WP 400 Pendulum Impact Tester, 25 Nm

Technical Description

The pendulum impact testing machine is a solid unit specially designed for engineering lectures. It is used for performing the notched bar impact bending test, one of the classic material tests. In this way, quality can be tested and the fracture behaviour of different metallic materials evaluated. The unit is equally suited for use with non-metallic specimens. The notched bar impact work necessary to deform the specimen can be read off directly from the gauge on a large scale. A two-hand trigger increases the safety for the user. A protective cover for the working area and a PC data acquisition is also available. The unit's basic data correspond to the requirements of DIN 50115. The educational advantages of the unit lie in its simple layout and direct visibility of all actions. Together with the other units in the WP range, this unit is part of a complete course on the fundamental principles of material testing.

Learning Objectives / Experiments

- Determination of notched bar impact work
- Determination of notched bar impact strength
- Evaluation of fracture surface characteristics
- Notched bar impact work-temperature curve
- Influence of notch shape on the notched bar impact work
- Influence of materials and their prior heat treatment on the notched bar impact work
- Influence of specimen temperature on the notched bar impact work

Specification

[1] Material testing table-top experiment for performing the notched bar impact bending test

[2] Quality testing and evaluation of the fracture behaviour of metallic materials

- [3] Pendulum impact testing machine according to DIN 50115
- [4] Specimen cross-section: 10x10mm
- [5] Specimen cross-section at notch: 10x5 and 10x8mm
- [6] Hammer impact speed: 3.8m/s
- [7] Increased safety through two hand trigger
- [8] Specimen materials: free-cutting steel 9SMn28K, tempering steel
- C45, construction steel St37, brass CuZn40Pb2
- [9] l x w x h: 1000x180x1000mm

[10] PC data acquisition WP 400.20 optionally available

Technical Data

Capacity to perform work: 15 and 25Nm Impact speed of the hammer: 3.8m/s Specimen bearing separation: 40mm Specimen cross-section: 10x10mm Cross-section at the notch: 10x8 and 10x5mm Specimen materials - free-cutting steel 9SMn28K,

- tempering steel C45,
- construction steel St37





Features

- * Notched bar impact bending test
- * Classic method for testing quality and evaluating the fracture behaviour of metallic materials
- * The unit's basic data correspond to DIN 50115 and DIN 51222
- * Part of a series of units for setting up a comprehensive course on the fundamental principles of material testing
- * PC data acquisition WP 400.20 optionally available

- brass CuZn40Pb2

Dimensions and Weight

l x w x h : 1000 x 180 x 1000 mm Weight : approx. 60 kg

Scope of Delivery

complete pendulum impact testing machine,
set of notched bar impact specimens (90 pcs.)
set of weights,
set of experiment instructions