

BRL-K790/04
January 1st, 2026

Evaluation Guideline

for the Kiwa process certificate for
“Application of coating systems on steel
tanks, pipes & fittings”



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Preface

This Evaluation Guideline (BRL) has been drawn up by the Kiwa Board of Experts "Tanks, Tank Installations and Appendages", in which the relevant parties in the field of coatings and coating application are represented. This Board also supervises the implementation of certification activities based on this BRL and where necessary requires this BRL to be revised. All references to the Board of Experts (BoE) in this BRL pertain to the above-mentioned Board of Experts.

Kiwa will use this BRL in conjunction with the Kiwa Regulation for Certification, which define Kiwa's general rules for certification.

NOTE: THIS IS AN ENGLISH TRANSLATION OF THE DUTCH VERSION OF THIS EVALUATION GUIDELINE. IN CASE OF A DISPUTE, THE DUTCH VERSION SHALL BE BINDING.

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Validation

This evaluation guideline has been validated by Kiwa effective 01-01-2026.

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1. Introduction

1.1. General

The requirements included in this BRL are used by Kiwa when processing applications and maintaining a process certificate for "The application of coating systems on steel storage tanks or steel pipes and fittings".

This BRL replaces BRL-K790/03 dated February 1st, 2011, including the amendment sheets dated April 1st, 2013 and March 15th, 2015.

Quality declarations issued based on the previous version of the BRL will in any case lose their validity no later than 12 months after the date this BRL has been validated.

When carrying out certification activities, Kiwa is bound by the requirements laid down in EN ISO/IEC 17065.

1.2. Field of application / scopes

This BRL covers the application of coating and/or paint systems on steel storage tanks and/or steel pipes and fittings. The following scopes are applicable:

1. Scope 1 – Factory applied internal and/or external coatings for:

- Internal coating for flammable liquids certified according to the requirements of BRL-K779 on both underground and above-ground PGS 16, PGS 19, PGS 28, PGS 30, or PGS 31 steel storage tanks and/or steel pipes, and fittings;
- External coating certified according to the requirements of BRL-K768 on underground PGS 16, PGS 19 or PGS 28 steel storage tanks and/or steel pipes, and fittings.

2. Scope 2 – In-situ applied internal and/or external coatings

The in-situ application of internal and/or external coatings as detailed in Scope 1.

3. Scope 3 – In-situ repair of small areas of internal and/or external coatings

In-situ repair of small areas of internal and/or external coatings as detailed in Scope 1 and/or the internal coatings as detailed in Scope 4.

4. Scope 4 – In-situ applied internal coatings on PGS 29 tanks

In-situ application of internal coatings for flammable fluids certified in accordance with the requirements of BRL-K779 on above ground PGS 29 steel storage tanks.

5. Scope 5 – In-situ applied external paint systems on PGS 29, PGS 30 and PGS 31 tanks

In-situ application of external paint systems on above ground PGS 29, PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).

6. Scope 6 – Factory applied external paint systems on PGS 30 and PGS 31 tanks

Factory application of external paint systems on above ground PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).

The applicator can be certified for one or more of the above-mentioned application scopes. This will be stated on the certificate – see Annex I.

1.3. Acceptance of tests reports provided by the supplier

With regard to the requirements laid down in this BRL, the applicant may submit, in the scope of external inspections, reports issued by conformity assessing institutions to prove that the requirements of this BRL are being met. It shall be demonstrated that the respective analysis/inspection/test and/or evaluation reports have been drawn up by a body that complies with the respective applicable accreditation norm with regard to the subject matter, namely:

- EN-ISO/IEC 17020 for inspection bodies;
- EN-ISO/IEC 17021-1 for certification bodies certifying management systems;
- EN-ISO/IEC 17024 for certification bodies certifying persons;
- EN-ISO/IEC 17025 for laboratories;
- EN-ISO/IEC 17065 for certification bodies certifying products, processes, and services.

An organization will be considered as compliant with these criteria if an accreditation certificate, for the respective subject matter, can be submitted which has been issued by the Dutch Accreditation Council (RvA) or another accreditation organization which has been accepted as a member of a multilateral agreement on the

subject of mutual recognition and acceptance of accreditation. If no accreditation certificate can be submitted, the certification organization itself will assess if compliance is given to the accreditation.

1.4. Quality declaration

The quality declarations to be issued by Kiwa based on this BRL will be referred to as Kiwa process certificate. A model of the process certificate has been included for information purposes as Annex I.

2. Terminology

2.1. Definitions

In this BRL, the following terms and definitions apply:

- **Board of Experts:** the Board of Experts Tanks, Tank Installations and Appendages.
- **Certification mark:** a protected trademark, the use of which is authorized by Kiwa to the supplier whose processes can be deemed to comply on delivery with the applicable requirements.
- **Evaluation Guideline (BRL):** The agreements made by the Board of Experts on the subject of certification.
- **Initial investigation:** The initial assessment of the supplier and the examination of the relevant processes for the purpose of the first issuance of a certificate.
- **IQC scheme:** Internal Quality Control scheme which describes the quality controls performed by the supplier as part of their quality system.
- **PGS:** Publication Series on Hazardous Substances.
- **Process certificate:** a document containing a declaration from Kiwa that the processes listed in that document and manufactured by the supplier can be deemed to meet the requirements applicable to those products upon delivery.
- **Process requirements:** concrete requirements expressed in dimensions or numbers, focused on the (identifiable) properties of processes and containing a limit value to be achieved that can be unambiguously calculated or measured.
- **Supplier:** the party responsible for ensuring that the processes continuously meet the requirements on which the certification is based.
- **Surveillance Assessment:** the assessment conducted after certification is granted to determine whether the certified products and/or approved quality-related processes continue to meet the requirements set out in the BRL.

3. Certification procedure

3.1. Initial assessment

The initial assessment to be conducted is based on the process requirements including the relevant test methods as detailed in this BRL, and depends on the type of process to be certified:

- a (sample) examination to determine whether the processes meet the product and/or performance requirements;
- an assessment of the production process;
- an assessment of the quality system and the IQC scheme;
- a review of the presence and functioning of the other required procedures;
- an assessment of the coating supplier's processing instructions.

3.2. Issuing of the certificate

After completing the initial assessment, the results are presented to the decision-maker (see § 13.2) who then assesses the results in order to determine whether the certificate can be issued or whether additional information and/or testing is required before the certificate can be issued.

3.3. Contract assessment

If the supplier is not the manufacturer of the processes to be certified, Kiwa will assess the agreement between the supplier and the manufacturer.

This written agreement, which is available to Kiwa, includes at least that the accreditation bodies, scheme managers, and Kiwa will be given the opportunity to observe the certification activities performed by Kiwa or on behalf of Kiwa at the manufacturer's premises.

4. Process requirements

4.1. General

This chapter contains the requirements the process shall meet, as well as the assessment methods to verify compliance.

Internal and external coatings certified according to the requirements of BRL-K768 or BRL-K779 and applied in accordance with the requirements of this BRL have a life expectancy of at least 20 years.

External paint layers on above-ground storage tanks, applied in accordance with the requirements of this BRL, shall have a life expectancy of at least 15 years.

4.2. Equipment

The applicator shall have equipment suitable for applying and inspecting a coating and/or paint system in accordance with the requirements of this BRL, the instructions of the coating and/or paint manufacturer, and the client.

4.3. Safety and Environmental Regulations

The applicator shall strictly comply with applicable local safety and environmental regulations.

