

Technical Definition

Welding – Picture analysis

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

Instructions to participant laboratories

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

1. Two pictures are supplied to each participant – The evaluations have to be performed on the provided_files.
 - First picture (kit 10-6-2020 Picture 1): Defect analysis
 - Second picture (kit 10-6-2020 Picture 2): Heat affected zone measurement
2. Each participant shall list the geometric imperfections of the first picture in accordance with the **EN ISO 6520-1 (2007)** and shall measure the heat affected zone on the second picture in accordance with **AWS D17.1/D17.1M:2017**.
3. Observations shall be performed respecting the following conditions:
 - One operator only
4. The following information is to be reported:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Classification of imperfection on first picture (see list below)	N/A	N/A	Mandatory	Yes
Maximum heated affected zone on second picture (left and right sides of the 3 markers)	µm	X	Mandatory	Yes

For picture 1 , please indicate the imperfections you observed among the below list:

- 1 – Crack
- 2 - Cavity/Porosity
- 3 – Inclusions
- 4 - Lack of fusion and penetration
- 5 - Incomplete root penetration
- 6 – Undercut
- 7 - Excess weld metal
- 8 – Misalignment
- 9 – Spatter
- 10 - Incorrect root gap for fillet welds

Imperfections on first picture will be compared to expected results.

Results for the second picture will be analysed according to the algorithm A (ISO 13528 – 2015) and evaluated using z-score.

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5. Examination shall start **as soon as pictures are received**. Please contact the following e-mail address for any technical or administrative query:

Submission date :	May 1st, 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.

REVISION HISTORY

Issue Date	Issue N°	Changes
09/01/2020	1	Document creation