environment.

The bench is equipped with a force indicator to characterize the critical effort (force for which instability appears) and a mechanical comparator to characterize the deformation of the beam.

Illustrations



Technical details

1. Structure in steel and anodized aluminum
2. Crank: the rotation of this crank makes it possible to apply a gradual and controlled movement of the end of the beam.
3. Adjustment screws: they allow to adjust the configuration of the bench according to the length of the specimen to be characterized and the type of liaisons (= types of adapters) to bring into play.
4. Adapter Brackets: These brackets allow to fix the different adapters to create articulated, flush or free connections at the interface with the beam.
5. Cross load application system: a transverse load can be applied on the beam to increase its state of instability / load is generated by weights (see detail below)
6. Force indicator: hydraulic force measuring device
7. Mechanical comparator mounted on vertical slide, to measure the deformation profile of the beam at any point, and thus trace the complete shape of the deformed..

Provided accessories:

Set of 20 test pieces

- steel, aluminum, copper and brass
- width of 20mm
- thickness ranging from 3 to 8mm
- lengths from 300 to 620 mm

Set of 6 weights:

- 1 weight of about 100g
- 2 weights of about 200g
- 1 weight of about 0.5 kg
- 2 weights of about 1 kg

Adapters:

- 1 free link adapter
- 2 hidden connection adapters
- 2 articulated adapters

Services required

- Dimensions: (LxlxH mm): 450 x 335 x 1275
- Weight (Kg): 48

Nota : Dans le cadre d'une installation de l'équipement par nos services, tous les raccordements aux réseaux doivent se situer à moins de 2m de la machine

Documentation

- User's manual
- Technical documentation of the components
- Certificate of conformity CE

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Illustrations non contractuelles / Illustrations not contractual

version : FT-SFB200-STD-A