5. Scope 1 – Factory applied internal and/or external coatings

5.1. General

The requirements listed below apply to the factory application of:

- Internal coating for flammable liquids certified according to the requirements of BRL-K779 on both underground and above-ground PGS 16, PGS 19, PGS 28, PGS 30, or PGS 31 steel storage tanks and/or steel pipes, and fittings;
- External coating certified according to the requirements of BRL-K768 on underground PGS 16, PGS 19 or PGS 28 steel storage tanks and/or steel pipes, and fittings.

5.1.1. *Registering work on the Kiwa Portal*

Prior to carrying out the coating application the applicator shall register this work in the Kiwa Portal. This information shall include the date, location, and a description of the work to be performed. This enables the certification body to inspect the work while it is being carried out.

5.2. Surface preparation

5.2.1. *Suitability of substrate to be coated*

The substrate shall be accessible and suitable for the application of coatings, as specified in:

- BRL-K758 for the suitability of the substrate to be coated,
- EN-ISO 12944-3 for the accessibility of the substrate,
- EN 14879-1 for the preparation of the substrate, and
- The coating manufacturer's instructions.

5.2.2. *Surface to be coated*

The surface to be coated shall be dry and free of dirt and grease. In case of doubt, or if the client so requires, the soluble salt content shall be checked at random locations.

The maximum soluble salt content when determined by using the Bresle test shall meet the coating manufacturer's specifications. The test shall be in accordance with EN-ISO 8502-6.

5.2.3. *Blast cleaning abrasives*

The abrasive to be used shall be dry and free of grease and suitable for meeting the requirements specified in § 5.2.4. Metallic abrasives shall meet the requirements of EN-ISO 11124-1, and non-metallic abrasives shall meet the requirements of EN-ISO 11126-1.

5.2.4. *Blast cleaning*

The surface to be coated shall be blast cleaned and, upon application, shall meet a minimum cleanliness level of Sa 2.5 in accordance with EN-ISO 8501-1. The roughness R_z shall be between 50 μm and 100 μm in accordance with EN-ISO 21920-2.

Should the coating manufacturer specify additional requirements, these shall be followed.

5.2.5. *Removal of abrasives*

The used abrasive material shall be completely removed from the surface. The blasted surface shall be made dust-free by using suitable means. This shall be demonstrated by random sampling and, if in doubt, or if the client so requires, by means of the tape test according to EN-ISO 8502-3, whereby the result achieved shall be better than or equal to Class 2. The sampling frequency shall be specified in the IQC scheme.

5.2.6. *Application of the coating in phases*

If the coating is applied in multiple phases, the blasted surface shall be visible beyond this coating.

5.2.7. Climatic conditions after blast cleaning

If necessary, measures shall be taken to maintain the quality of the cleaned surface after blasting. This shall be done in the event that the object is not coated within 8 hours after blast cleaning. The relative humidity shall be $\leq 60\%$ and the temperature of the surface to be coated shall be at least 3 °C above the dew point.

5.2.8. Entering the tank

After blast cleaning, the tank may only be entered wearing dust- and grease-free clothing and clean footwear.

5.3. Coating application

The following conditions shall be met before the coating system can be applied:

- a. The surface shall meet the requirements stated in § 5.2.
- b. Determine and record the object temperature and relative humidity.
- c. Determine and record the dew point.

5.3.1. Temperature and relative humidity

The object to be coated and ambient temperature and relative humidity shall meet the requirements set by the coating manufacturer during application. These shall be monitored and recorded using measuring equipment during application.

5.3.2. Dew point

The dew point shall be determined regularly before and during application, and while the coating is drying. The coating manufacturer's instructions shall be followed. The surface temperature shall be at least 3 °C above the dew point.

5.3.3. Application of the coating

When applying the coating, the following aspects shall be checked (if applicable):

- Brand, type, batch numbers, and shelf life of the coating used
- Dosage
- Correct mixing of coating (components) and any solvents
- Mixing (homogeneity) of the coating components
- Continuous supply of the coating components
- Even distribution of the coating layers
- Wet film thickness
- Object temperature
- Temperature and humidity of the ambient air
- Amount of materials used
- Temperature of the coating (components)
- Pot life
- Induction time
- Recoating times
- Drying times

The coating manufacturer's instructions shall be followed.

5.3.4. Curing

The coating system shall not be subjected to mechanical or chemical loads earlier than specified in the coating manufacturer's instructions.

5.4. Inspection of the applied coating

5.4.1. Accessing the tank

If the tank has to be accessed, this shall be done only when wearing suitable footwear to prevent damage.

5.4.2. Appearance

The coating shall be applied evenly and shall be free of imperfections such as contamination, solvent inclusions, surface coverage, pinholes, sags/drips/wrinkles, and surface defects. Visual inspection of the surface shall be performed with the naked eye, under normal daylight or comparable lighting. For internal coatings, the inspection distance shall be a maximum of 3 meters; for external coatings, a maximum of 5 meters, measured from the surface to be inspected. Within this distance, the aforementioned imperfections shall not be visible.

5.4.3. Coating thickness

The coating thickness to be applied, including the maximum, is specified by the client within the requirements of the coating manufacturer. Measurements shall be taken in accordance with EN-ISO 2808 using a magnetic or electromagnetic coating thickness gauge and with the following frequency:

- 1 measurement per 3 m² for tanks with a volume ≤ 5 m³;
- 1 measurement per 5 m² for tanks with a volume > 5 m³.

5.4.4. Adhesion

In case of doubt, or if the client so requires, the adhesion shall be checked on a random basis in accordance with EN-ISO 4624 on a test panel at least 5 mm thick. The requirement for the absolute adhesion is specified in BRL-K768 or BRL-K779.

5.4.5. Pores

The coating shall be free of pores during the final inspection. In general, the number of times that the coating is spark tested should be kept to a minimum.

Conductive Coating

The pore-free nature of a conductive coating shall be visually inspected and, in cases of doubt, can also be determined by means of a current continuity test using the low-voltage method. The visual inspection shall be performed using a strong light source (comparable to 350 lux white light). With the low-voltage method, the coating to be tested is scanned with a sponge; a reading from the meter or an acoustic signal indicates the presence of pores.

Non-Conductive Coating

To detect pores in the non-conductive coating, the high-voltage method can use a spark test device with a DC or AC power supply. The electrode of the spark test device (e.g., a brush) is slowly moved over the entire surface of the coating. This surface shall be completely dry during the test. The electrode shall remain in constant contact with the coating. A spark will occur in areas where a pore is present.

Testing devices

Low-Voltage Method

The test device for the current continuity test shall consist of a microammeter (measuring range 25 µA) connected in series with a potentiometer and a battery or mains connection with a voltage up to 42 V. The meter's terminal is connected to a damp sponge. To increase conductivity and penetration, the sponge shall be moistened with a solution of 1 part 25% ammonia solution (w/w) and 5 parts 96% ethanol (v/v) in 94 parts distilled water. The device's terminal is connected to the bare metal substrate of the layer to be tested via a spring-loaded cable.

High-voltage method (according to ASTM D 5162)

A voltage-adjustable spark tester is used, adjusted on-site so that the set voltage of the spark tester corresponds to 9 volts per µm of the minimum measured layer thickness. The terminals are connected to the bare metal substrate of the layer to be inspected via a spring-loaded cable.

5.4.6. Indentation resistance

In case of doubt, or if the client so requires, the Buchholz indentation resistance shall be checked on a test plate in accordance with EN-ISO 2815. The coating temperature shall not exceed 25 °C. The indentation resistance is determined based on the arithmetic mean of five measurements and shall meet the requirements of the relevant

(product) BRL. For the absolute value of the Buchholz indentation resistance of a cured coating, refer to the minimum indentation resistance specified by the coating manufacturer. If the above-mentioned measurement encounters practical difficulties, then the hardness can be measured with a Shore D hardness tester in accordance with EN-ISO 868. The hardness shall meet the minimum requirements specified by the coating manufacturer.

