RULES

PUBLICATION 56/P

PROCEDURAL REQUIREMENTS FOR LABORATORIES

November
2024

Publications P (Additional Rule Requirements) issued by Polski Rejestr Statków complete or extend the Rules and are mandatory where applicable.

GDAŃSK

Publication 56/P – Procedural Requirements for Laboratories – November2024 is an extension of the requirements contained in *Part IX – Materials and Welding* of the *Rules for the Classification and Construction of Sea-going Ships*.

This *Publication* was approved by the PRS Board on 30 October 2024 and enters into force on 1 November 2024.

The present *Publication* replaces *Publication No. 56/P – Procedural Requirements for Laboratories – July 2020*.

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PRS/RP, 10/2024

CONTENTS

Page

1 GENERAL

1.1 General Provisions

1.1.1 The present *Publication* specifies the basic standards for approval of laboratories or firms (hereinafter referred to as laboratories) conducting examinations, tests or measurements detailed in 2.1, the results of which are used by PRS in survey performance and the issue of documents.

1.1.2 Chapters 1÷6 of the *Publication* provide general requirements regarding approval of laboratories. Detailed requirements, specific to different laboratories, are given in Chapter 7.

1.1.3 The laboratory which operates within material or product manufacturer must be independent of the manufacturer's production departments.

1.1.4 The laboratory management shall define the laboratory organizational structure (e.g. the organizational scheme) specifying interrelations between the laboratory personnel and the laboratory's place in the manufacturer's structure.

1.1.5 The manufacturer's laboratories and the laboratories of branch plants are subject to separate approval processes.

1.1.6 The present *Publication* refers to the provisions of other documents (e.g. standards). The provisions, referred to or cited at the appropriate places in this text, constitute the requirements of the present *Publication*. The titles of the standards and the date of their issue (current at the time of this *Publication* issue) are given in Chapter 13. Most recent editions of the reference documents shall be always used.

1.1.7 The present *Publication* does not cover issues related to laboratory compliance with regulatory and work safety requirements.

1.2 Reference Documents

Standards

EN ISO 9712 – Non-destructive testing. Qualification and certification of personnel;
EN ISO 9001 – Quality management systems. Requirements;
EN ISO 10012 – Measurement management systems. Requirements for measurement process and measuring equipment;
EN ISO/IEC 17025 – General requirements for the competence of testing and calibration laboratories;
EN ISO/IEC 17020 – Conformity assessment – Requirements for the operation of various types of bodies performing inspection.

Other Documents

FTP Code 2010 – International Code for Application of Fire Test Procedures, 2010 (IMO Resolution MSC.307(88));
Publication 123/P – Safe Entry to Confined Spaces;
Publication 33/I – Recycling of Ships;
Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC.

2 APPLICATION

2.1 The requirements, set forth in the present *Publication,* apply to laboratories conducting:
- destructive testing,
- fire testing,
- gasometric measurements,
- chemical tests and analyses,
- other.

2.2 The requirements of the present *Publication* are applicable to laboratories and firms acting as self-dependent economic entities (corporate bodies), providing services specified in 2.1, and providing services on behalf of PRS' customers.

3 PROCEDURE FOR APPROVAL OF LABORATORIES

3.1 Submission of Documents

3.1.1 The following documents[1]: shall be submitted to PRS for consideration:
- outline of laboratory, in this organization and management structure, including subsidiaries to be included in the approval (data on the laboratory activity, stated in the request for approval, must be consistent with entry into appropriate National Court Register or Business Activity Register; a copy of entry into appropriate National Court Register or Business Activity Register shall be included in the request),
- the requested scope of approval,
- Quality Management System Certificate; where the laboratory does not have a certified Quality Management System – documented procedures covering the issues given in 3.5.2,
- Approval Certificates issued by other independent technical supervision bodies or Administration, if any,
- a list of procedures/instructions related to the requested scope of approval (test methods) containing the relevant document No., title, current edition and the date of issue,
- a list of operators documenting their training and experience within the requested service area and qualifications according to recognized national or international standards, as relevant,
- training programmes for operators,
- a list of equipment used for the requested test methods stating the equipment type and manufacturer, placed in-service date, method and frequency of verification and the date of last verification,
- forms for recording test results within the scope of the test methods covered by the request,
- information on other activities which may present a conflict of interest,
- record of customer claims and record of corrective actions – for information during inspection.

