

Technical Definition

Hydrogen Embrittlement – 4340 Steel

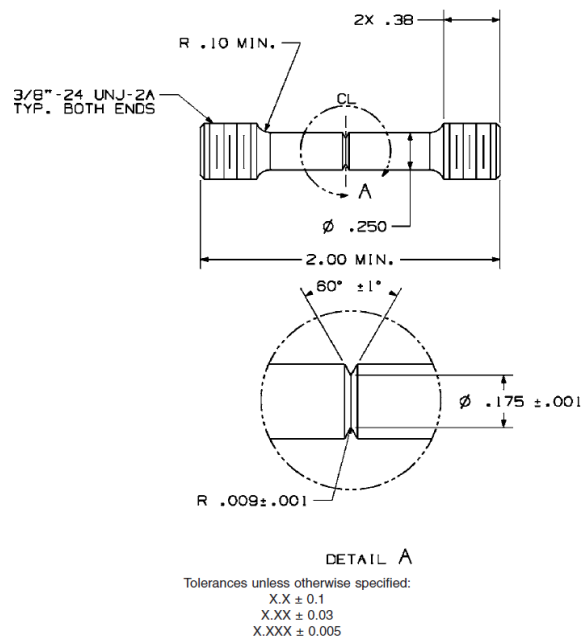
You shall respect the HSE policy of your laboratory for each performed test.

Instructions to participant laboratories

Please read these instructions carefully BEFORE starting the tests.

- Three coated specimens (\varnothing 9,52 x 55,5 mm) are supplied to each participant – 3 results must be provided.
If one result is missing, your test will be considered as an outlier. A RCA shall be completed.
- No additional machining is required.

Definition of the test specimens :



- The tests are to be performed in accordance with the **EN 2832-93** or **ASTM F519-18** and the below requirements and test conditions:

Test duration	150 hours sustained load or until fracture
Temperature (°C)	Room Temperature
Static Tensile Load	30 kN or 6744 lbs

It is expected that some samples may break.

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
Specimen ID	N/A	N/A	Mandatory	No
Break / No break	N/A	N/A	Mandatory	Yes
Test duration (if a specimen breaks)	hours	X,XX	Not mandatory	For information only

All evaluated characteristics will be compared to expected results.

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 :	September 30th, 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 PTP.

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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 (3 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 3-3-2020.

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
07/08/2020	1	Document creation