5.4.7. *Multi-Layer system*

If the coating is applied in more than one layer, the thickness measurements shall be taken after each layer. The adhesion of the various layers shall also be determined in accordance with the instructions of the coating manufacturer – see § 5.4.4.

5.5. Coating repairs

5.5.1. *Insufficient coating thickness*

Areas with insufficient dry film thickness (DFT) shall be repaired in accordance with the manufacturer's recommended repair method, using the same coating system and corresponding coat build-up. The requirements and tolerances specified in EN-ISO 12944-5 (ISO 19840) apply. If more than 30% of the total coated area has insufficient coating thickness, an additional coat shall be applied over the entire surface. Deviations from this requirement are permitted in consultation with the certification body, the coating manufacturer, and the client. The repair shall be carried out in accordance with the coating manufacturer's instructions and the requirements of § 5.3.

5.5.2. *Imperfections*

Imperfections shall be removed and the area sufficiently roughened to allow for proper repair. The repair shall be carried out in accordance with the coating manufacturer's instructions and the requirements of § 5.3. These minor repairs can be carried out with the repair kits provided by the manufacturer. The applicator can prepare the coating themselves. Checking for the correct mixing ratio is then mandatory.

5.5.3. *Repair inspection*

Repairs shall be inspected in accordance with § 5.4.2, § 5.4.3 and § 5.4.5.

5.6. Inspection report, transport and repair kits

5.6.1. *Inspection report*

The applicator generates the inspection report via the Kiwa Portal, which is added to the tank or tank installation documentation. Also, on underground tanks with an external coating, the following information shall be noted on the coating with a waterproof felt-tip pen:

- Minimum measured layer thickness,
- Maximum applicable spark length (= 2 x minimum measured layer thickness), and
- Date of inspection at the factory.

5.6.2. *Transport*

The client is responsible for the transport (or outsourcing) of the coated material(s) from the factory to the destination, unless otherwise contractually agreed with the applicator. The weather conditions under which transport is prohibited shall be indicated by the coating manufacturer. Unloading the material(s) on site is the client's responsibility. The coated material(s) shall have adequate protection during transport and storage to prevent deterioration in quality.

5.6.3. *Repair kits*

The transporter shall have a repair kit provided by the coating applicator for on-site repairs. The component characteristics and expiration dates shall be clearly marked on the repair kits. Repairs may only be carried out by trained personnel in accordance with a repair procedure that has been approved by the certification body.

6. Scope 2 – In-situ applied internal and/or external coatings

6.1. General

In addition to the requirements of Scope 1 – Factory applied internal and/or external coatings, the following aspects shall be observed during the in-situ application of internal and/or external coatings certified in accordance with the requirements of BRL-K768 or BRL-K779.

6.2. Preparatory work

6.2.1. Client

The tank systems falling under PGS 16, PGS 19, PGS 28, PGS 30, and PGS 31 are provided with an installation certificate issued by an installer certified in accordance with BRL-K901 or BRL SIKB 7800. After the coating application work has been completed, the tank systems shall be recertified. This means that the applicator shall carry out their work in collaboration with the installer. The installer will then issue the order to the applicator, provide the inspection reports and undertake the dismantling work.

6.2.2. Registering work on the Kiwa Portal

See § 5.1.1.

6.2.3. Accessing a tank

Before the applicator accesses a tank, the tank shall be internally cleaned by a company certified in accordance with the requirements of BRL-K905. Where applicable, a safety work permit shall be issued by the owner of the installation. In addition, the applicator shall have a recent (less than 4 hours old) declaration/permit for the tank to be entered.

All applicable articles of AI-05 shall also be observed.

6.2.4. Personal protective equipment

A tank may only be accessed after it has been determined that the prescribed personal protective equipment is present, in good condition, and is being used. This check shall be carried out by the applicator's quality manager. At a minimum, the following personal protective equipment (PPE) shall be worn during work:

- safety shoes with steel toes;
- safety glasses;
- suitable safety clothing;
- suitable safety gloves.

When entering the tank, additional measures shall be taken to measure the oxygen content in the tank. If the oxygen content is < 20%, self-contained breathing apparatus shall be worn. Self-contained breathing apparatus shall also be used during blasting work, with the exception of vacuum blasting.

Safe and certified climbing equipment shall be available for safe access to the tank. The climbing equipment shall be suitable for access through a manhole with a diameter of 600 mm or more. This climbing equipment shall also be designed to minimally reduce the size of the manhole.

Note: Consult the applicable occupational health and safety guidelines for entering tanks with an opening smaller than 600 mm.

To ensure adequate response in the event of an emergency, it shall be possible to evacuate people from the tank safely and responsibly. Appropriate equipment shall be available for this purpose such that a person can be reached and brought to safety in a controlled manner. The system used shall be suitable for lifting or lowering persons, with particular attention to situations where there is a risk of falling.

Additional PPE, such as a safety helmet, may be prescribed at the client's request. Any installer may prescribe additional safety equipment beyond the minimum prescribed PPE. In any case, the personal protective equipment shall be suitable for the work and the materials for which it is intended.

6.2.5. Working on elevated surfaces

When working on elevated surfaces, the applicator shall construct a sturdy platform that allows easy access to all surfaces to be coated. Provisions shall be made to mitigate the risk of falling objects. This shall also be taken into account when demarcating the work area.

During blasting work, the scaffolding floors shall be regularly cleared of abrasive.

6.2.6. Monitoring of the work area

Before commencing work, the ATEX zoning of the surrounding area shall be determined. In the case of ATEX Zone 0 or Zone 1 (gas) or Zone 20 or Zone 21 (dust), the steel tank and all equipment shall be electrically grounded.

6.2.7. Makeup of the application crew

An application crew consists of at least two employees. The crew's quality manager shall be present during the work.

A manhole guard is required when entering the storage tank. The quality manager may also act as the manhole guard. The manhole guard may not perform any other duties during this work.

At locations where residents, customers, or onlookers have easy access to the hazardous area, a safety guard shall be responsible for supervision. This safety guard may be the same person as the manhole guard.

6.2.8. Demarcating the work area for above- and underground tanks

The work area shall be adequately and clearly demarcated. The necessary barriers/road markings/signposting shall be placed prior to execution and will be maintained for the duration of the entire project.

In addition to the above provisions, additional requirements may apply, such as those imposed by petrochemical companies.

Note: Upon commencement of work, the applicator shall ensure that the location-specific risks have been covered by their client.

6.3. Surface to be coated

In addition to § 5.2.2, explicit attention shall be paid to any water-soluble salt contamination. This applies particularly to coastal areas and installations near cooling towers, etc.

6.4. Disposal of environmentally harmful substances

All used blast media, coating products, any solvents, face masks, etc., shall be considered chemical waste and treated as such.

6.5. Application of the coating in phases

If the coating is applied in multiple phases, the blasted surface shall be visible beyond the lining. Grit residue may be present on the bottom of above-ground tanks when coating the walls and roof.

6.6. Existing coating

If a coating other than the one to be applied is already present, the installer shall determine the repair procedure in consultation with the coating manufacturer.

