BRL-K778

2019-10-24

Concept design

Evaluation Guideline

for the Kiwa process certificate for
internal cement mortar lining for pipes

Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of internal cement mortar lining for pipes are represented. The Board of Experts also supervises the certification activities and where necessary requires the evaluation guideline to be revised. All references to Board of Experts in this evaluation guideline pertain to the above mentioned Board of Experts.

This evaluation guideline will be used by Kiwa in conjunction with the Kiwa Regulations for Certification.

It has been chosen to:

- BRL-K770; Internal cement mortar lining of existing underground pipes : dated 2012-02-01;
- BRL-K778; Internal cement mortar lining for pipes to be laid underground: dated 2012-02-01,

Merge into a new version of BRL-K778.

The new version of BRL-K778 will also be implemented as a process certification evaluation guideline.

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Binding declaration
This evaluation guideline has been declared binding by Kiwa on Date

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Contents

1	**Introduction**	**4**
1.1	General	4
1.2	Field of application / scope	4
1.3	Acceptance of test reports provided by the supplier	4
1.4	Quality declaration	4
2	**Terms and definitions**	**5**
2.1	Definitions	5
3	**Procedure for granting a process certificate**	**6**
3.1	Initial investigation	6
3.2	Granting the process certificate	6
4	**Requirements**	**7**
4.1	General	7
4.2	Regulatory requirements	7
4.3	Private requirements	7
5	**Process requirements**	**9**
5.1	General	9
5.2	Application of cement mortar in a production environment	9
5.3	Application of cement mortar at location	9
6	**Marking**	**13**
6.1	Cement	13
6.2	Applied cement mortar in production environment	13
6.3	Application of cement mortar at location	13
7	**Requirements in respect of the quality system**	**14**
7.1	Manager of the quality system	14
7.2	Internal quality control/quality plan	14
7.3	Control of test and measuring equipment	14
7.4	Procedures and working instructions	14
7.5	Other requirements	14
8	**Summary of tests and inspections**	**15**
8.1	Test matrix	15
8.2	Inspection of the quality system of the supplier	16

9	**Agreements on the implementation of certification**	**17**
9.1	General	17
9.2	Certification staff	17
9.3	Report initial investigation	18
9.4	Decision for granting the certificate	19
9.5	Layout of quality declaration	19
9.6	Nature and frequency of third party audits	19
9.7	Non conformities	19
9.8	Report to the Board of Experts	20
9.9	Interpretation of requirements	20
9.10	Specific rules set by the Board of Experts	20
10	**Titles of standards**	**21**
10.1	Public law rules	21
10.2	Standards / normative documents	21
I	**Model certificate (example)**	**22**
II	**Model IQC-scheme (example)**	**24**

1 Introduction

1.1 General

This evaluation guideline includes all relevant requirements which are employed by Kiwa when dealing with applications for the issue and maintenance of a process certificate for internal cement mortar lining for pipes.

This guideline replaces the evaluation guidelines BRL-K770 dated 2012-02-01 and BRL-K778 dated 2012-02-01.
The quality declarations issued and based on those guidelines will lose their validity at least 2 years after validation of this BRL.

For the performance of its certification work, Kiwa is bound to the requirements as included in NEN-EN-ISO/IEC 17065 “Conformity assessment - Requirements for bodies certifying products, processes and services”.

1.2 Field of application / scope

The process relates to the internal lining by means of cement mortar of distribution and transport pipes for drinking and raw water intended for the preparation of drinking water. The pipes can be made of steel or cast iron. The internal lining refers to new products to be produced as well as to products that are applied or repaired on site.

1.3 Acceptance of test reports provided by the supplier

If the supplier provides reports from test institutions or laboratories to prove that the products meet the requirements of this evaluation guideline, the supplier shall prove that these reports have been drawn up by an institution that complies with the applicable accreditation standards, namely:

- NEN-EN-ISO/IEC 17020 for inspection bodies;
- NEN-EN-ISO/IEC 17021-1 for certification bodies certifying systems;
- NEN-EN-ISO/IEC 17024 for certification bodies certifying persons;
- NEN-EN-ISO/IEC 17025 for laboratories;
- NEN-EN-ISO/IEC 17065 for certification bodies certifying products.

Remark:
This requirement is considered to be fulfilled when a certificate of accreditation can be shown, issued either by the Board of Accreditation (RvA) or by one of the institutions with which an agreement of mutual acceptance has been concluded by the RvA. The accreditation shall refer to the examinations as required in this evaluation guideline. When no certificate of accreditation can be shown, Kiwa shall verify whether the accreditation standard is fulfilled.

