FT 200
Forming by bending

Description

- **permanent deformation of flat bars**
- **measurement of deformation forces**

The experimental setup enables fundamental experimentation in the mechanics of deformation. Flat rods can be permanently deformed by means of a simple bending device. The necessary deformation work, e.g. to produce a 90° angle, is recorded in the experiment using a force measurement system.

A range of different materials and bend radii can be investigated using this experiment. The experiments should be conducted in a workshop environment, as the bending device has to be clamped into a vice. A suitable force measuring device and a wide range of specimens are supplied.

Learning objectives/experiments

- deformation experiments on flat sections
- measurement of the deformation force
  - influence of bend radius, bend angle, material

Specification

[1] experimental setup for deformation experiments on flat sections
[2] bending device for insertion in a vice
[3] device to measure the deformation forces
[4] rotatable moulding to allow for 4 different bend radii
[5] deformation forces on the lever up to 200N

Technical data

Bending device
- lever length: 500mm

Bend specimens
- cross-section: 10x6mm
- material: steel, copper, brass, aluminium

Force measuring device: 200N
Bend radii: R1, R2, R4, R8

LxWxH: 640x120x100mm
Weight: approx. 10kg

Scope of delivery

1 bending device with lever and moulding
1 force measuring device
1 set of specimens
1 set of instructional material