6.7. Work sequence for in-situ repairs of coating systems on tanks

The following work sequence shall be adhered to during the application of the coating:

1. Order by or in collaboration with a tank installer certified in accordance with BRL SIKB 7800.
2. Disassembly work by the installer. The installer shall ensure the accessibility of the tank to be coated.
3. Internal cleaning by a cleaning company certified according to BRL-K905.
4. Issuance of a safety work permit by a recognized body.
5. Inspection of the tank in accordance with the relevant PGS (for pitting corrosion, general corrosion, deformation, slope, external and internal lining, etc.). For underground tanks, this shall be carried out by a company accredited according to AS SIKB 6800 Protocol 6811. For above-ground tanks, this shall be carried out by a company certified according to BRL SIKB 7800 Sub-section 15 or AS SIKB 6800

Protocol 6811. The remaining wall thickness of the tank shall meet the PGS requirements before proceeding to the next phase.

6. Internal inspection of coating suitability by the applicator certified according to BRL-K790. This will be noted on the applicator's inspection report.
7. Application of the coating by the applicator certified according to the requirements of BRL-K790. A certificate will be issued by the applicator.
8. Inspection of the applied coating and providing the client with advice on when the tank may be put into operation.
9. Pressure testing of the tank by the certified installer. Pressure vessels for liquefied gases are inspected in the presence of a Notified Body (NoBo) in accordance with the Pressure Equipment Directive (PED).
10. Tank installation work by the installer. Cleaning of all connections and repair of coating, etc., in accordance with BRL SIKB 7800.
11. Handover to the client.

7. Scope 3 – In-situ repair of small areas of internal and/or external coatings

7.1. General

The requirements listed below apply to in-situ minor repairs of internal or external coatings certified according to the requirements of BRL-K768 or BRL-K779 as detailed in Scope 1 – Factory applied internal and/or external coatings or internal coatings as detailed in Scope 4 – In-situ applied internal coatings on PGS 29 tanks.

These requirements apply to repairs carried out manually on both newly constructed and/or existing storage tanks.

7.2. Repair area for external coatings

The maximum repairable area for external coatings is limited to 100 cm² per location. If the repairable area is exceeded, Scope 2 shall apply.

7.3. Repair area for internal coatings

The maximum repairable area for internal coatings is limited to 100 cm² per location. If the repairable area is exceeded, Scope 2 shall apply.

7.4. Preparatory work

7.4.1. Registering work on the Kiwa Portal

See § 5.1.1.

7.4.2. Accessing a tank

Before the applicator accesses a tank, the tank shall be internally cleaned by a company certified in accordance with the requirements of BRL-K905. Where applicable, a safety work permit shall be issued by the owner of the installation. In addition, the applicator shall have a recent (less than 4 hours old) declaration/permit for the tank to be entered.

All applicable articles of AI-05 shall also be observed.

7.4.3. Personal protective equipment

A tank may only be accessed after it has been determined that the prescribed personal protective equipment is present, in good condition, and is being used. This check shall be carried out by the applicator's quality manager. At a minimum, the following personal protective equipment (PPE) shall be worn during work:

- safety shoes with steel toes;
- safety glasses;
- suitable safety clothing;
- suitable safety gloves.

When entering the tank, additional measures shall be taken to measure the oxygen content in the tank. If the oxygen content is < 20%, self-contained breathing apparatus shall be worn. Self-contained breathing apparatus shall also be used during blasting work, with the exception of vacuum blasting.

Safe and certified climbing equipment shall be available for safe access to the tank. The climbing equipment shall be suitable for access through a manhole with a diameter of 600 mm or more. This climbing equipment shall also be designed to minimally reduce the size of the manhole.

Note: Consult the applicable occupational health and safety guidelines for entering tanks with an opening smaller than 600 mm.

To ensure adequate response in the event of an emergency, it shall be possible to evacuate people from the tank safely and responsibly. Appropriate equipment shall be available for this purpose such that a person can be reached and brought to safety in a controlled manner. The system used shall be suitable for lifting or lowering persons, with particular attention to situations where there is a risk of falling.

Additional PPE, such as a safety helmet, may be prescribed at the client's request. Any installer may prescribe additional safety equipment beyond the minimum prescribed PPE. In any case, the personal protective equipment.

7.4.4. Working on elevated surfaces

When working on elevated surfaces, the applicator shall construct a sturdy platform that allows easy access to all surfaces to be coated. Provisions shall be made to mitigate the risk of falling objects. This shall also be taken into account when demarcating the work area.

During blasting work, the scaffolding floors shall be regularly cleared of abrasive.

7.5. Surface preparation

7.5.1. Blast cleaning

The surface to be coated shall be blast cleaned and, upon application, shall meet a minimum cleanliness level of Sa 2.5 in accordance with EN-ISO 8501-1. The roughness R_z shall be between 50 μm and 100 μm in accordance with EN-ISO 21920-2.

As an alternative to blast cleaning, mechanical brushing (for example, bristle blasting) can be used to clean the surface to be repaired and achieve the required cleanliness and roughness.

If the coating manufacturer specifies additional requirements, these shall be followed.

7.5.2. Climatic conditions after blasting

If necessary, measures shall be taken to maintain the quality of the cleaned surface after blasting. This shall be done in the event that the object is not coated within 8 hours after blast cleaning. The relative humidity shall be $\leq 60\%$ and the temperature of the surface to be coated shall be at least 3 °C above the dew point.

7.6. Curing

The coating system shall not be subjected to mechanical or chemical loads earlier than specified in the coating manufacturer's instructions.

7.7. Inspection report

The applicator generates the inspection report via the Kiwa Portal, which is added to the tank or tank installation documentation.

8. Scope 4 – In-situ applied internal coatings on PGS 29 tanks

8.1. General

In addition to the requirements of Scope 1 – Factory applied internal and/or external coatings and Scope 2 – In-situ applied internal and/or external coatings, the following shall be observed during the in-situ application of internal coatings certified in accordance with the requirements of BRL-K779 on PGS 29 steel tanks for flammable liquids.

8.1.1. *Registering work on the Kiwa Portal*

See § 5.1.1.

8.2. Suitability of substrate to be coated

The coating suitability of the base plates and the connection between the base and the wall requires special attention. This also applies to any existing reinforcement profiles, supporting beams, etc.

This shall be checked both before and after blasting. The client shall be contacted if any discrepancies are found.

8.3. Preparatory work

Before starting the application process, all openings of pipes and fittings shall be sealed.

8.4. Coating application

The coating shall be applied in accordance with § 5.3. In difficult-to-reach areas, it may not be possible to use a spray gun to apply the coating. These surfaces shall then be coated with suitable equipment (e.g., a brush) such that the required layer thickness is achieved. This work shall be carried out in consultation with the coating manufacturer.

When applying multiple coats, the drying times specified by the coating manufacturer shall be observed.

8.5. Adhesion

After application, adhesion shall be randomly checked on test plates in accordance with EN-ISO 4624. The coating on the test plates shall be applied simultaneously with the tank, with curing taking place in the tank. The requirement for absolute adhesion is specified in BRL-K779.

9. Scope 5 – In-situ applied external paint systems on PGS 29, PGS 30 and PGS 31 tanks

9.1. General

In addition to the requirements of Scope 1 – Factory applied internal and/or external coatings and Scope 2 – In-situ applied internal and/or external coatings, the following shall be observed during the in-situ application of external paint systems on above-ground PGS 29, PGS 30, or PGS 31 (BRL SIKB 7800 Primary Areas D, E, or F) steel tanks.

This scope applies to both the new application of external paint systems and the repair of already existing paint systems.

9.2. Action plan

The applicator shall draw up an action plan in consultation with the client. This plan shall explicitly address the treatment of the tank roof and tank wall. The measures related to demarcating the work area shall also be included in this action plan.

9.3. Paint to be applied

The applied paint layers shall be certified according to the requirements of BRL-K21012. When installed outdoors, these paint layers shall preferably be white or light-coloured to reflect as much solar radiation as possible.

9.4. Corrosion zones

For Dutch conditions, the corrosion zones according to EN-ISO 12944-2 Table 1 apply.