1.4 Quality declaration

The quality declaration to be issued by Kiwa is described as a Kiwa product certificate.
A model of the certificate to be issued on the basis of this evaluation guideline has been included for information as Annex.

2 Terms and definitions

2.1 Definitions

In this evaluation guideline, the following terms and definitions apply:

- **Board of Experts**: the Board of Experts Watercycle (CWK);
- **Certification mark**: a protected trademark of which the authorization of the use is granted by Kiwa, to the supplier whose products can be considered to comply on delivery with the applicable requirements and possibly with quality information on the application of the product is added by a specially designed label which is based on the result , as stated in the report issued by Kiwa on the inspection of the prototype;
- **Distribution network**: assembly of pipes and associated couplings, valves and other technical provisions for the transport and delivery of drinking water, not being a collective pipe network (source Dutch drinking water act);
- **Drinking water:** water intended or partly intended for drinking, cooking or food preparation or other domestic purposes, but does not include hot water, and is made available by pipeline to consumers or other customers;
- **Drinking water installation:** an installation direct or in-direct connected to the public drinking water distribution network of a drinking water company (source Dutch drinking water act);
- **Evaluation Guideline (BRL)**: the agreements made within the Board of Experts on the subject of certification;
- **Installation:** configuration consisting the pipe work, fittings and appliances;
- **Inspection tests**: tests carried out after the certificate has been granted in order to ascertain whether the certified products continue to meet the requirements recorded in the evaluation guideline;
- **IQC scheme (IQCS):** a description of the quality inspections carried out by the supplier as part of his quality system;
- **Initial investigation**: tests in order to ascertain that all the requirements recorded in the evaluation guideline are met;
- **Private Label Certificate:** A certificate that only pertains to products that are also included in the certificate of a supplier that has been certified by Kiwa, the only difference being that the products and product information of the private label holder bear a brand name that belongs to the private label holder;
- **Process certificate:** a document in which Kiwa declares that a process may, on delivery, be deemed to comply with the process specification recorded in the process certificate;
- **Process requirements:** requirements made specific by focussing on (identifiable) characteristics of products and containing a limiting value to be achieved, which can be calculated or measured in an unequivocal manner;
- **Product certificate**: a document in which Kiwa declares that a product may, on delivery, be deemed to comply with the product specification recorded in the product certificate;
- **Product requirements**: requirements made specific by means of measures or figures, focussing on (identifiable) characteristics of products and containing a limiting value to be achieved, which can be calculated or measured in an unequivocal manner;
- **Supplier**: the party that is responsible for ensuring that the products meet and continue to meet the requirements on which the certification is based.

3 Procedure for granting a process certificate

3.1 Initial investigation

The initial investigation to be performed are based on the product and process requirements as contained in this evaluation guideline, including the test methods, and comprises the following:

- type testing to determine whether the process complies with the process and/or functional requirements;
- production process assessment;
- assessment of the quality system and the IQC-scheme;
- assessment on the presence and functioning of the remaining procedures.

3.2 Granting the process certificate

After finishing the initial investigation, the results are presented to the Decision maker (see 9.2) deciding on granting the certificate. This person evaluates the results and decides whether the certificate can be granted or if additional data and/or tests are necessary.

4 Requirements

4.1 General

This chapter contains the requirements that internal cement lining for pipes have to fulfil.

4.2 Regulatory requirements

4.2.1 Requirements to avoid deterioration of the quality of drinking water

Products and materials which (may) come into contact with drinking water or warm tap water, shall not release substances in quantities which can be harmful to the health of the consumer, or negatively affect the quality of the drinking water. Therefore, the products or materials shall meet toxicological, microbiological and organoleptic requirements as laid down in the currently applicable "Ministerial Regulation materials and chemicals drinking water and warm tap water supply", (published in the Government Gazette). Consequently, the procedure for obtaining a recognized quality declaration, as specified in the currently effective Regulation, has to be concluded with positive results.
Products and materials with a quality declaration[1], e.g. issued by a foreign certification institute, are allowed to be used in the Netherlands, provided that the Minister has declared this quality declaration equivalent to the quality declaration as meant in the Regulation.

4.2.2 Suitability of cement

Cement must comply with REGULATION (*Verordening*) (EU) Nr. 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 that establishes harmonized conditions for the marketing of construction products.[2]

4.3 Private requirements

4.3.1 Product requirements

The requirements of the cement mortar are specified in the table below with exception of those articles for which the requirements are specified in 4.3.2 :

EN 197-1	Cement - Part 1: Composition, specifications and conformity criteria for ordinary cement types
Mixing water	The mixing water used for the production of cement mortar may only be drinking water.
Sand	Only quartz sand may be used for production sand. The grain size of the sand must be less than or equal to 1 mm.
Additives	Additives may be used if the processing requirements of the cement supplier so require. In addition, these additives must comply with article **Error! Reference source not found.** of this BRL.

