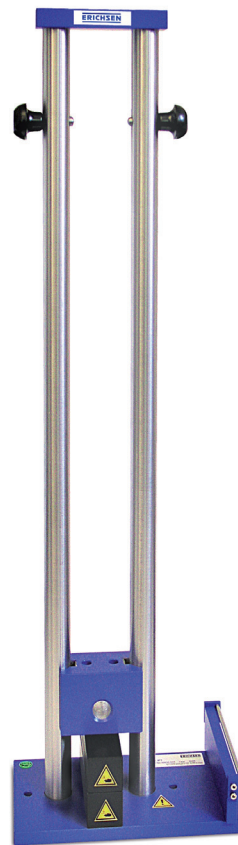


Bend and Impact Tester Model 471



testing equipment for quality management

ERICHSEN

Technical Description and Operating Instructions

**Practical test method to
determine the quality
of coated metal sheets**

**by deformation
in a sudden blow**

Bend and Impact Tester, Model 471

Purpose and application

The Bend and Impact Tester is used to measure both flexibility and impact resistance of light-gauge sheet metal, or tube stock, coatings in a single operation. The test simulates punching, beading, crimping and similar operations.

Test principle

A bent coated sheet metal panel is subjected to a prescribed impact force thus causing the cylindrical fold in the panel to be squeezed into a conical shape.

The test permits to determine the bending radius at which failure of the coating first occurs.

Design and function

The Bend and Impact Tester, model 471 consists of 2 vertical tubes which guide a 2300 +/- 100 g impact tool with a 650 mm +/- 5 mm drop, a special-design-anvil for placing the test panel.

A 5 mm diameter rod mandrel for bending the coated panel is also mounted on the base plate of the instrument.

Test procedure

The coated sheet metal panel (50 x 140 mm) is bent by 180° over the mandrel with the coating outside.

The impact tool is attached to the top between the holding pins and the panel is placed over the anvil with one side touching the stop plate.

Then the impact tool is released.

Evaluation

100 g Copper sulphate ($\text{Cu SO}_4 \times 5 \text{ H}_2\text{O}$)
50 g Citric acid
0.5 ml Sulphuric acid
(concentrated, spec. gravity 1.84)

are dissolved in 1 litre distilled water. The test panel is submerged in this solution for 5 minutes and then rinsed under running water.

Any failures in the coating become visible in the form of lines or dots of corrosion.

Test result

The length of the corrosion line is measured in mm together with the points starting from the buckling point (maximum fold). If this line is shorter, the better the formative qualities of the coating.

Technical data

Dimensions:

Width: approx. 250 mm
Depth: approx. 170 mm
Height: approx. 850 mm

Net weight: approx. 18 kg

Panel size: 50 x 140 mm
Thickness: 0.10 - 0.35 mm

Order Information	
Order No.	Description
0003.01.31	Bend and Impact Tester, Modell 471, including bending mandrel

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Group 13 - TBE + BAE 471 - X/99