9.5. Preparatory work

9.5.1. Surface cleaning

Depending on the agreement made with the client in the action plan (see § 9.2) and the condition of the existing paint layers, the tank can be cleaned with a high-pressure cleaner or by blasting.

If a high-pressure cleaner is used, the tank does not need to be shielded. The surface cleanliness achieved immediately after cleaning with the high-pressure cleaner should meet CVis WJ-2 or DVis WJ-2 according to the requirements of the SSPC-VIS 4(I)/NACE no. 7 standard. The flash rust formed during water drying shall not exceed level L (= Light Flash Rusting). To prevent flash rust, an anti-corrosion agent can be applied. The paint system used shall be appropriate for the pretreatment used.

If blast cleaning is used, the tank shall be completely covered before commencing work. All used abrasive shall be collected and then disposed of. When using anti-corrosion agents, ensure that they are not released into the environment.

10. Scope 6 – Factory applied external paint systems on PGS 30 and PGS 31 tanks

10.1. General

The requirements listed below apply to the factory application of external paint layers on above-ground PGS 30 or PGS 31 (BRL SIKB 7800 Primary Areas D, E, or F) steel tanks.

10.2. Paint to be applied

The applied paint layers shall be certified according to the requirements of BRL-K21012.

When installed outdoors, these paint layers should preferably be white or light-coloured to reflect as much solar radiation as possible.

10.3. Corrosion Zones

For Dutch conditions, the corrosion zones according to EN-ISO 12944-2 Table 1 apply.

10.4. Preparatory work

10.4.1. Suitability of substrate to be painted

The substrate shall be accessible and suitable for coatings, as specified in:

- BRL-K758 for the suitability of the substrate to be coated,
- EN 14879-1 for the preparation of the substrate, and
- The coating manufacturer's instructions.

10.4.2. Surface to be painted

The surface shall be dry and free of dirt and grease.

10.4.3. Blast cleaning abrasives

The abrasive to be used shall be dry and free of grease and suitable for meeting the requirements specified in § 10.4.4. Metallic abrasive shall meet the requirements of EN-ISO 11124-1, and non-metallic abrasive shall meet the requirements of EN-ISO 11126-1.

10.4.4. Blast cleaning

The surface to be painted shall be blast cleaned and, upon application, shall meet a minimum cleanliness level of Sa 2.5 in accordance with EN-ISO 8501-1. The roughness R_z shall be between 50 μm and 100 μm in accordance with EN-ISO 21920-2.

Should the paint manufacturer specify additional requirements, these shall be followed.

10.4.5. Removal of abrasives

The used abrasive material shall be completely removed from the surface. The blasted surface shall be made dust-free by using suitable means. This shall be demonstrated by random sampling and, if in doubt, or if the client so requires, by means of the tape test according to EN-ISO 8502-3, whereby the result achieved shall be better than or equal to Class 2. The sampling frequency shall be specified in the IQC scheme.

10.4.6. Climatic conditions after blast cleaning

At the time of application of the paint system, the surface shall meet the requirements of § 10.4.4. If necessary, measures shall be taken to maintain the quality of the surface after blast cleaning.

10.5. Paint systems application

The following conditions shall be met before the paint system can be applied:

- a. The surface shall meet the requirements stated in § 10.4.
- b. Determine and record the object temperature and relative humidity.
- c. Determine and record the dew point.

10.5.1. Temperature and relative humidity

The object to be painted and ambient temperature and relative humidity shall meet the requirements specified by the paint manufacturer during application. These shall be monitored and recorded using measuring equipment during application.

10.5.2. Dew Point

The dew point shall be determined regularly before and during application, and while the paint is drying. The paint manufacturer's instructions shall be followed. The surface temperature shall be at least 3 °C above the dew point.

10.5.3. Application of the paint system

When applying the paint system, the following aspects shall be checked (if applicable):

- Brand, type, batch number, and shelf life of the paint used
- Dosage
- Correct mixing of paint (components) and any solvents
- Mixing (homogeneity) of the paint components
- Continuous supply of the paint components
- Even distribution of the paint layers
- Object temperature
- Temperature and humidity of the ambient air
- Amount of materials used
- Temperature of the paint (components)
- Pot life
- Induction time
- Time between application of the next paint layer
- Drying times

The paint manufacturer's instructions shall be followed.

10.5.4. Curing

The paint system shall not be subjected to mechanical loads earlier than specified in the paint manufacturer's instructions.

10.6. Inspection of applied paint layers

10.6.1. Appearance

The paint shall be applied evenly and shall be free of imperfections such as contamination, solvent inclusions, surface coverage, pinholes, sags/drips/wrinkles, and surface defects. Visual assessment of the surface shall be performed with the naked eye, under normal daylight or similar lighting, at a maximum distance of 5 meters from the surface to be inspected. Within this distance, the aforementioned imperfections shall not be visible.

10.6.2. Paint thickness

The applicable paint thickness, including the maximum, is specified by the client within the requirements of the paint manufacturer. The applied nominal paint thickness shall meet the requirements of EN-ISO 12944-5. The measurements shall be carried out in accordance with EN-ISO 2808 using a magnetic or electromagnetic thickness gauge and at the frequency specified in ISO 19840.

10.6.3. Adhesion

In case of doubt, or if the client requires, the adhesion shall be checked on a random basis in accordance with EN-ISO 2409. The paint delamination shall not be worse than Class 2. If the paint layer thickness exceeds 250 µm, the adhesion shall be determined in accordance with EN-ISO 4624 on a test panel. The paint supplier specifies the absolute adhesion requirement.

10.7. Paint repairs

10.7.1. *Insufficient paint thickness*

Areas with insufficient dry film thickness (DFT) shall be repaired in accordance with the manufacturer's recommended repair method, using the same paint system and the corresponding layer structure. The requirements and tolerances specified in EN-ISO 12944-5 (ISO 19840) apply. If more than 30% of the total painted area has an insufficient layer thickness, an additional layer shall be applied over the entire surface. Deviations from this requirement are permitted in consultation with the paint manufacturer and the client. The repair shall be carried out in accordance with the paint manufacturer's instructions and the provisions of § 10.5.

10.7.2. *Imperfections*

Imperfections shall be removed and the area sufficiently roughened to allow for proper repair. The repair shall be carried out in accordance with the paint manufacturer's instructions and the provisions of § 10.5. These minor repairs can be carried out with the repair kits provided by the manufacturer. The applicator can mix the paint themselves. Checking for the correct mixing ratio is then mandatory.

10.7.3. *Repair inspection*

Repairs shall be inspected in accordance with § 10.6.1 and § 10.6.2.

10.8. Inspection report and transport

10.8.1. *Inspection report*

The applicator generates the inspection report via the Kiwa Portal, which is added to the tank or tank installation documentation.

10.8.2. *Transport*

The client is responsible for the transport (or outsourcing) of the painted material(s) from the factory to the destination, unless otherwise contractually agreed with the applicator. The paint manufacturer shall specify the weather conditions under which transport is prohibited. Unloading the workpiece(s) on site is the client's responsibility. The painted workpiece(s) shall be adequately protected during transport and storage to prevent deterioration in quality.

11. Requirements in respect of the quality system

This chapter contains the requirements which shall be met with by the supplier's quality system.

11.1. Manager of the quality system

The supplier shall appoint a Quality Systems Manager who shall report directly to the director.

11.2. Internal quality control/quality scheme

The supplier shall have an internal quality control scheme (IQC scheme) which has been implemented within the organisation.

The following shall be demonstrably recorded in this IQC scheme:

- the aspects that are checked by the supplier;
- the methods used to perform such inspections;
- the frequency of these inspections;
- the manner of recording and archiving the inspection results.

