

M4R 025 G3

Example for application Valve testing

MAN Diesel in Augsburg (D)

EMCO-TEST
YOUR FACTOR OF SAFETY.

This example for application was created in cooperation with the company MAN Diesel Augsburg (D). On this occasion we would like to thank this company for its cooperation and the trust put in us!

Customer requirements to the hardness tester:

- The hardness tester has been purchased to enable the testing even with concave and convex bent function areas of samples, as e.g. valve seat rings and valve cones which occur standard with big diesel engines, with the same hardness testing method HRC and the same hardness tester. The present older machine was not able to test valve seat rings with HRC caused by the geometry. These parts have been tested alternatively in Vickers. The hardness values have been converted, because all technical documentation contains data for HRC.



Execution of the hardness testing operation:

Nr.	Hard.	Method
1	60.64	HRC
2	60.51	HRC
3	62.98	HRC
4	61.08	HRC
5	60.88	HRC

Method: HRC - Standard
Conversion: ---

Measure

Preload: 98,10N
Mainload: 1471,50N
Preloadtime: 3s
Mainloadtime: 8s

60,88
HRC
OK

- 1 Measurement takes place with test method HRC. Selection via drop down menu.

The surfaces of the samples are adjusted towards the indentors in right angle in special devices. Caused by the low diameter of the clamping cone the sample can be fixed without achieving to big measure differences between indenter and bent surface.

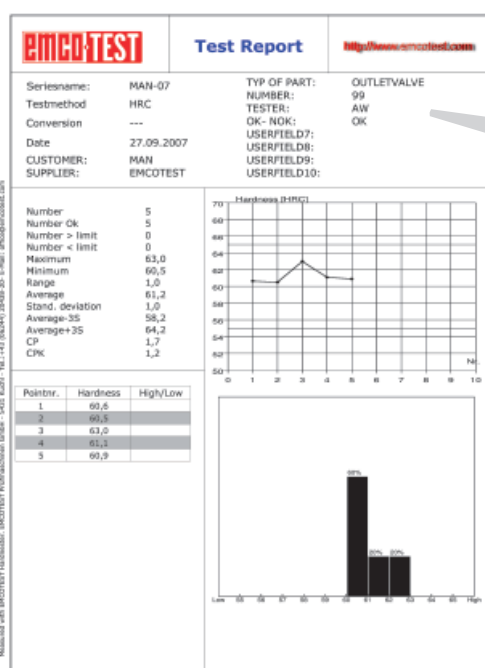
- 2 Here the HRC measurement is started.

- 3 Collection of measurement values in data bank.

The measurement data can be displayed assembly attendant with high accuracy, without disturbing conversions in hardness testing operations requested in the technical documentation. The rebuildings on valve cones and seat rings between the testings are negligible low.

- 4 The documentation can be printed-out directly from the hardness tester.

Storage of reports also possible in pdf- format.



Technical data:

- M4R025G3 Rockwell hardness testing machine
 - NDR28007Z Rockwell indenter
 - M4TP07 Plane anvil 400 x 600 mm support
- Test method: HRC
Customer: MAN Diesel Augsburg (D)

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