

Technical Definition

Creep Test – Nimonic 75

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

Please read these instructions carefully BEFORE starting the tests.

- Five blanks ($\varnothing 16 \times 90$ mm) are supplied to each participant – 5 results must be provided. If one result is missing your test will be considered as an outlier. A RCA shall be completed. In case of :
 - loss or deterioration of PTP sample(s) please contact your sponsor for a replacement kit.
 - A decision to exclude the results of one of the samples, you shall provide a short root cause analysis to explain.

- The specimens shall be machined in accordance with the requirements of ASTM E139-11.

It is permitted to use a rigid specimen for ease of identification of the gauge length.

- All tests are to be performed at a temperature of **580°C / 1076°F** and a stress of **160 MPa**, in accordance with the requirements of **ASTM E139-11 (2018)**, **EN 2002-005 (2008)** or **ISO 204:2018**. Tests shall be stopped after **50 hours**. Soaking time shall be between **1 and 3 hours**.

The tests shall be performed respecting the following conditions:

- One operator only
- One testing machine only
- Tests performed in sequence

- The following information is to be reported:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Soaking Time	hours	X,X	Mandatory	No
Maximum and minimum temperatures during the test	°C	XXX,X	Mandatory	No
Details of any temperature deviations outside of the tolerance of the standard, before and during the test	N/A	N/A	Not mandatory if not necessary	No
Method of strain measurement (extensometer or marks)	N/A	N/A	Mandatory	No
Thermocouples used	N/A	N/A	Mandatory	No
Pre-test diameter	mm	X,XX	Mandatory	No
Gauge length (before testing)	mm	X,XX	Mandatory	No
Adjusted gauge length (after testing)	mm	X,XX	Mandatory	No
Total Plastic Strain (creep strain) at 50 hours	%	XX,XXX	Mandatory	Yes
Time to 0,1% Total Plastic Strain (creep strain)	hours	XX,XX	Mandatory	Yes

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

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5. 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 :	July 1st, 2020
Technical and administrative support :	info@ptpscheme.com

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

<https://ptpscheme.com>

7. 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.
8. 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.
9. The tested specimens do not need to be sent back to the PTP office.

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Kit 3-1-2020 PTP Metallic		

APPENDIX : Instructions for IRR participation

The Internal Round Robin participation (IRR) is **optional** and **independent** from your PTP participation.

Confidentiality : The IRR results and reports are confidential and only accessible by your laboratory. They are not shared with the scheme sponsors or any other accreditation or certification bodies.

The extra samples shall be tested according to the following table:

	Operator 1	Operator 2	Operator 3	Operator 4	Operator X
Test machine 1	PTP kit (5 samples)	1 sample	1 sample	1 sample	1 sample
Test machine 2	1 sample				
Test machine 3	1 sample				
Test machine Y	1 sample				

Operator 1 (OP1) is to be the most experienced operator currently conducting tests on a regular basis and shall perform tests on all machines (TM1, TM2, TM3...)

Test Machine 1 (TM 1) is to be the most utilised machine for this test in your laboratory and shall be tested by all operators (OP1, OP2, OP3...)

Example: A laboratory has 2 operators and 3 test machines. They receive a PTP kit and 3 extra specimens.

Operator 1 shall test the PTP kit on TM1, 1 specimen on TM2 and 1 specimen on TM3.

Operator 2 shall test 1 specimen on TM1.

The IRR results have to be submitted on a separate results form available on the PTP website.

The identification of operators and test machines you provide will appear on the IRR final report. These identifications will not be seen by other laboratories.

The IRR results will be classified against the acceptance classes of the kit 3-1-2020.

Reminder: Laboratories are not permitted to switch specimens between the PTP kit and IRR samples. The traceability of the samples will be checked during the evaluation. Laboratories found to have switched samples will invalidate their PTP participation.

REVISION HISTORY

Issue Date	Issue N°	Changes
06/01/2020	1	Document creation
20/03/2020	2	Modification of the results submission date
27/05/2020	3	Modification of the results submission date