This IQC scheme shall be in the format of the model IQC scheme as included in Annex II.

11.3. Control of test and measuring equipment

The applicator shall determine which measuring equipment is required based on this BRL in order to demonstrate that the process meets the specified requirements.

When necessary, the measuring equipment shall be calibrated at specified intervals.

The applicator shall assess the validity of previous measurement results and record them if calibration reveals that the measuring equipment is not functioning correctly.

The measuring equipment in question shall be provided with an identification mark that allows the calibration status to be determined.

The applicator shall record the calibration results.

11.4. Organization and personnel

The tasks, competencies, and organisation of the applicator's employees shall be documented in an organizational chart or structure diagram. The responsible and authorized individuals per company and per shift, along with their deputies, who are responsible for monitoring and verifying the execution of the work in accordance with all regulations, shall always be known to the certification body. Any organizational changes shall be reported to Kiwa in writing by the company.

11.5. Personnel qualification

The applicator shall be able to demonstrate that the workers are competent and have sufficient experience. This can be demonstrated by submitting the job description and a personnel file containing relevant training and experience information for all employees performing these tasks.

The following requirements apply:

Quality Manager for on-site work

The Quality Manager shall meet at least the following requirements:

- Fully familiar with this BRL and the underlying documents or parts of documents that directly relate to the work specified in this BRL;
- Knowledge of all applicable procedures and the emergency plan;
- Training: Use of respiratory protection in confined spaces, if applicable;
- Training: Use of fire extinguishing equipment if an emergency response officer is not present;
- Education: Safety, for example, "Basic Safety VCA".

Applicator

The applicator shall meet at least the following requirements:

- Fully familiar with this BRL and the underlying documents or parts of documents that directly relate to the applicable work;
- Training: Use of respiratory protection in confined spaces, if applicable;

- Education: Safety, for example, "Basic Safety VCA".

The following is recommended:

- Training: Use of fire extinguishing equipment.

Manhole Watch or Safety Watch

The manhole watch shall meet at least the following requirements:

- Knowledge of all applicable procedures and the emergency plan;
- If the safety watch is also required to carry out gas measurements, they shall also have completed a "Gas Measurement" instruction. This shall be specifically tailored to the Ex/O2 meter used on site. This is the responsibility of the quality manager on site, who shall have arranged this before commencing work. If the manhole guard has completed training in gas measurement, this instruction may be omitted if he or she is familiar with the meter present.

11.6. Procedures and working instructions

The supplier shall be able to provide the following:

- procedures for:
 - o handling process deviations;
 - o corrective actions to be taken if non-conformities are found;
 - o handling complaints about delivered products and/or services;
- the work instructions and inspection forms used.

11.7. Warehouse storage

The applicator shall store the inventory under the conditions specified by the abrasive material and/or the coating or paint manufacturer. The specified shelf life of the various material shall be taken into account. Stock that has not yet been used beyond its expiration date, may only be used after written approval from the manufacturer has been obtained.

12. Summary of tests and inspections

This chapter contains a summary of the tests and inspections to be carried out for certification:

- **Initial investigation:** the investigation necessary to determine whether all the requirements of the BRL are fulfilled;
- **Follow-up investigation:** the surveillance investigation carried out after granting the certificate to ensure that the certified process continue to comply with the requirements laid down in this BRL. The investigations are carried out by the certification body according to the indicated frequency;
- **inspection of the supplier's quality system:** monitoring compliance with the IQC scheme and procedures.

12.1. Test matrix

Description of requirement	Article BRL	Class (see Note)	Investigation within the scope of:		
			Initial Investigation	Follow-up investigation by Kiwa after certificate is granted ^{a) b)}	
				Inspection	Frequency
Process requirements					
Equipment	4.2	1	X	When changed	When changed
Safety and Environmental Regulations	4.3	1	X	X	Each visit
Scope 1 – Factory applied internal and/or external coatings					
Surface preparation	5.2	2	X	X	Each visit
Coating application	5.3	1	X	X	Each visit
Inspection of the applied coating	5.4	1	X	X	Each visit
Coating repairs	5.5	2	X	X	Each visit
Inspection report, transport and repair kits	5.6	2	X	X	Each visit
Scope 2 – In-situ applied internal and/or external coatings					
Preparatory work	6.2	2	X	X	Each visit
Surface to be coated	6.3	2	X	X	Each visit
Disposal of environmentally harmful substances	6.4	3	X	X	Each visit
Application of the coating in phases	6.5	3	X	X	Each visit
Existing coating	6.6	2	X	X	Each visit
Work sequence for in-situ repairs of coating systems on tanks	6.7	2	X	X	Each visit
Scope 3 – In-situ repair of small areas of internal and/or external coatings					
Repair area for external coatings	7.2	2	X	X	Each visit
Repair area for internal coatings	7.3	2	X	X	Each visit
Preparatory work	7.4	1	X	X	Each visit
Surface preparation	7.5	1	X	X	Each visit
Curing	7.6	2	X	X	Each visit
Inspection report	7.7	2	X	X	Each visit
Scope 4 – In-situ applied internal coatings on PGS 29 tanks					
Suitability of substrate to be coated	8.2	1	X	X	Each visit
Preparatory work	8.3	2	X	X	Each visit
Coating application	8.4	1	X	X	Each visit
Adhesion	8.5	1	X	X	Each visit
Scope 5 – In-situ applied external paint systems on PGS 29, PGS 30 and PGS 31 tanks					
Action plan	9.2	1	X	X	Each visit
Paint to be applied	9.3	1	X	X	Each visit
Corrosion zones	9.4	1	X	X	1x / year
Preparatory work	9.5	2	X	X	Each visit

Description of requirement	Article BRL	Class (see Note)	Investigation within the scope of:		
			Initial Investigation	Follow-up investigation by Kiwa after certificate is granted ^{a) b)}	
				Inspection	Frequency
Scope 6 – Factory applied external paint systems on PGS 30 and PGS 31 tanks					
Paint to be applied	10.2	1	X	X	Each visit
Corrosion Zones	10.3	1	X	X	1x / year
Preparatory work	10.4	2	X	X	Each visit
Paint systems application	10.5	1	X	X	Each visit
Inspection of applied paint layers	10.6	1	X	X	Each visit
Paint repairs	10.7	2	X	X	Each visit
Inspection report and transport	10.8	2	X	X	Each visit
Requirements in respect of the quality system					
Manager of the quality system	11.1	2	X	X	Each visit
Internal quality control/quality scheme	11.2	2	X	X	Each visit
Control of test and measuring equipment	11.3	2	X	X	1x / year
Organization and personnel	11.4	2	X	X	1x / year
Personnel qualification	11.5	2	X	X	1x / year
Procedures and working instructions	11.6	2	X	X	1x / year
Warehouse storage	11.7	3	X	X	1x / year

^{a)} = If the process or production process is changed, the process shall be reassessed, in consultation between the supplier and Kiwa, in order to determine whether it meets the performance requirements.

^{b)} = During the follow-up investigation, the inspector will inspect the process by means of a selection of the above mentioned marked process requirements. The frequency of the follow-up visits is defined in § 13.5 of this BRL.

Note:

Non-conformities noted during inspection visits are classified as follows:

- 1 = Critical: These lead to dangerous or unsafe situations. The supplier shall, in consultation with the certification body, take corrective measures within two weeks. Exceeding this period will result in suspension of the certificate.
- 2 = Important: These influence the quality of the product in the longer term. The shall, in consultation with the certification body, take corrective measures within three months. Exceeding this period will result in suspension of the certificate.
- 3 = Less important: These deviations are less important but shall be corrected in due course. This will be tested during the next assessment visit.