3.2 General Requirements

3.2.1 Scope of Approval

The laboratory shall demonstrate, as required by 3.2.2 ÷ 3.2.9, that it has the competence and control needed to perform the services for which the approval is sought.

3.2.2 Training of Personnel

The laboratory management is responsible for the qualification and training of its personnel to a recognized international or national standards, as applicable. Where there are no such

[1] It is recommended that the documents, referred to in paragraph 3.1, should be prepared in electronic form.

standards, the laboratory shall define its own standards, in the form of a written procedure, for the training and qualification of its personnel relevant to particular test methods. The personnel shall also have an adequate experience and be familiar with the operation of measuring equipment. Operators shall have a minimum of one (1) year on-the-job training in the relevant test method.

3.2.3 Supervision

The laboratory management shall provide supervision for all rendered services. The responsible supervisor shall have a minimum of two (2) years' experience as an operator within the activity for which the laboratory is to be approved. Where the laboratory employs one person, that person shall meet the requirements of a supervisor.

3.2.4 Personnel Records

The laboratory shall keep records concerning its personnel. The records shall contain information on formal education, training and experience in test methods covered by the request, as well as the psychophysical efficiency (e.g. eye examination).

The laboratory management shall determine responsibility, authorizations and interfaces between the supervisory personnel and operators.

Where supernumerary employees are engaged on a contract basis (e.g. contract-order), the laboratory shall ensure that the employees are supervised and have appropriate qualifications.

3.2.5 Measuring Equipment and Facilities

The laboratory shall have the necessary measuring equipment and facilities for conducting tests. A record of the measuring equipment used shall be kept. The record shall contain information on the measuring equipment maintenance and verification.

The whole measuring equipment used for tests and subsidiary measurements (e.g. environmental conditions measurements) which has a significant effect on the quality of the performed tests shall be periodically verified.

The laboratory may establish its own principles of measuring equipment control covering, inter alia, verification frequency with respect to that measuring equipment only which is not subject to legal metrology control.

Measuring equipment which is not subject to legal metrology control may be verified by the laboratory competent personnel. The laboratory shall be adequately prepared for that purpose, shall be provided with appropriate procedures and standards and comply with the provisions of the *Law Measurement Act*. Measuring equipment verification may be performed by other laboratories or service suppliers complying with the provisions of the *Law Measurement Act* and granted appropriate authorization and accreditation. It is essential that traceability of measurements results to SI units is ensured.

Measuring equipment with invalid verification date shall be clearly identified and taken out of service.

It is recommended that control of measuring equipment should be performed in accordance with EN ISO 10012 Standard.

3.2.6 Documentation

The laboratory shall establish, maintain and control the following documents (procedures and instructions):
- documents describing the laboratory (Principles of Organization),
- documents describing the laboratory Quality Management System,
- documents describing test methods applied by the laboratory,
- documents ensuring traceability of measurements results.

Where, in the laboratory activity, reference is made to external documents, it shall be always made using the most recent editions of the documents. The laboratory shall keep a list of such documents. Additionally, the laboratory shall maintain original editions of such documents.

3.2.7 Subcontractors

It is recommended that all tests undertaken by the laboratory and covered by the laboratory approval should be performed by the laboratory itself on the stipulation that supernumerary personnel is not regarded as subcontractor's personnel.

Where any part of the services provided are subcontracted, the laboratory shall submit information on agreements and arrangements, as well as documented qualifications of the subcontractor's personnel carrying out the tests.

The laboratory is responsible for the subcontractor's work and shall maintain records of the subcontractor's competence evidences regarding the subcontracted work or service.

