

STUDY OF TEARING OF METALS FROM THE
DAMAGE INITIATION TO THE FINAL RUPTURE

T02

EC-Nantes

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1 INTRODUCTION

The following document shows the measurements and parameters used for testing the specimen with reference name T02, as well as the results obtained.

2 MEASUREMENTS AND PARAMETERS

The data of measurements and parameters is shown below.

2.1 T02 plane

The Figure 1 shows the T02 specimen plane:

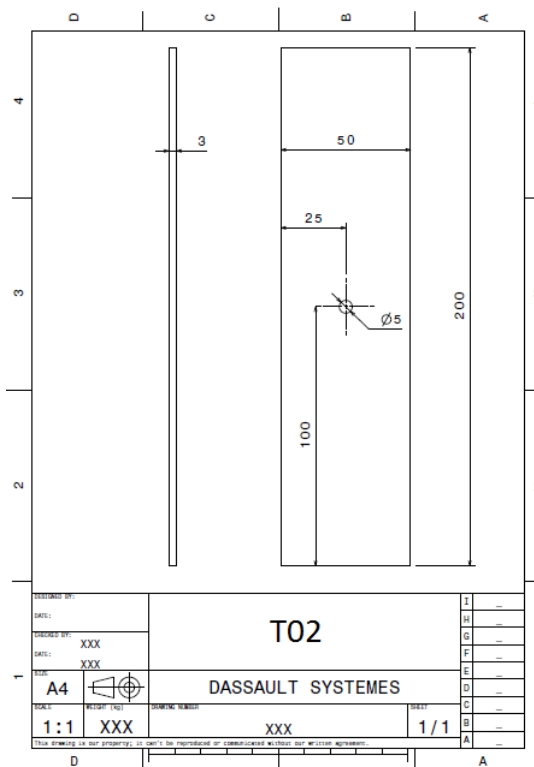


Figure 1: T02 specimen plane.

2.2 Tensile test

The Table 1 shows the measurements and parameters that has been measured and used for testing the T02 specimen:

Thickness (mm)	3.08
Width (mm)	49.92
Hole diameter (mm)	4.98
Temperature (°C)	20.7
Diaphragm	f/16
Frame rate (msec)	5000
Exposure time (usec)	50000
Speed (mm/min)	0.5

Table 1: Measurements and parameters for T02 specimen tensile test.

2.3 DIC

The Table 2 shows the parameters used in VIC-2D 2009 for computing the displacement and strain fields of T02 specimen:

Image size (pixel)	6576x4384
Image size (MB)	27.4
File type	BMP
Number of images	224
Subset	15
Step	6
Incremental correlation	YES
Filter size	5

Table 2: Parameters used in VIC-2D 2009.

3 RESULTS

3.1 FORCE/DISPLACEMENT CURVE

The Figure 2 shows the obtained force/displacement curve:

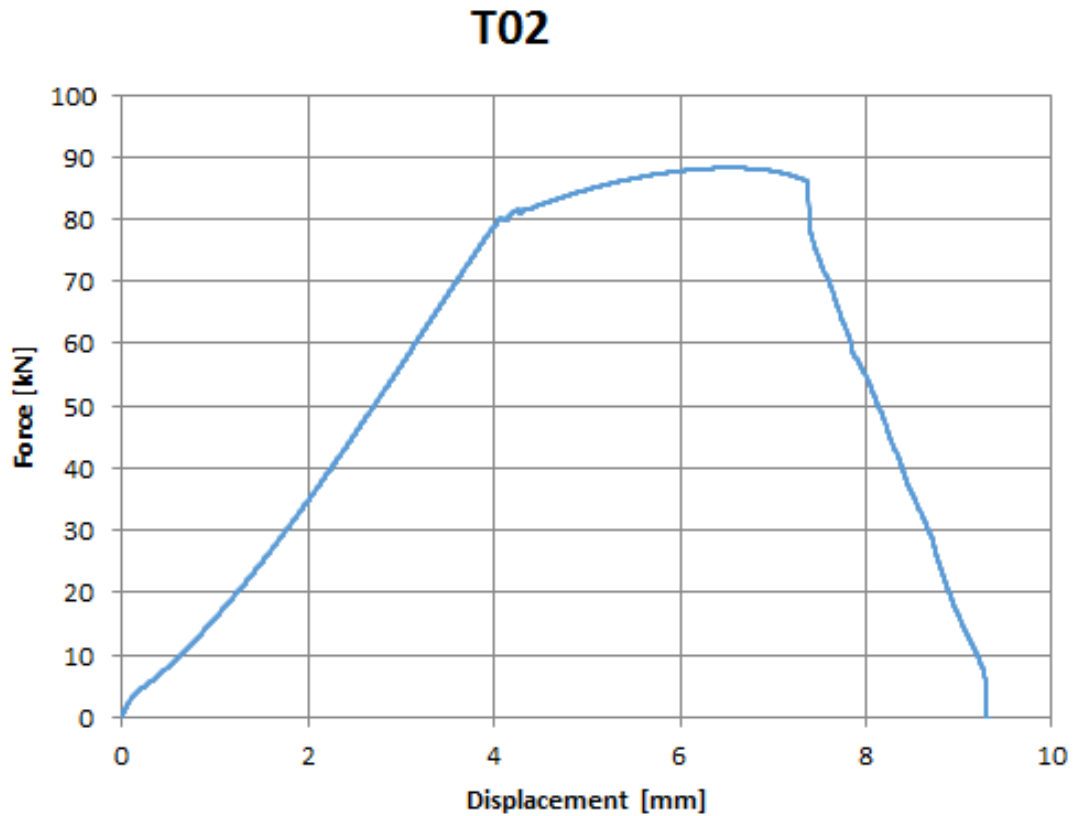


Figure 2: T02 specimen force/displacement curve.

3.2 DISPLACEMENT FIELD

Displacement field.

3.3 STRAIN FIELD

Strain field.