BRNO UNIVERSITY OF TECHNOLOGY

FACULTY OF CIVIL ENGINEERING
institute of building testing

PROFICIENCY TESTING PLAN

ZHU 2025/1 – Testing of Finished Construction Layer Treatments (ZHU 736175, 12697-36, 13036-1, 13036-4, 13036-7)

Proficiency Testing Provider at the SZK FAST
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1 Basic Information about the Proficiency Testing Program

The purpose of the proficiency testing program (PTP) is to compare and evaluate the test results of finished construction layer treatments according to selected parts of ČSN 73 6175 [1], articles 8 and 9, EN 12697-36 [2], EN 13036-1 [3], EN 13036-4 [4], and EN 13036-7 [5].

The objective of the program is to provide objective information on the measurement capabilities of PTP participants. The basic criterion for participation is timely registration in the program. The fundamental requirements for receiving a Certificate of Participation and a Final Report on the results of the conformity experiment are the submission of results and timely payment of the participation fee.

Important Dates

Application deadline:	May 31, 2025
Announcement of exact date and venue:	June 6, 2025
Date of the event:	**June 25, 2025, time and venue to be specified.**
Submission of results to organizer:	June 30, 2025
Evaluation by:	July 31, 2025

Sample transportation is not part of this proficiency testing program. All measurements take place at one location and time.

Test results must be submitted exclusively via http://ptprovider.cz/OutcomesCode. A participant code, automatically sent upon registration in the PT program, is required to log in.

1.1 Specifications and Characteristics

Applications for this PTP are accepted from testing laboratories and other interested entities. The minimum number of participants in each part of the program is 6. If the number of participants approaches the minimum, the coordinator will consider using the Horn procedure to determine the reference value and its uncertainty for evaluating PTP results. The maximum number of participants is not limited. If the minimum number of participants is not reached, the PTP provider reserves the right to cancel the PTP. In such cases, the procedure follows chapter 3 of the guideline "Management of Appeals and Complaints" [6], available at www.ptprovider.cz.

The program is implemented for the following characteristics:

1. ČSN 73 6175 [1], article 8
    - Characteristic: Measurement of longitudinal and transverse surface irregularity of the pavement with a straightedge
    - Units: mm
    - Specification according to EN 73 6121 [7]: chapter 6, article 6.4.4, Table 16
    - Number of determinations: continuous measurement over a precisely specified section
    - Test section: 200–500 m with an accurately marked measurement route
    - Instructions: Measurement is performed on a clean pavement surface according to the required measurement principles defined in EN 73 6175 [1], chapter 4, article 4.1.
2. ČSN 73 6175 [1], article 9
    - Characteristic: Measurement of the longitudinal unevenness of the road surface using a planograph
    - Units: mm
    - Specification according to EN 73 6121 [7]: chapter 6, article 6.4.4, Table 16
    - Number of determinations: continuous measurement over a precisely specified section
    - Test section: 200–500 m with an accurately marked measurement route

- Instructions: Measurement is performed on a clean pavement surface according to the required measurement principles defined in EN 73 6175 [1], chapter 4, article 4.1.

3. EN 12697-36 [2]
    - Characteristic: Determination of asphalt pavement thickness
    - Units: mm
    - Specification according to EN 73 6121 [7]: chapter 6, article 6.4.2, Table 13
    - Number of determinations: according to the number of tested layers on the core sample
    - Test specimens: core sample
    - Instructions: Requirements for test specimens are specified in EN 12697-36 [2], chapter 5.
4. EN 13036-1 [3]
    - Characteristic: Measurement of pavement surface macrotexture depth by volumetric method
    - Units: mm
    - Specification according to EN 73 6177 [8]: Annex A, No. A3
    - Number of determinations: 1 – average of four determinations
    - Test surface: precisely specified pavement surface
    - Instructions: Requirements for the test material used are specified in EN 13036-1 [3], chapter 4, article 4.1.
5. EN 13036-4 [4]
    - Characteristic: Method for measuring skid resistance – Pendulum Test (PTV)
    - Units: -
    - Specification according to EN 73 6177 [8]: Annex A, article A2
    - Number of determinations: 1 – average of five swings
    - Test location: 1
    - Instructions: Requirements for test locations (samples) are specified in EN 13036-4 [4], chapter 9.
6. EN 13036-7 [5]
    - Characteristic: Measurement of individual pavement surface irregularities – Straightedge Test
    - Units: mm
    - Specification according to EN 73 6242 [9]
    - Number of determinations: 10 – measurements at precisely specified locations
    - Test section: 10 local spots
    - Instructions: Measurement is performed on a clean pavement surface according to the requirements specified in EN 13036-7 [5], chapter 4, articles 4.1–4.3.