The laboratory shall specify the form of supervision over the quality of services provided by subcontractors.

Services commissioned to subcontractors cannot fall beyond the documented competence scope of the laboratory personnel supervising the quality of services provided by subcontractors.

3.2.8 Verification

The laboratory is obliged to verify that the services provided are carried out in accordance with approved procedures, the customer and PRS requirements.

3.2.9 Test Report

Test report shall contain at least the following basic information:
- report title,
- laboratory address, telephone, fax, e-mail,
- report No.,
- the customer name and address,
- identification of the object subjected to tests,
- date of the test,
- identification of document according to which the tests were carried out,
- name of document or numbers of standards which formed the basis for acceptance (specifying acceptance criteria),
- tests results (with units of measurement),
- statement of compliance/non-compliance with the relevant requirements,
- statement that the results refer exclusively to the tested objects,
- surnames, functions and signatures or equivalent identification of persons authorizing the test report,
- signatures of persons carrying out the tests and persons verifying the tests, stating their qualifications.

Notwithstanding the above requirements, if any additional information is given in subject standards related to the tests, such information shall be included in the test report.

It is recommended that test report issued in the form of a permanent document should have pages numbered and general number of pages specified and laboratories should issue a statement that the report should be copied fully unless the laboratory agrees otherwise.

The test report shall contain PRS *Approval Certificate* No. and the *Certificate* validity date.

Welded joints test report shall contain identification No. of the welder who performed the tested welded joint.

3.3 Inspection of the Laboratory

3.3.1 Upon review of the submitted documents, the laboratory is inspected by PRS Surveyor in order to verify that it is duly organized and managed in accordance with the submitted documents and that it is capable of conducting the services for which approval is sought.

3.3.2 Inspection of the laboratory covers at least the verification of:
- equipment – documenting control of measuring equipment,
- personnel – qualifications of the laboratory personnel/completed training, etc.,
- procedures/instructions associated with the conducted tests,
- supervision of conducted tests – documenting the test method, identification,
- verification of dealing with customer complaints.

3.3.3 Approval may be conditional on a practical demonstration of the specific service performance, as well as satisfactory reporting being carried out.

3.3.4 Where insufficient compliance with the requirements set forth by PRS has been stated, the Surveyor carrying out the audit may issue appropriate recommendations. The date of the recommendations implementation is agreed with the laboratory.

3.3.5 In the case of serious non-compliance with the requirements of the present *Publication*, the date of renewed inspection of the laboratory may be agreed. Such renewed inspection will be possible upon receipt from the laboratory information in writing that the non-compliance has been eliminated.

3.4 Inspection Report

3.4.1 The inspection is documented by PRS Surveyor with a report. The report shall contain information on the issues detailed in Chapter 7 relating to the given category of laboratory. The report contains the Surveyor's request for the issue of *Approval Certificate*. The request is considered by the relevant PRS HO department following the entire documentation analysis.

3.5 Quality Management System

3.5.1 It is recommended that the laboratory should have a documented and confirmed by a third-party Quality Management System complying with the requirements of EN ISO/IEC 17025 or EN ISO 9001 Standards.

Laboratories conducting tests for the issue of Certificate of Conformity with New Approach directives shall have a Quality Management System complying with the requirements of EN ISO/IEC 17025 Standard.

In the case of laboratories which perform tests solely for the needs of manufacturer within which they operate, Quality Management System covering, as a minimum, the issues detailed in 3.5.2 will be accepted.

3.5.2 The Quality Management System shall cover, as a minimum, the following:
- code of conduct for the relevant activity,
- documentation related to measuring equipment verification,
- training programmes for personnel,
- supervision and verification to ensure compliance with operational procedures,
- recording and reporting of information,
- periodic review of work process procedures, complaints, corrective actions and control of documents.