[1] A quality declaration issued by an independent certification institute in another member state of the European Community or another state party to the agreement to the European Economic Area, is equivalent to a recognized quality declaration, to the extent that, to the judgment of the Minister of the first mentioned quality declaration, is fulfilled the at least equivalent requirements as meant in the Regulation materials and chemicals drinking water- and warm tap water supply.
[2] Also known as Construction Product Regulations.

4.3.2 Additional Product Requirements

In addition to the requirements specified under **Error! Reference source not found.**, the following applies:

4.3.2.1 Mixing the cement mortar

For the mixing of cement, water, sand and additives, the supplier's processing instructions must be followed on the understanding that:
The mixing of the components must be carried out in mass parts as a function of the end product with an accuracy of:

- ± 1.5% of the target value for cement;
- ± 2% of the target value for sand;
- ± 2% of the target value for water;
- ± 3% of the target value for additives.

The mortar must be mixed very thoroughly until obtaining a homogeneous mass.

4.3.2.2 Hygienic treatment of products in contact with drinking water

The supplier must have a procedure in place that protects the products in such way, that the hygiene is ensured during storage and transport.
In addition, the supplier shall inform the customer about the handling of products delivered under the certificate, which come into contact with drinking water and warm tap water, from arriving at the construction site through to the realization and commissioning. The primary reason for providing this the information is to contribute to the awareness of the importance of hygienic work as a ‘prevention measure’.

5 Process requirements

5.1 General

This chapter describes the process requirements that must be met when applying the cement mortar according to H**Error! Reference source not found.** in both a conditioned production environment and on location in the (outside) air.

5.2 Application of cement mortar in a production environment

The cement mortar must be mixed according to 4.3.2.1 and applied in a conditioned production environment. The mixing of cement mortar and its application shall be checked according to the IQC scheme.

5.3 Application of cement mortar at location

The equipment, tools and any other resources used shall comply with **Error! Reference source not found.**.

5.3.1 Cleaning and assessing surface condition

5.3.1.1 Inflowing water

The contractor shall take measures to ensure that during preparatory work, cleaning, cementing, curing and putting a pipeline into operation, no inflowing water that could cause groundwater or other water to enter the pipe, is present in the trench. Wells shall be excavated at least 0,3 m lower than the bottom of the pipe.

5.3.1.2 Preparation

For existing and new pipes, the contractor shall:

- when applying cement mortar on site, apply the "Werkboekje bij de Hygiënecode Drinking water, storage, transport and distribution";
- remove and clean all obstacles or parts protruding into the pipe, and re-assemble them after cementing;
- before commencing work, inform the client about any leaks, deformations or other deviations in the pipeline section to be cleaned;
- take measures to avoid that branching pipes or connections are contaminated during the work. If contamination would occur, same shall be cleaned;
- take measures to prevent damage as a result of the raising of the pipeline.

5.3.1.3 Cleaning method

The contractor may choose a cleaning method which he considers to be the most suitable in the given situation.

5.3.1.4 Cleaning and surface condition

Incrustations, corrosion products, remains of old coatings and other inaccuracies shall be removed and treated in such a way that the surface can be cemented in accordance with the supplier's processing requirements.

The required surface condition after cleaning shall comply with class Sa2 or St2 as described in EN-ISO 8501-1. In addition, the protruding rust tips or residual coating shall not exceed 25% of the minimum cement mortar layer thickness to be applied outside the cleaned surface. The latter also applies to the weld seams. For pipes with a diameter ≥ DN 600, all protruding rust tips or residual lining shall be removed. A metallic surface need not be achieved. A thin smeared film of residual rust, bitumen or other coatings or fouling is permitted, as well as light surface rust such as the type

that arises after the water pressure test. Diameter changes through plate transitions shall be pre-processed prior to cementing in consultation with the client. (Inserting cone or reinforced steel over which cement mortar is applied).

After cleaning, in addition to the required degree of cleaning, the passable pipes shall also be inspected on their structural reliability.

Leaks, pipe deformations, defective pipe connections, etc. shall be repaired in consultation with the client. Non-passable pipe sections with an internal diameter of 500 mm and smaller shall allow for camera inspection.

The degree of cleanliness can be assessed on the basis of camera images and / or photos. The cleaned surface must meet the requirements as stated in the processing instructions for the cement mortar.