1.2 Environmental Condition Requirements for Individual Procedures

Environmental condition requirements for individual testing procedures are specified by the testing standard according to which the test is conducted.

1.3 Ensuring Homogeneity and Stability

PTP staff and their potential suppliers are aware of the importance of the homogeneity and stability of test specimens for the results of the proficiency testing program. Proficiency testing items are provided in cooperation with SQZ, s.r.o., U místní dráhy 939/5, 77900 Olomouc. The homogeneity and stability of test specimens are ensured by:

1. producing specimens from a single production batch, and/or

2. dividing specimens produced from multiple production batches in such a way as to ensure the homogeneity of specimens in terms of testing physical-mechanical and durability characteristics,
3. the preparation process for test surfaces (locations), their size and shape are always specified by the given testing standard.

1.4 Instructions for Eliminating Major Sources of Errors and Risks

PTP participants are required to:

- handle proficiency testing items in the same manner as the majority of routinely tested samples,
- follow the instructions of the PTP staff member responsible for the implementation of the PTP, especially concerning the type of test performed, the number of determinations, and its timing,
- report measurement uncertainty in accordance with their documented procedures, including the appropriate coverage factor. Unless specified otherwise, participants should use a coverage factor of 2, corresponding to a confidence level of approximately 95%,
- adhere to rules and principles of ethical conduct, refraining from unfair practices that could negatively impact the evaluation of the PT program,
- follow occupational health and safety (OHS) and fire safety principles, using only electrical equipment and devices with valid inspection certificates,
- submit the PTP testing results, including measurement uncertainties, to the PTP provider by the specified deadline, as indicated in section 1.

1.5 PTP Process

All additional information, forms, and records not included in this document are currently published at www.ptprovider.cz.

2 Procedures used in the Statistical Analysis of Laboratory Results

Procedures used in the statistical analysis of proficiency testing programs can be found here: http://ptprovider.cz/?lang=en.

3 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.

4 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.

5 Related Documents

- Quality Handbook of the PT Provider at the SZK FAST
- Cancellation and Complaint Proceedings available at http://ptprovider.cz/?lang=en [6]
- 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] ČSN 73 6175. *Measurement and evaluation of road surface roughness*. 2009.

[2] EN 12697-36. *Bituminous mixtures - Test methods for hot mix asphalt - Part 36: Indentation using cube or cylindrical specimens*. 2012.

[3] EN 13036-1. *Road and airfield surface characteristics - Test methods - Part 1: Measurement of pavement surface macrotexture depth using a volumetric patch technique*. 2010.

[4] EN 13036-4. *Road and airfield surface characteristics - Test methods - Part 4: Method for measurement of slip/skid resistance of a surface: The pendulum test*. 2011.

[5] EN 13036-7. *Road and airfield surface characteristics - Test methods - Part 7: Determination of pavement surface macrotexture depth using a volumetric patch technique*. 2008.

[6] *Cancellation and Complaint Proceedings – available at www.ptprovider.cz*.

[7] ČSN 73 6121. *Roads - Testing Methods - Test for Adhesion of Bitumen to Aggregate*. 1997.

[8] ČSN 73 6177. *Measurement and evaluation of road surface skid resistance*. 2015.

[9] ČSN 736242. *Design and construction of pavements on road bridges*. 2010.