

**BEND TEST CONICAL MANDREL PRO**

SP1830

MANUAL

**1 SAFETY PRECAUTIONS**

- Make sure to keep fingers and other body-parts clear from the bending area when performing a test.
- Make sure all actions such as the clamping and bending are carried out without using any heavy forces
- Don't exceed the max. Panel thickness.
- Check the mandrel visually for mechanical damages or marks.

**2 PRODUCT DESCRIPTION**

The TQC Bend Test Conical Mandrel "Pro" is a laboratory apparatus to bend coated test panels over a conical shaped mandrel in order to assess the elasticity or resistance of a coating-, paint or varnish to cracking, elongation and/or detachment from a metal test panel in accordance with ISO 6860 and ASTM D522. The conical shape of the bending area allows the deformation of the test panel and examination of the elasticity range of a coating over any diameter between 3.1 and 38 mm in one single test. The sample panel is secured to the apparatus by means of a quick lever handle that lock and unlocks the panel in a split second using just hand hand.

**3 STANDARDS**

ISO 6860, ASTM D522

**4 WHAT'S IN THE BOX?**

TQC Conical bend test "Pro"

**5 PREPARATIONS**

- Apply the paint film on a test panel of max. 100 x 180 mm , and a thickness of max. 0,8mm. Coat and dry film carefully. For other possible preparations please check the applicable Standard.
- Install the apparatus on the table with the clenching wheel on the left side.

**6 PERFORM A MEASUREMENT**

1. Position the apparatus such that the fixation clamp (1) are facing forwards.
2. Loosen the fixation clamp and move the bending-handle (2) in the front direction so it is positioned at the same side as the fixation clamp.
3. Position the test panel with the coating facing forwards (direction of operator) between the conical mandrel and the steel bending bar in such a way that the panel can be secured in place with the clamping device (3) and tighten it with the clamp.
4. Now slowly move the bending-handle(2) to the other side of the apparatus thus bending the test panel over the conical mandrel



5. Visually observe the test panel and check for cracks. If any cracks have occurred note the diameter (3) of the beginning and end of the crack.
6. Loosen fixation clamp (1) and remove test panel.

## 7 MAINTENANCE

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- Though robust in design, this instrument is precision-machined. Never drop it or knock it over
- Always clean the instrument after use.
- Clean the instrument using a soft dry cloth. Never clean the instrument by any mechanical means such as a wire brush or abrasive paper. This may cause, just like the use of aggressive cleaning agents, permanent damage.
- Do not use compressed air to clean the instrument.

## 8 DISCLAIMER

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The right of technical modifications is reserved.

The information given in this manual is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this manual without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this manual or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this manual is liable to modification from time to time in the light of experience and our policy of continuous product development.