4 APPROVAL CERTIFICATE

4.1 Upon reviewing the submitted documentation and satisfactory completion of the laboratory inspection, the PRS Head Office will issue an *Approval Certificate* stating that the laboratory's service operation system has been found to be satisfactory and the tests performed in accordance with that system may be accepted and utilized by PRS' Surveyors in making decisions affecting the issue of the relevant certificates. *Approval Certificate* shall clearly state the type and scope of the tests.

4.2 The validity of *Approval Certificate* shall be a maximum of three years.

4.3 At PRS Surveyor's request, included in the report referred to in 3.4, *Approval Certificate* may be issued before post-inspection recommendations have been carried out, provided that the conditions of the recommendations implementation (date, way of notification, verification, if required) are determined. Where the recommendations have not been implemented in the declared time and the laboratory fails to notify PRS of the reason for such delay, *Approval Certificate* will become invalid on the recommendations implementation declared date.

4.4 Renewal of *Approval Certificate* is made at the laboratory's request by verification, through inspection, that approval conditions are maintained. At *Approval Certificate* renewal, the requirements of the present *Publication* apply. The request for renewal of *Approval Certificate* shall contain information on any changes introduced since the last inspection of the laboratory connected with the approval (changes concerning personnel, personnel training, equipment replacement, documents updating).

5 CONTROL OVER APPROVED LABORATORIES

5.1 In case where any alteration to the approved service operation system of the laboratory is made, such alteration shall be immediately reported to PRS. Reinspection may be required when deemed necessary by PRS.

5.2 In the case of the approval conditions infringement, as well as in the case of customer's complaints about the services provided by the laboratory holding *Approval Certificate*, PRS reserves the right to inspect the laboratory to verify maintenance of the approval conditions.

5.3 Regardless of the above-mentioned inspection, evaluation of the laboratory services is made by PRS Surveyors on a current basis through observations made during supervision of the conducted tests.

6 CANCELLATION OF APPROVAL CERTIFICATE

6.1 *Approval Certificate* may be cancelled in the following cases:
- where the tests were not carried out properly or the results were not properly reported,
- where PRS Surveyor finds deficiencies in the approved service operation system of the laboratory and appropriate corrective action is not taken,
- the laboratory fails to inform PRS of any alteration to the approved service operation system,
- where wilful acts or wilful/deliberate departures from standards are ascertained,
- the invoice issued by PRS has not been paid in due time.

6.2 PRS reserves the right to inform the interested parties of *Approval Certificate* cancellation.

6.3 A laboratory, whose *Approval Certificate* was cancelled, may apply for reapproval, provided that the non-conformities which resulted in the approval cancellation are corrected and PRS is able to confirm that the laboratory has effectively implemented the corrective actions.

7 SPECIAL REQUIREMENTS FOR VARIOUS CATEGORIES OF LABORATORIES

7.1 Destructive Testing

7.1.1 The scope of the services provided covers:
- chemical analyses of metals using classic and instrumental methods,
- mechanical properties tests of metals and plastics (e.g. strength tests, impact tests),
- metallographic tests,
- destructive tests using other methods.

7.1.2 Supervisory Personnel

The responsible supervisor shall have technical education and knowledge of the requested test methods.

7.1.3 Operators

Personnel carrying out mechanical tests are approved on the basis of professional experience and completed training.

Personnel conducting chemical analyses and metallographic tests shall have a minimum secondary chemical and metallographic education.

Personnel conducting visual testing after welded joints fracture test shall have qualifications as specified in 7.2.

7.1.4 Equipment

Test equipment shall comply with the requirements of subject standards and shall be maintained in accordance with service manual.

7.1.5 Documentation

Documented procedures shall contain information on preparation, selection and identification of specimens, as well as testing procedure.

The requirements regarding the testing of hull structural steels and other metals intended for ship structures and equipment are given in the *Rules for the Classification and Construction of Sea-going Ships*, *Part IX – Materials and Welding*.

7.1.6 Test Report

The report shall contain information as specified in 3.2.9 and shall have regard to guidelines given in subject standards relating to the relevant test method.

7.1.7 Verification

PRS reserves itself the right to verify the test report.

