ptp.

Kit 11-1-2021
PTP Metallic

Technical Definition

Bearing Test - Aluminium 2024 & 15CDV6

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

Please read these instructions carefully BEFORE starting the tests.

1. Five aluminium blanks (154 x 42 x 4 mm) and five steel blanks (204 x 74 x 6 mm) are supplied to each participant – 5 results per material shall be provided.
   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.

2. The specimens shall be machined in accordance with the requirements of the below table :

Aluminium specimens	Steel specimens
Hole diameter d = 6,35 H7 Width w = 38 mm Edge distance e = 12,7 mm Length L = 150 mm Thickness a = 2 mm	Hole diameter d = 10 H7 Width w = 70 mm Edge distance e = 20 mm Length L = 200 mm Thickness a = 3 mm

   Important: Special care shall be taken on residual stress. Plate bending or surface overheating shall be avoided. It is recommended to reduce half of the blanks thickness from each face.

3. All tests are to be performed in accordance with the methods of **ASTM E238-17a**.

   Temperature: Room Temperature
   Testing speed: 0.05 bearing strain / min

   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
Specimen thickness	mm	X,XX	Mandatory	No
Hole diameter	mm	X,XX	Mandatory	No
Edge distance e	mm	X,XX	Mandatory	No
Pin diameter	mm	X,XX	Mandatory	No
Control mode and rate used	N/A	N/A	Mandatory	No
Room temperature	°C	XX,X	Mandatory	No
Bearing max load	N	XXXXX	Mandatory	No
Bearing load at 2% strain	N	XXXXX	Mandatory	No

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Bearing yield strength	MPa	XXX	Mandatory	**Yes**
Bearing strength	MPa	XXX	Mandatory	**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 :	**July 1st, 2021**
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.

Technical Definition

Bearing Test - Aluminium 2024 & 15CDV6

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 + 5 samples)	3 + 3 samples	3 + 3 samples	3 + 3 samples	3 + 3 samples
Test machine 2	3 + 3 samples				
Test machine 3	3 + 3 samples				
Test machine Y	3 + 3 samples				

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 9 + 9 extra specimens.
Operator 1 shall test the PTP kit on TM1, 3 + 3 specimens on TM2 and 3 + 3 specimens on TM3.
Operator 2 shall test 3 + 3 specimens 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 11-1-2021.

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
07/12/2021	1	Document creation