12.2. Assessment of the quality system

The supplier's quality system will be assessed by Kiwa based on the IQC scheme.

The inspection contains at least those aspects mentioned in § 11.

13. Agreements on the implementation of certification

13.1. General

The certification body shall have regulations, or an equivalent document, which detail the general rules that are used for certification.

13.2. Certification staff

The staff involved in the certification may be sub-divided into:

- Certification assessor/Reviewer (**CAS/RV**): in charge of carrying out the design and documentation evaluations, pre-certification tests, initial investigations, and evaluation of applications and reviewing of conformity assessments.
- Site assessor (**SAS**): in charge of carrying out external inspections at the supplier's works;
- Decision maker (**DM**): responsible for deciding whether the supplier can be certified on the basis of the initial investigation, for deciding whether the certificate can be continued on the basis of the subsequent inspections, and for taking decisions on the implementation of the corrective actions.

Qualification requirements certification staff

The qualification requirements for all personnel of a certification body performing certification activities are detailed in Table 1. The education and experience of the certification personnel shall be recorded in a traceable manner.

Table 1: Qualification criteria

Basic competences	Evaluation criteria
Knowledge of company processes. Skills for conducting professional assessments on products, processes, services, installations, design, and management systems.	Relevant work experience SAS, CAS/RV: 1 year DM: 5 years, including 1 year related to certification Relevant technical knowledge and experience at the level of: SAS: Middel level education (MBO) CAS/RV, DM: Bachelor (HBO)
Skills for conducting site assessments. Adequate communication skills (including report writing, presentation skills, and interview skills).	SAS: Kiwa Audit training or equivalent and 4 site assessments of which at least 1 under supervision.
Conduction of Initial Investigation	CAS: 3 initial assessments under supervision.
Conducting of reviews	RV: Evaluation of 3 reviews
Technical competences	Evaluation criteria
Education	General: <ul style="list-style-type: none"> • Relevant working and operating knowledge at a middle or higher technical education level (MBO/HBO). • Specific courses and training (knowledge and skills)
Performing of tests	General: Performance of tests (per scheme).
Experience – specific	CAS <ul style="list-style-type: none"> • 3 complete assessments (excluding the initial assessment of the production site) under supervision of a CAS; • 1 complete initial assessment (to be evaluated by PM); • 3 initial assessments of the production site under the supervision of the PM; SAS <ul style="list-style-type: none"> • 4 inspection assessments together with a qualified SAS; • 1 inspection assessment self-reliant (evaluated by PM)
Skills in performing witnessing	PM Internal training witness testing

Legenda:

- Product manager: (PM)
- Site assessor (SAS)
- Certification assessor (CAS)
- Reviewer (RV)
- Decision maker (DM)

Qualifications certification staff

The qualification of the Certification staff shall be demonstrated by means of assessing the education and experience in accordance with the above requirements. In case the certification staff is qualified on the basis of alternative criteria, written records shall be kept.

The authority to qualify the certification staff shall be laid down in the quality system of the certification body.

13.3. Report initial assessment

The certification body records the results of the initial investigation in a report. This report shall comply with the following requirements:

- **Completeness:** the report provides a verdict about all requirements included in the BRL;
- **Traceability:** the findings on which the verdicts have been based shall be recorded and traceable;
- **Basis for decision:** the DM shall be able to base their decision on the findings included in the report.

13.4. Decision for granting the certificate and/or imposition of measures

The decision for granting the certificate and/or the imposition of measures with regard to the certificate shall be based on the results recorded in the file.

The results of an initial investigation and a periodic assessment (in case of critical non-conformities) shall be assessed by the reviewer (RV).

Based on the review, the decision maker (DM) will decide if:

- The certificate can be granted,
- Sanctions are imposed,
- The certificate shall be suspended or revoked.

The reviewer and the decision maker shall not have been involved in the preparation of the results based on which the decision is being made.

The decision shall be recorded in a traceable manner.

13.5. Nature and frequency of third party assessments

The certification body shall carry out surveillance assessments on site at the supplier at regular intervals to verify compliance of the supplier with their obligations. The Board of Experts decides on the frequency of assessments.

At the time of validation of this BRL, the assessment frequency has been fixed at 4 assessments per year.

The assessments to be performed by the certification body are detailed in the test matrix (see § 12.1) and shall cover at least:

- the product specifications specified in the certificate;
- the production process;
- the supplier's IQC Scheme and the results of the inspections performed by the supplier;
- the correct marking of the certified products;
- compliance with the required procedures;
- dealing with complaints about delivered products.

The results of each assessment shall be recorded by Kiwa in a traceable manner in a report.

13.6. Non conformities

When the certification requirements are not met, measures will be taken by Kiwa in accordance with the sanctions policy as detailed in the Kiwa Regulation for Certification. The Kiwa Regulation for Certification is available page on the Kiwa website.

The following applies to the classification and follow-up of non-conformities and the relevant sanctions policy.

13.6.1. Classification of non-conformities

When assessing a non-conformity observed during an assessment after the certification body has issued the process certificate, a distinction is made between:

- Non-conformities considered critical are those that can directly impact the quality and/or performance of the product and/or process;
- "Other" non-conformities (Important and Less important non-conformities).

13.6.2. Follow-up of non-conformities

The follow-up procedure for non-conformities by a certification body is as follows:

- The certification body shall be able to deal with critical non-conformities within the time frame established by the certification body, but shall not exceed a maximum of 10 working days;
- The certification body shall be able to deal with Important non-conformities within the time frame established by the certification body, but shall not exceed the maximum term of 3 months,
- The certification body shall be able to deal with Less Important non-conformities during the next assessment visit.

13.7. Report to the Board of Experts

The certification body shall report annually to the Board of Experts regarding the certification activities performed. In this report the following aspects shall be included

- mutations in number of issued certificates (granted/withdrawn);
- number of assessments executed in relation to the frequency determined by the BoE;
- results of the assessments;
- measures imposed in case of non-conformities;
- complaints received from third parties about certified processes.

13.8. Interpretation of requirements

The Board of Experts may record the interpretation of requirements set out in this BRL in one or more separate interpretation documents. The interpretation documents will be available to the members of the BoE, the certification bodies, and the certificate holders operating under this BRL and will be published on Kiwa's website.

13.9. Specific rules set by the Board of Experts

The Board of Experts may define the interpretation of the requirements set out in this assessment guideline in a separate interpretation document.