7.2 Fire Testing

7.2.1 The scope of the provided services covers:
- non-combustibility test,
- smoke and toxicity test,
- surface flammability test,
- determination of calorific potential,
- primary deck coverings test,
- vertically supported textiles and films tests,
- upholstered furniture and bedding components tests,
- fire test of ship structures (e.g. horizontal and vertical divisions, doors).

7.2.2 Supervisory Personnel

The responsible supervisor shall have technical education and knowledge of the requirements set forth by IMO (e.g. *FTP Code*) and PRS allowing to perform tests in the requested scope.

7.2.3 Operators

Personnel conducting flammability tests shall have knowledge of IMO requirements within the scope of the requested test methods.

7.2.4 Equipment

Test equipment shall comply with the requirements specified in the relevant IMO documents (resolutions and codes).

7.2.5 Documentation

Documented procedures shall contain information on at least test method, taking and identification of test specimens, equipment calibration, reports preparation.

7.2.6 Test Report

The report shall contain information, as required in 3.2.9 and shall comply with the requirements of the *FTP Code*.

7.2.7 Verification

PRS reserves the right to participate in the performed tests/examinations.

7.3 Gasometric Measurements

7.3.1 The scope of the services provided covers conducting gasometric measurements in confined spaces in accordance with the requirements of *Publication 123/P Safe Entry to Confined Spaces.*

7.3.2 Supervisory Personnel

The responsible supervisor shall have:
- at least secondary technical education,
- knowledge of gasometric measurements,
- appropriate work safety qualifications and knowledge of hazards associated with entry into confined spaces,
- ability to provide first aid.

7.3.3 Operators

Personnel conducting gasometric measurements shall have knowledge of hazards associated with entry to confined spaces and ability to provide first aid.

7.3.4 Equipment

Measuring equipment shall be direct reading.

7.3.5 Documentation

Documented procedures shall contain information on at least the equipment preparation, equipment calibration, measurement methods, reports preparation.

7.3.6 Test Report

The report shall contain information, as required in 3.2.9 and shall:
- specify the date and time of the conducted measurements,
- identify the space subjected to measurements,
- contain the measurements results,
- identify the measuring equipment used, calibration date,
- identify the person carrying out the measurement.

7.4 Chemical Tests and Analyses

7.4.1 The scope of provided services includes taking specimens, identification and defining the number of chemical compositions classed as hazardous materials, to be listed in the Inventory of Hazardous Materials. The scope of services may cover identification of all compounds and their parts, in accordance with EU Regulation No 1257/2013, Hongkong Convention and IMO Res. MEPC.379(80).

7.4.2 The laboratory shall hold valid certificate of implementation of, or accreditation to EN ISO/IEC 17025 Standard.

7.4.3 Personnel

The laboratory shall employ managing and technical personnel, suitably qualified and having skills necessary for the realization of tasks related to the scope of provided services, as well as having authorizations necessary for the implementation, maintenance and improvement of management system and for identification of departures from the management system or testing procedures and for initiating actions to prevent the departures.

The laboratory management shall ensure employment of personnel having appropriate competences and experience to operate equipment, perform analyses, assess results and issue reports and certificates. Qualification of personnel for respective tasks shall be based, depending on requirements, on proper education, training, experience and/or proved skills.

It is recommended that the personnel responsible for preparation of opinions and interpretations enclosed to test reports, should show, in addition to having appropriate qualifications, trainings, experience and satisfactory knowledge of the carried out tests:
- appropriate knowledge concerning production technology, materials, products, etc. which are subject to testing or methods of their application and faults or wear, which can occur in operation or in service;
- knowledge of general requirements given in legal regulations and standards;
- understanding of the importance of found deviations from normal operation of materials and products.

The laboratory shall maintain valid job descriptions for management, operators, technical and support personnel engaged in testing.

Personnel designated for taking specimens, tests and/or calibrations, issuing reports, test reports, opinions and interpretations and operating particular equipment, shall have appropriate authorization from the laboratory management.

