



PROFICIENCY TESTING PLAN

ZO 2026/1 – Steel Testing

Poskytovatel zkoušení způsobilosti při SZK FAST

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Approved: August 21, 2026

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Contents

1 Basic Information about the Proficiency Testing Program	2
2 Implementation of the Proficiency Testing Program	2
2.1 Specifications and Characteristics	2
2.2 Ensuring Homogeneity and Stability	5
2.3 Instructions for Eliminating Major Sources of Errors and Risks	5
2.4 PTP Schedule	6
3 Procedures used in the Statistical Analysis of Laboratory Results	6
4 Certificate of Participation and the Final Report on the Results of Interlaboratory Comparison	6
5 Safeguards for Confidentiality	6
6 Related Documents	6

1 Basic Information about the Proficiency Testing Program

The aim of the Proficiency Testing Program (PTP) is to compare and evaluate the results of tests conducted on steel according to ČSN EN ISO 6892-1 [1], ČSN EN ISO 6892-2 [2], ČSN EN ISO 148-1 [3], ČSN EN ISO 6506-1 [4], ČSN EN ISO 6508-1 [5], ČSN EN ISO 6507-1 [6], ČSN EN ISO 7438 [7], ČSN EN 10 164 [8] and SEP 1390 [9].

The program strives to provide objective information about the measuring skills of PTP participants. The basic criterion for participation is timely registration for the program, and the prerequisites for obtaining the Certificate of Participation and the Final Report on the Results of Interlaboratory Comparison are timely payment of the fee and adherence to the schedule.

Important dates:

Registration deadline:	August 31, 2026
Distribution of samples:	October 12, 2026
Realization/initiation of testing:	November 9, 2026
Results sent to the organizer:	November 27, 2026
Presentation of the Certificate of Participation:	January 31, 2027

Submission of test results takes place exclusively via the MyPT customer zone at <https://test.ptprovider.cz/zona>. Results are entered by the laboratory after signing in to their account, in the section of the respective programme.

2 Implementation of the Proficiency Testing Program

2.1 Specifications and Characteristics

Applications for this Proficiency Testing Scheme (PTS) are accepted from testing laboratories or other entities expressing interest. The minimum number of participants for each part of the program is 5. In the event that the number of participants approaches the minimum, the PTS coordinator will consider using Horn's procedure to determine the assigned value and its uncertainty. The maximum number of participants is 30. If the minimum number of participants is not reached, the Proficiency Testing Provider (PTP) reserves the right to cancel the PTS. Subsequently, the procedure follows Chapter 3 of the directive "Appeals and Complaints Management" [10], which is available at www.ptprovider.cz.

The program is implemented for the following characteristics:

ZO01 ČSN EN ISO 6892-1 [1]

- Characteristic: $R_{p0,2}$, R_m , A, Z
- Units: N/mm², N/mm², %, %
- Specification according to EN 10 080 [11]: B500B
- Test pieces: Bars □ 10 mm, length 500 mm
- Number of determinations: 5

ZO02 ČSN EN ISO 6892-1 [1]

- Characteristic: $R_{p0,2}$, R_m , A, Z
- Units: N/mm², N/mm², %, %
- Specification: test piece according to EN ISO 6892-1 [1]
- Test pieces: metallic materials
- Number of determinations: 5
- Use the nominal cross-sectional area for calculation.

ZO03 ČSN EN ISO 6892-1 [1]

- Characteristic: $R_{p0,2}$, R_m , A, Z
- Units: N/mm², N/mm², %, %
- Specification: flat test piece according to EN ISO 6892-1 [1]
- Test pieces: metallic materials
- Number of determinations: 5
- Use the nominal cross-sectional area for calculation.

ZO04 ČSN EN ISO 6892-2 [2]

- Characteristic: $R_{p0,2}$, R_m , A, Z
- Units: N/mm², N/mm², %, %
- Specification: metallic materials according to EN ISO 6892-2 [2], property class 4.8
- Number of determinations: 5
- Use the nominal cross-sectional area for calculation.

ZO05 ČSN EN ISO 6892-1 [1]

- Characteristic: $R_{p0,2}$, R_m , A, Z
- Units: N/mm², N/mm², %, %
- Specification according to EN ISO 898-1 [12]: property class 4.8
- Number of determinations: 5
- Use the nominal cross-sectional area for calculation.

ZO06 ČSN EN ISO 148-1 [3]

- Characteristic: KV2, SFA, LE
- Units: J, N, mm
- Specification: Charpy V-notch, 5 pcs
- Test pieces: Standard test specimen 10x10x55 mm
- Number of determinations: 5

ZO07 ČSN EN ISO 148-1 [3]

- Characteristic: KV2, SFA, LE
- Units: J, N, mm
- Specification: Charpy V-notch, 5 pcs
- Test pieces: Standard test specimen 10x10x55 mm
- Number of determinations: 5

ZO08 ČSN EN ISO 148-1 [3]

- Characteristic: KV2, SFA, LE
- Units: J, N, mm
- Specification: Charpy V-notch, 5 pcs
- Test pieces: Standard test specimen 10x10x55 mm
- Number of determinations: 5

ZO09 ČSN EN ISO 6506-1 [4]

- Characteristic: HBW
- Units: -
- Specification: -
- Test pieces: 10 indentations, hardness reference block
- Number of determinations: 10

ZO10 ČSN EN ISO 6508-1 [5]

- Characteristic: HRC
- Units: -
- Specification: -
- Test pieces: 10 indentations, hardness reference block
- Number of determinations: 10

ZO11 ČSN EN ISO 6507-1 [6]

- Characteristic: HV10
- Units: -
- Specification: -
- Test pieces: 10 indentations, hardness reference block
- Number of determinations: 10
- Instructions: Degrease the blocks with a cotton swab.

