

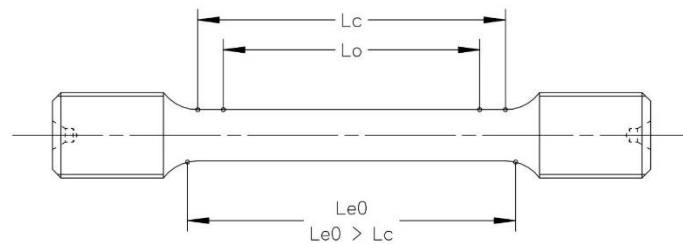
Version No. 2	Page 1 of 4	<div>Technical Definition</div> <div>Creep Test – Nimonic 75</div>
<div>ptp.</div>		
<div>Kit 3-1-2023 PTP Metallic</div>		

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

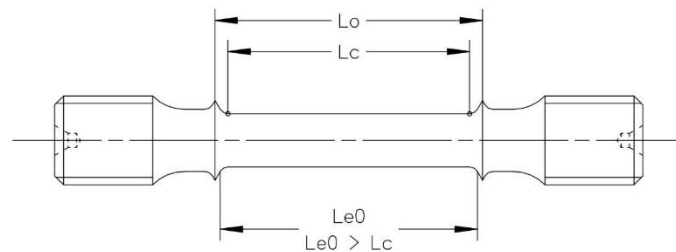
**Please read these instructions carefully BEFORE starting the tests.**

1. 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.
2. The specimens shall be machined in accordance with the requirements of ASTM E139-11 (2018) or ISO 204 (2018).

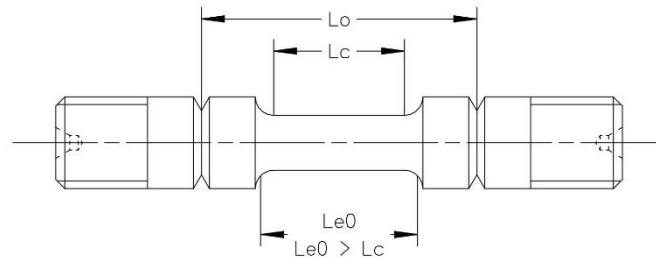
You can use one of these types drawing of specimens:



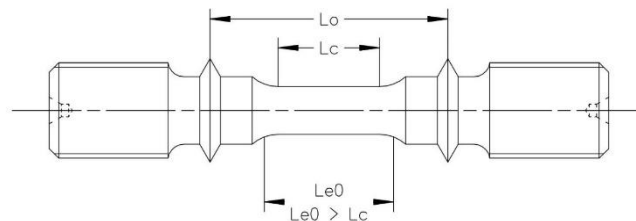
**Type 1**



**Type 2**



**Type 3**



**Type 4**

Version No. 2	Page 2 of 4	<div>Technical Definition</div> <div>Creep Test – Nimonic 75</div>
<div>ptp.</div>		
<div>Kit 3-1-2023 PTP Metallic</div>		

3. All tests are to be performed at a temperature of **600°C / 1112 °F** and a stress of **150 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

4. The following information is to be reported:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Type of specimens (drawing 1, 2, 3, 4 or other)	N/A	N/A	Mandatory	No
Soaking Time	hours	X,X	Mandatory	No
Maximum and minimum temperatures during the test – maximum and minimum in separate lines	°C	XXX,X	Mandatory	No
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 (described as a remark)	N/A	N/A	Not mandatory if not necessary	No
Method of strain measurement: extensometer	N/A	N/A	Mandatory	No
Type of thermocouples used	N/A	N/A	Mandatory	No
Number of thermocouples used	#	X	Mandatory	No
Specimen shape: smooth / with collars / circumferential grooves on shaft / other (if 'other' then brief description and specimen drawing)	N/A	N/A	Mandatory	No
Specimen machining: final machining step of gauge length section (e.g. turning or grinding)	N/A	N/A	Mandatory	No
Extensometer attachment: on reduced section / to collars / to circumferential grooves on shaft / to thread / other (if 'other' then brief description)	N/A	N/A	Mandatory	No
Is adjusted gauge length $L_{e0}$ calculated according ASTM-E139 8.2.4 or EN2002-005 4.7: Yes / No	N/A	N/A	Mandatory	No
$L_c$ (parallel gauge length – nominal of specimen drawing)	mm	XX,XX	Mandatory	No
$L_o$ (extensometer gauge length – nominal of specimen drawing)	mm	XX,XX	Mandatory	No
$L_{e0}$ (adjusted gauge length if used - – nominal of specimen drawing)	mm	XX,XX	Mandatory	No

Version No. 2	Page 3 of 4	<div>Technical Definition</div> <div>Creep Test – Nimonic 75</div>
<div>ptp.</div>		
<div>Kit 3-1-2023 PTP Metallic</div>		

Used gauge length for strain calculation (average of all 5 specimens or nominal of drawing)	mm	XX,XX	Mandatory	No
Pre-test diameter	mm	X,XX	Mandatory	No
Time for loading to creep stress	min	XX	Mandatory	No
Initial plastic strain	%	XX,XXX	Mandatory	No
<b>Total Plastic Strain (creep strain) at 25 hours</b>	%	XX,XXX	Mandatory	<b>Yes</b>
<b>Total Plastic Strain (creep strain) at 35 hours</b>	%	XX,XXX	Mandatory	<b>Yes</b>
<b>Total Plastic Strain (creep strain) at 50 hours</b>	%	XX,XXX	Mandatory	<b>Yes</b>
<b>Time to 0,1% Total Plastic Strain (creep strain)</b>	hours	XX,XX	Mandatory	<b>Yes</b>

All evaluated characteristics will be analysed according to the algorithm A and S (ISO 13528 – 2022) and evaluated using z-score.

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

<b>Submission date</b>	<b>September 1<sup>st</sup> 2023</b>
<b>Technical and administrative support</b>	<a href="mailto:info@ptpscheme.com">info@ptpscheme.com</a>

- Instructions for submission of results are detailed on the website:

<https://ptpscheme.com>

- 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.
- 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.
- The tested specimens do not need to be sent back to the PTP office.

Version No. 2	Page 4 of 4	<div>Technical Definition</div> <div>Creep Test – Nimonic 75</div>
<div>ptp.</div>		
<div>Kit 3-1-2023 PTP Metallic</div>		

#### 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
<b>Test machine 1</b>	PTP kit (5 samples)	1 sample	1 sample	1 sample	1 sample
<b>Test machine 2</b>	1 sample				
<b>Test machine 3</b>	1 sample				
<b>Test machine Y</b>	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 3-1-2023.

**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.

#### VERSION HISTORY

Version Date	Version N°	Changes
10/03/2023	1	Document creation
05/05/2023	2	Update deadline