7.4.4 Tests and Analyzes

The laboratory shall use respective: plan, methods and procedures for all tests included in the scope of activity. It applies to taking specimens, handling test specimens, their preparation, storage, transportation and estimating uncertainties and statistic techniques.

The laboratory shall maintain valid instructions for handling specimens and their preparation for testing.

The laboratory shall use appropriate method of taking specimens and their analysis, which in addition complies with the Client requirements and has been published in the international or national standards. The laboratory shall ensure that current revisions of standards are applied.

The sensitivity level of the method shall allow for detection of substances in the amounts exceeding the level indicated in IMO Res. MEPC.379(80).

The reference materials shall correspond to SI unit system or certified reference materials.

7.4.5 Equipment

The laboratory shall be equipped with all items necessary for proper carrying out tests, including taking specimens, carrying out measurements and analyses. If the laboratory uses equipment which does not supervise, compliance with the requirements of EN ISO/ICE 17025 Standard shall be ensured.

The laboratory shall maintain current operating and service manuals for the equipment. The equipment shall be operated only by authorized personnel.

7.4.6 Documentation

Documented procedures shall contain information concerning at least taking, storage, transportation, preparation for tests and testing specimens of each kind of material, in accordance with the inventory of hazardous materials.

7.4.7 Test Report

The test report shall include information required in 3.2.9 and shall:
- define the date and time of carried out measurements,
- identify the test specimen,
- contain test results,

– identify used test device, method, equipment item and its calibration date,
– identify the person carrying out measurements.

7.5 Subjects Engaged in the Development of the Inventory of Hazardous Materials

7.5.1 Companies, individual entrepreneurs or Owner's employees (called HazMat experts, IHM experts or specialists/hazardous materials experts) may be the subjects engaged in the development of the *Inventory of Hazardous Materials* (IHM) and applying for approval.

7.5.2 The subjects engaged in development of IHM shall hold a certificate confirming implementation of ISO 9001 and EN ISO/ICE 17020 Standards or equivalent. A description and procedure confirming compliance with basic requirements of the standards may also be presented.

7.5.3 The scope of provided services shall cover performance of the following activities and tests:
– visual examination,
– control together with specimens taking,
– chemical analyses,
– preparation of the visual and sampling check plan (VSCP),
– preparation of the Inventory of Hazardous Materials Report (IHM Report), photographic documentation,
– development of IHM,
– representing the Owner during the verification of IHM by a recognized organization,
– maintaining and updating IHM during the whole life-cycle of the ship.

If the subject engaged in the development of IHM has in own structure a laboratory carrying out analytic tests, the scope of provided services may also cover all activities mentioned in 7.4.4.

7.5.4 Supervisory Personnel

The employee responsible for the supervision shall have technical education and knowledge of the requirements of European Union, International Maritime Organization – statutory requirements for ship recycling – which allows for carrying out tests in the scope considered.

The supervisory personnel shall be adequately qualified, educated and experienced in respect of handling hazardous materials.

7.5.5 Operators

The personnel developing IHM shall have adequate technical education and knowledge in respect of ship structures and equipment and hazardous materials, as well as of valid regulations concerning hazardous materials, including those which refer to IHM in IMO Res. MEPC.379(80).

If the subject engaged in the development of IHM has in own structure the personnel taking specimens and/or a laboratory carrying out analyzes of the specimens, it is bound with the requirements of 7.5.4. The operators shall be adequately qualified, educated and experienced.

7.5.6 Documentation

Documented procedures shall contain information concerning at least test methods, taking and identification of test specimens, performance of equipment calibration, preparation of reports.

7.5.7 Verification

PRS reserves itself the right to attend the carried out examinations/tests.

List of amendments effective as of 1 November 2024

Item	*Title/Subject*	*Source*
7.4.1	Reference to the IMO document	IMO MEPC.379(80)
7.4.4	Reference to the IMO document	IMO MEPC.379(80)
7.5.5	Reference to the IMO document	IMO MEPC.379(80)