

Technical Definition

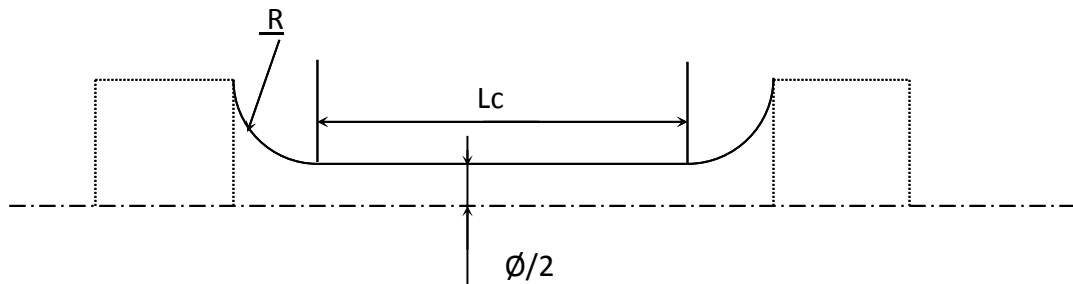
Tensile Test (Ambient Temperature) – Inconel 718

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.

- Five blanks (\varnothing 16 x 75 mm) are supplied to each participant – 5 results must be provided.
In case of :
 - loss or deterioration of PTP sample(s) please contact your sponsor for replacement kit.
 - exclusion of a test specimen results by yourself, you shall provide a short root cause analysis.
- The specimens shall be machined as shown below:



	SI unit (mm)			Imperial unit (inch)		
	Diam (\varnothing)	Lc	R	Diam (\varnothing)	Lc	R
<i>Tolerance</i>	± 0.127	min	min	± 0.005	min	min
<i>Dimension</i>	6.35	36.00	4.77	0.25	1.40	0.19

- All tests are to be performed in accordance with the methods of **ASTM E8/E8M-16a, ISO 6892-1 (2016) or EN 2002-1 (2005)**. The method to use is strain rate control up to yield strength. The test after yield strength can be controlled in any of the ways detailed within the indicated standards (extensometer or crosshead)

Temperature : Room Temperature - Ambient

Strain rate control: Speed up to yield strength: 0.005 min^{-1}

Speed up to rupture: 0.05 min^{-1}

The tests shall be performed respecting the following conditions:

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



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4. The following information is to be reported:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Room Temperature	°C	XX,X	Mandatory	No
Specimen diameter and gauge length before and after testing	mm	XX,XX	Mandatory	No
Test method	N/A	N/A	Mandatory	No
Control mode up to yield strength and rate used	N/A	N/A	Mandatory	No
Control mode after yield strength and rate used	N/A	N/A	Mandatory	No
Ultimate Tensile Strength (Rm)	MPa	XXX	Mandatory	Yes
Yield Strength (Rp 0,2)	MPa	XXX	Mandatory	Yes
Elongation 4D (A4D)	%	XX,X	At least one result has to be provided	Yes
Elongation 5D (A5D)	%	XX,X		Yes
Reduction of Area (Z)	%	XX,X	Mandatory	Yes
Young's Modulus (E)	GPa	XX,X	Not mandatory if not qualified	Yes

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

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 :	May 1st, 2018
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 PTP.

REVISION HISTORY

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