

Technical Definition

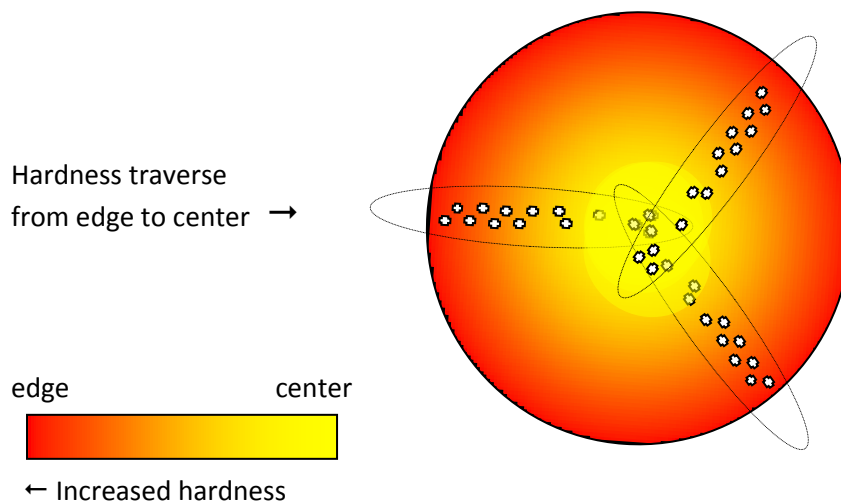
Depth of Carburisation – 16NCD13

You shall respect the HSE policy of your laboratory for each performed test.

Instructions to participant laboratories

Please read these instructions carefully BEFORE starting the tests.

1. One specimen (\emptyset 20 x 10 mm) is supplied to each participant. 3 results must be provided.
In case of :
 - loss or deterioration of PTP sample, please contact your sponsor for replacement kit.
 - exclusion of a test specimen results by yourself, you shall provide a short root cause analysis.
2. Each participant is required to prepare the specimen according to its own process.
3. Each participant is required to determine the **Effective depth** of carburisation using 3 Vickers micro hardness series of measurements (depth corresponding to **550 HV measurement**).
4. The test is to be performed in accordance with the approved method routinely used by the laboratory. Distance from the edge of the first micro hardness at 0.1 mm
A typical approach would be to perform a hardness survey as shown in the following figure:



Force to be applied : 500 gf advised



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5. The following information is to be reported:

| Characteristic | Unit | Significant digits | Mandatory / Not mandatory | Evaluated Yes/no |
|---|------|--------------------|---------------------------|------------------|
| Room temperature | °C | XX,X | Mandatory | No |
| Force applied | gf | XXX | Mandatory | No |
| Test force application time | s | XX | Mandatory | No |
| Spacing of indentations | mm | X,X | Mandatory | No |
| Maximum hardness values for each of the 3 series | HV | XXX | Mandatory | Yes |
| Minimum hardness values for each of the 3 series (minimum should be measured in the center of the specimen (yellow area)) | HV | XXX | Mandatory | Yes |
| Effective Depth of carburisation for each of the 3 series | mm | X,XX | Mandatory | Yes |

All evaluated characteristics will be analysed according to the algorithm A (ISO 13528 – 2015) and evaluated using z-score.

6. Testing shall start **as soon as test specimens are received**. Please contact the following e-mail address for any technical or administrative query.

| | |
|---|--|
| Submission date : | May 1st, 2018 |
| Technical and administrative support : | info@ptpscheme.com |

7. Instructions for submission of results are detailed on the website:

<https://ptpscheme.com>

8. To ensure the confidential treatment of your results in the final report, you will be allocated a unique identity number when you register for the program.

9. Collusion and falsification of your PTP results are totally forbidden. In case of identification or suspicion of collusion or falsification, the laboratory will be excluded from the program and the sponsors will be immediately informed. The sponsors could ask you proofs of your records and analyses, so be sure to conserve data, curves and specimens.

10. The tested specimen does not need to be sent back to PTP.

REVISION HISTORY

| Issue Date | Issue N° | Changes |
|------------|----------|-------------------|
| 02/01/2018 | 1 | Document creation |