14. List of documents

14.1. Normative documents

Number *	Title
AI-05	Working safely in confined spaces – Official Journal of the Labour Inspectorate
ASTM D 5162	Discontinuity (Holiday) testing of nonconductive protective coatings on metallic substrates
BRL-K758	Coating suitability of metal products to be coated
BRL-K768	External epoxy coatings for underground steel tanks, pipes and fittings
BRL-K779	Internal coating on steel tanks for flammable liquids
BRL-K901	Regulation for the Recognition of Installers of tanks and pipes for the storage of LPG, propane, butane, DME and natural gas (REIP)
BRL-K904	Tank clean-up and removal
BRL-K905	Tank cleaning
BRL-K21012	External paint systems
BRL SIKB 7800	Regulation for the Recognition of Tank Installation Installers (REIT)
EN 14879-1	Organic coating systems and linings for protection of industrial apparatus and plants against corrosion caused by aggressive media – Part 1: Terminology, design and preparation of substrate
EN-ISO 2409	Paints and varnishes – Cross-cut test
EN-ISO 2808	Paints and varnishes – Determination of film thickness
EN-ISO 2815	Paints and varnishes – Buchholz indentation test
EN-ISO 4624	Paints and varnishes – Pull-off test for adhesion
EN-ISO 8501-1	Preparation of steel substrates before application of paints and related products – Visual assessment of surface cleanliness – Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings
EN-ISO 8502-3	Preparation of steel substrates before application of paints and related products – Tests for the assessment of surface cleanliness – Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)
EN-ISO 8502-6	Preparation of steel substrates before application of paints and related products – Tests for the assessment of surface cleanliness – Part 6: Extraction of water soluble contaminants for analysis (Bresle method)
EN-ISO 11124-1	Preparation of steel substrates before application of paints and related products – Specifications for metallic blast-cleaning abrasives – Part 1: General introduction and classification
EN-ISO 11126-1	Preparation of steel substrates before application of paints and related products – Specifications for non-metallic blast-cleaning abrasives – Part 1: General introduction and classification
EN-ISO 12944-2	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 2: Classification of environments
EN-ISO 12944-3	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 3: Design considerations
EN-ISO 12944-5	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 5: Protective paint systems
EN-ISO 12944-6	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Part 6: Laboratory performance test methods
EN-ISO 21920-2	Geometrical product specifications (GPS) – Surface texture: Profile – Part 2: Terms, definitions and surface texture parameters
EN-ISO/IEC 17020	Conformity assessment - General criteria for the operation of various types of bodies performing inspection
EN ISO/IEC 17021	Conformity assessment - Requirements for bodies providing audit and certification of management systems
EN-ISO/IEC 17024	Conformity assessment - General requirements for bodies operating certification of persons
EN-ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories

EN-ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes, and services
ISO 19840	Paints and varnishes – Corrosion protection of steel structures by protective paint systems – Measurement of, and acceptance criteria for, the thickness of dry films on rough surfaces
PGS 16	Autogas (LPG)
PGS 19	Propane Storage: Guidelines for fire-safe, occupationally safe, and environmentally safe stationary propane storage
PGS 28	Liquid petroleum products – Delivery facilities and underground storage
PGS 29	Liquid petroleum products – Above-ground storage in vertical cylindrical tanks
PGS 30	Liquid petroleum products – Outdoor storage in small installations
PGS 31	Other hazardous liquids – Storage in underground and above-ground tank installations
SSPC-VIS 4(I) / NACE no.7	Interim Guide and Visual Reference Photographs for Steel Cleaned by Water Jetting

*) If no year of issue is specified in this column, the current version of the document applies. For documents with a year of issue an annual verification will take place to verify if the normative documents are still up to date. Modifications of the applicable normative documents will be published on the services page of Kiwa’s website.

Annex I Model certificate (example)

<h1>Certificate</h1>	Process certificate K-XXXXXXXX-X	
	Valid from <input type="text" value="Fill in date"/>	Replaces <input type="text" value="Fill in text"/> Page <input type="text" value="1 of xx"/>
<h2>Application of coatings on steel storage tanks or steel pipes and fittings</h2>		
<p>STATEMENT BY KIWA Based on pre-certification tests as well as periodic inspections by Kiwa, the products referred to in this certificate and marked with the Kiwa-mark as indicated under 'Marking', supplied by</p>		
<h3>Name of business</h3>		
<p>may, on delivery, be relied upon to comply with the Kiwa guideline K790/04. "Application of coatings on steel storage tanks or steel pipes and fittings" dated 2026-01-01 for the following scopes:</p>		
<ol style="list-style-type: none">The factory applied internal and/or external coatings for:<ul style="list-style-type: none">Internal coating for flammable liquids certified according to the requirements of BRL-K779 on both underground and above-ground PGS 16, PGS 19, PGS 28, PGS 30, or PGS 31 steel storage tanks and/or steel pipes, and fittings;External coating certified according to the requirements of BRL-K768 on underground PGS 16, PGS 19 or PGS 28 steel storage tanks and/or steel pipes, and fittings.The in-situ application of internal and/or external coatings as detailed in Scope 1.In-situ repair of small areas of internal and/or external coatings as detailed in Scope 1 and/or the internal coatings as detailed in Scope 4.In-situ application of internal coatings for flammable fluids certified in accordance with the requirements of BRL-K779 on above ground PGS 29 steel storage tanks.In-situ application of external paint systems on above ground PGS 29, PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).Factory application of external paint systems on above ground PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).		
<p>Wim van Loon Managing Director Nederland</p>		
<p><i>Publication of this certificate is allowed.</i> <i>Advice: consult www.kiwa.com in order to ensure that this certificate is still valid.</i></p>		
		
<p>Kiwa Nederland B.V. Sir Winston Churchilllaan 273 P.O. Box 70 2280 AB RUSWIJK The Netherlands Tel. +31 88 998 44 00 NL.Kiwa.Info@kiwa.com www.kiwa.com</p>	<p>Certificate holder Fill in text</p>	<p>Production location Fill in text</p>

2025/0001

Application of coating systems on steel tanks, pipes & fittings

PROCESS SPECIFICATION

The certificate is applicable for the following scopes:

1. The factory applied internal and/or external coatings for:
 - Internal coating for flammable liquids certified according to the requirements of BRL-K779 on both underground and above-ground PGS 16, PGS 19, PGS 28, PGS 30, or PGS 31 steel storage tanks and/or steel pipes, and fittings;
 - External coating certified according to the requirements of BRL-K768 on underground PGS 16, PGS 19 or PGS 28 steel storage tanks and/or steel pipes, and fittings.
 2. The in-situ application of internal and/or external coatings as detailed in Scope 1.
 3. In-situ repair of small areas of internal and/or external coatings as detailed in Scope 1 and/or the internal coatings as detailed in Scope 4.
 4. In -situ application of internal coatings for flammable fluids certified in accordance with the requirements of BRL-K779 on above ground PGS 29 steel storage tanks.
 5. In-situ application of external paint systems on above ground PGS 29, PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).
 6. Factory application of external paint systems on above ground PGS 30 or PGS 31 steel tanks (BRL SIKB 7800 Scope D, Scope E or Scope F).
-

Application and use

The process covers the application of airless coating systems according to:

- BRL-K790: Applying coatings to steel tanks or steel pipes and fittings
 - Additional requirements of the customer;
 - Regulations of the supplier of the coating or paint.
-

Marking

The products are marked with the Kiwa quality mark.

The implementation of this brand is as follows:

Kiwa K-XXXXXXX

Application company Coater B.V.

Location of the mark:

A Coating Application Inspection Report will be provided, and if the contractor so requests, a marking will be placed on the outside of the storage tank.

Tips for the customer

1. Upon delivery of the product check whether:
 - 1.1 the delivered product was as agreed;
 - 1.2 the products show no visible defects (e.g. as a result of transport).
 2. If you reject the product on the basis of the above, please contact:
 - 2.1 Application Company B.V. in Blast Cityand if necessary with:
 - 2.2 Kiwa Nederland B.V.
 3. For the correct method of handling, transport and storage, consult the instructions given by the certificate holder.
 4. Check whether this certificate is still valid by consulting www.kiwa.nl.
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Annex II Model IQC Scheme (example)

Inspection item	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or supplied materials: <ul style="list-style-type: none"> • Receiving inspection coating or paint • Receiving inspection blast abrasive 				
Production process, production equipment, other equipment: <ul style="list-style-type: none"> • Procedures • Working instructions • Equipment • Other equipment 				
Finished products <ul style="list-style-type: none"> • Appearance • Coating thickness • Adhesion 				
Measuring and testing equipment <ul style="list-style-type: none"> • Measuring equipment • Calibration 				
Logistics <ul style="list-style-type: none"> • Internal transport • Storage • Packaging • Preservation • Identification and marking 				