General test equipment description

Figure 1: Static mechanical tests provided at MDT A/S: Bending test 3-4 points (shown in the left side of the image) and tensile test (shown in the right side of the image)

The three-point & four-point bending tests and pull test are used to document the behavior of materials under various forms of load. These tests provide an adequate basis for selecting the right material for appropriate application and concepts designed to obtain optimal performance under given conditions. At MDT A/S we offer tensile testing for loads up to 300 kg and flexural bending test up to 3000 kg. The flexural bending and tensile test setups are shown in Figure 1.

General test configuration

3-point bending test	
Paramter	Value
Speed	11 mm/min & 47 mm/min
Load Capacity	3000 kg & 500 kg
Maximum support pin (charnier hinge) length	1100 mm
Step distance	100 mm
Load area	100 x 100 mm

Tensile test	
Parameter	Value
Lowest speed	88 mm/min to 766 mm/min
Load cell	300 kg

Base data

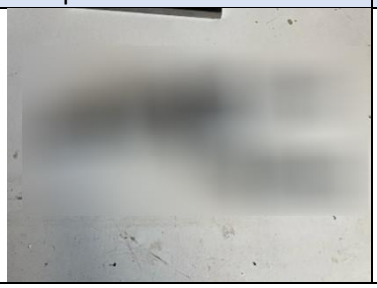
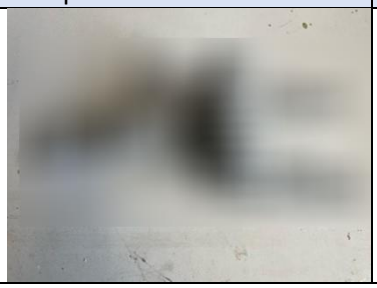
Task No:	B-001
Task requester/Customer	Customer X
Contact	Anonymous
Task responsible	Morten Dahl
Test responsible	Okan Özcelik
Date for request	07-03-23
Date for completion	

Purpose of the test - Compression of spring element

Four structurally different components are received from Customer X in which the purpose is to determine the flexural strength of each component. Furthermore, a fixture plate is constructed which dimensions aligned with the components in order to secure each component on the test bench. Each component is to be stressed until a maximum deflection of 30 mm is achieved.

Test material

Raw materials	QTY	Unit	Batch number
Component A	1	1	
Component B	1	1	
Component C	1	1	
Component D	1	1	

Components			
Comp A with fixture plate	Comp B	Comp C	Comp D
			Not available

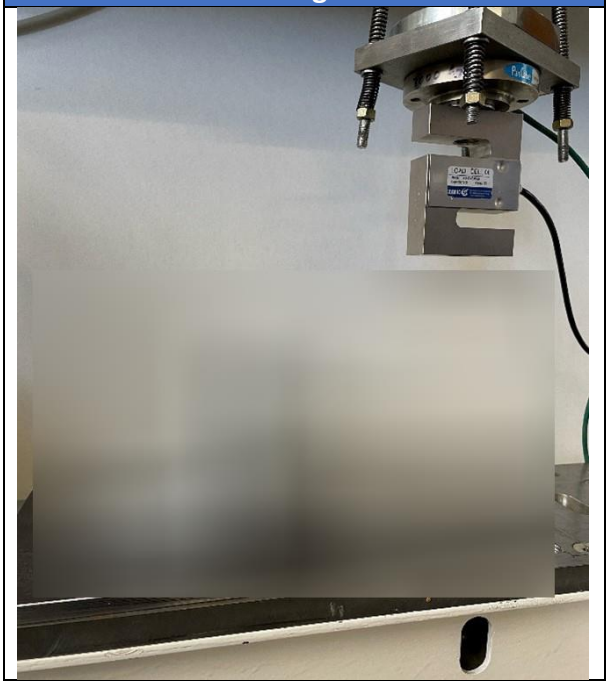
(Due to client confidentiality requirements, this report excludes specific references to the customer, and all visual evidence has been redacted.)

Test conditions

Bending test	
Paramter	Value
Speed	11 mm/min
Load cell capacity	500 kg
Fixture plate	12 mm thick aluminium
Maximum deflection	30 mm
Load area	5x5 mm

Picture presentation of the test setup with (component A) fixed on a plate with 8 x 8 mm threads on a steel plate with a thickness of 12mm. Below the tip of the component is a point laser which can accurately measure the deflection of the component.

Test configuration



MDT A/S
Address: Industrivej 5, DK-6000 Kolding
Tel.: +45 75559797
Email: info@flexible-products.dk Website: www.flexible-products.dk