TORQUE BENDING TEST

DESCRIPTION

Non-destructive test method for studs welded with tip ignition (CD) and short cycle (SC) process.
Torque check of the welded studs for quality assurance.

A bending torque is applied by a torsion meter onto the stud. This applies a defined stress in the welding zone. The test torque parameters are shown in a table included in this test kit. You can edit the torque at the torque meter by turning the set-up wheel (0-10Nm). Each parameter from the table belongs to the specified stud diameter, the specified material and the sheet thickness of the work piece. These empirical parameters refer to the limit between the elastic and the plastic deformation of the stud or the work piece. For a ratio stud diameter to work piece thickness smaller than 1:2 a plastic deformation of the work piece will occur; for ratios larger than 1:2 the stud will fail. With this tool you can make a fast and easy, non-destructive stud test. A quantitative check of the welding quality. Part number 92-40-135

Kit Contains:
1 torque meter
4 Stud Adapters: 8-32/M4, 10-24-10-32/M5, 1/4-20/M6, 5/16-18/M8
1 allen key 4 mm
1 parameter table

TORQUE BENDING TEST INSTRUCTIONS

STEP 1

Select the test insert depending on stud diameter, push it on a torque wrench and fix it.

STEP 2

Depending on the test job, adjust the test torque of the torque wrench. Adjust the test torque in such a way that there is no permanent distortion of the welded parts.

STEP 3

As shown in the figure, push the test device onto the stud. A torque is initiated with the torque wrench in a defined distance to the sheet surface. A bending strain of the weld results.

STEP 4

Move the test device forward/up until the device 'clicks' (attaining the nominal torque).