

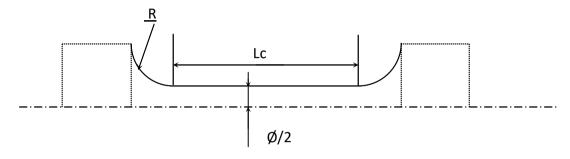
Technical Definition

Tensile Test (Elevated Temperature) – A-286 Steel

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 (\emptyset 20 x 75 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 as shown below:



	SI unit (mm)			Imperial unit (inch)		
	Diam (Ø)	Lc	R	Diam (Ø)	Lc	R
Tolerance	± 0.127	min	min	± 0.005	min	min
Dimension	6.35	36.00	4.77	0.25	1.40	0.19

3. All tests are to be performed in accordance with the methods of ASTM E21-20, ISO 6892-2 (2018) or EN 2002-2 (2006). 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: 649°C (1200°F)

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

Revision No. 1 Page 2 of 2 Control Revision No. 1 Page 2 of 2 Rit 2-1 PTP Metallic

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4. The following information is to be reported:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Test 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
Elongation measurement method	N/A	N/A	Mandatory	No
End-fitting sample method	N/A	N/A	If applicable	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	Yes
Elongation 5D (A5D)	%	XX,X	has to be provided	Yes
Reduction of Area (Z)	%	XX,X	Not mandatory if not qualified	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 email address for any technical or administrative query.

Submission date :	December 31st, 2022	
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.

REVISION HISTORY

Issue Date	Issue N°	Changes
21/07/2022	1	Document creation