ZO12 ČSN EN ISO 7438 [7]

- Characteristic: Occurrence of cracks

- Units: -
- Specification: metallic materials, to be specified
- Test pieces: flat specimen
- Number of determinations: 3

ZO13 ČSN EN 10 164 [8]

- Characteristic: Z - reduction of area
- Units: %
- Specification: -
- Test pieces: 3
- Number of determinations: 3

ZO14 SEP 1390 [9]

- Characteristic: Occurrence and measurement of cracks
- Units: mm
- Specification: metallic materials, to be specified
- Test pieces: 3
- Number of determinations: 3

2.2 Ensuring Homogeneity and Stability

PT Provider employees and any suppliers they may utilize are aware of the significance of the homogeneity and stability of test specimens for the results of the Proficiency Testing Program. The homogeneity and stability of specimens is ensured in the following ways:

1. samples are from one production charge,
2. the distribution of specimens made of more production charge so as to ensure homogeneity of bodies in the field of testing of related characteristics,
3. by review the material before releasing participants.

2.3 Instructions for Eliminating Major Sources of Errors and Risks

PTP participants have the obligation:

- to handle the proficiency testing materials in the same way they handle the majority of routinely tested samples,
- to follow the instructions of the PT Provider employee responsible for the PTP, especially regarding the type of testing carried out, the number of result determinations and the PT schedule,
- to state measurement uncertainties in accordance with their documented procedures, including the corresponding expansion coefficient. Participants will use expansion coefficient 2, which approximately represents the 95 % reliability level, unless stated otherwise,

- adhere to the rules and principles of ethical behavior, avoiding unfair practices that could negatively impact the evaluation of the PT program,
- follow occupational health and safety and fire protection regulations, using only electrical equipment and instruments with valid inspections,
- to send the test results obtained during proficiency testing, including measurement uncertainties, to the PT Provider by the set deadline (see part 1).

2.4 PTP Schedule

All other information, forms and records not included in this document are accessible in updated form at <http://ptprovider.cz/?lang=en>.

3 Procedures used in the Statistical Analysis of Laboratory Results

Procedures used in the statistical analysis of proficiency testing programs can be found at ptprovider.cz.

4 Certificate of Participation and the Final Report on the Results of Interlaboratory Comparison

The PT Provider gives expert commentary on participant efficiency evaluation in the Final Report as part of training courses the PT Provider organises. The Final Report preserves the anonymity of the PTP participants. Each participant, or the participant's test results, is represented by an ID number. The Certificate of Participation in the PT programme is part of the Final Report. The Certificate is unique to each participant and includes the participant's ID number.

5 Safeguards for Confidentiality

The identity of PTP participants is confidential and only known to persons/subjects involved with the PTP. All participant information is considered confidential by the PT Provider. The participant may renounce this confidentiality for the purposes of discussion and mutual assistance until the PTP results are obtained. The PT Provider reveals the proficiency testing results to no third party with the sole exception of a written request by a regulatory authority submitted prior to the commencement of the PTP and which has been granted a written consent by the PTP participants.

6 Related Documents

- Quality Handbook of the PT Provider at the SZK FAST
- Cancellation and Complaint Proceedings available at <http://ptprovider.cz/?lang=en> [10]
- MPA 20 – 01 - . . for application of EN ISO/IEC 17043 Concordance Assessment – General Requirements for Proficiency Testing in the Accreditation System of the Czech Republic.

References

- [1] EN ISO 6892-1. *Metallic materials - Tensile testing - Part 1: Method of test at room temperature*. 2021.
- [2] EN ISO 6892-2. *Metallic materials - Tensile testing - Part 2: Method of test at elevated temperature*. 2018.
- [3] EN ISO 148-1. *Metallic materials - Charpy pendulum impact test - Part 1: Test method*. 2016.
- [4] EN ISO 6506-1. *Metallic materials - Brinell hardness test - Part 1: Test method*. 2014.
- [5] EN ISO 6508-1. *Metallic materials - Rockwell hardness test - Part 1: Test method*. 2023.
- [6] EN ISO 6507-1. *Metallic materials - Vickers hardness test - Part 1: Test method*. 2023.
- [7] EN ISO 7438. *Metallic materials - Bend test*. 2020.
- [8] EN 10164. *Steel products with improved deformation properties perpendicular to the surface of the product - Technical delivery conditions*. 2018.
- [9] SEP 1390. *Welded bead-on-plate bend test*. 1996.
- [10] *Cancellation and Complaint Proceedings* – available at www.ptprovider.cz.
- [11] EN 10080. *Steel for the reinforcement of concrete - Weldable reinforcing steel - General*. 2005.
- [12] EN ISO 898-1. *Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread*. 2013.