5.3.2 Cementing process

5.3.2.1 Equipment

The pump delivery shall be determined for each strand to be cemented with an accuracy of ± 1 l/ min. The speed of the spray head shall be selected for each strand to be cemented in such a way that the minimum required layer thickness is achieved in all places. The equipment shall be equipped in such a way that uniform movement of the spray head is guaranteed when spraying a straight strand.

5.3.2.2 Cementing process

Non-adhering coatings, loose rust, dirt, welding spatters, oil and grease etc. shall be removed from new pipes that are not provided with a cement layer until after installation or on location.
The water shall be dosed with suitable dosing equipment. If packaged cement and sand are used, the weight stated on the package will suffice.
The mixing of the mortar shall be done in such a way that it results in a homogeneous mixture. The sand and cement to be dosed shall be sieved with a sieve with a mesh size smaller than or equal to 5 mm. The cementing process shall be carried out continuously per strand. No audible variation in the speed of the pump motor may occur during cementing, as this could indicate an inadequate cementing process. The cementing process shall be carried out at an ambient temperature as described in the cement supplier's processing instructions.

5.3.3 Finishing and after-treatment

5.3.3.1 Finishing

After cladding a pipe section, the mortar at the location of pipe ends and tube lures shall be finished off where necessary.

5.3.3.2 After-treatment

To prevent dehydration and contamination and to promote good curing, the pipe ends shall be sealed draft-proof and watertight immediately after inspection and finishing. Curing of the cement mortar shall take place at a relative humidity of at least 95%. During the first 24 hours of the curing, the ambient temperature shall be higher than 0°C. The external surface of a pipe section exposed to direct sunlight shall at no time exceed a temperature of 30°C. At least 18 hours and a maximum of 24 hours after completion of the cementing work on a pipe section, this section shall be partly or completely (depending on the requirement of the client) filled with water.

5.3.4 Cement mortar coating

5.3.4.1 Type of cement to be used

The cement used shall comply with the requirements of **Error! Reference source not found.**.

5.3.4.2 Layer thickness

The layer thickness of the cured cement mortar coating shall meet the requirements established in Table 1 and Table 2.

Table 1 : layer thickness cement mortar lining cast iron pipes

nominal diameter	min. layer thickness (mm)	max. layer thickness (mm)
DN 300	3,0	5,0
300≤DN≤600	5,0	8,0
600≤ DN≤ 900	5,0	8,5
DN>900	6,0	10,0

Table 2 : Layer thickness cement mortar lining steel pipes

nominal diameter	min. layer thickness (mm)	max. layer thickness (mm)
DN≤150	3,0	5,5
150<DN≤300	4,0	6,5
300<DN≤600	5,0	8,0
600DN≤1000	6,0	9,5
1000<DN≤1.500	8,0	12,0
DN>1,500	10,0	14,0

5.3.4.3 Mechanical properties

Please refer to EN 197-1.

5.3.4.4 Repair

Repair of applied cement mortar lining, depending on the defect, shall be carried out in case of:

<u>l. defects other than cracks:</u>

a. tubes ≥ 600 mm:

local removal of the lining after which a new lining is applied manually or according to the basic process. (In case of major damage or defects, the lining shall be removed completely);

b. tubes <600 mm:

applying a second layer of cement mortar over the defective layer. This second cement mortar layer shall meet the requirements as stated in 5.3.

<u>2. cracks:</u>

Shrinkage cracks up to a width of 0.8 mm are permissible and do not need to be repaired. In case of cracks wider than 0.8 mm, the lining of the entire circumference shall be removed, or a second layer must be applied.

5.3.4.5 Commissioning

Before a pipe is put back into service, it shall be filled with water, vented and, if necessary, extorted (if required by the client). The pipe shall then be drained until the pH of the flowing water is lower than 8.5. Next a first bacteriological (reference)

sample shall be taken. 18 to 24 hours after the flushing was stopped, a second bacteriological sample shall be taken. Sampling and sample testing shall be carried out in accordance with the Drinking Water Hygiene Code. If the second bacteriological sample is satisfactory, the pipe can be put into use. If the second sample is not satisfactory, the pipe shall be disinfected in accordance with the Drinking Water Hygiene Code and a new check shall take place.

5.3.5 Reporting

The certificate holder shall inform the client on all activities performed.
The report shall contain the following aspects:

- Location;
- Certificate holder
- Cement used, according to 5.3.4.1 (**Error! Reference source not found.**);
- DN tube;
- Material tube;
- Cleaning method, according to 5.3.1.3;
- Cleansing solution:
- Layer thickness, according to 5.3.4.2;
- Commissioning, according to 5.3.4.5.

6 Marking

6.1 Cement

NEN-EN197-1, article 8

- Cement type according to table 1 supplemented with strength class;
- Different cement products (per producer);
- SR for sulfate resistant cement;
- LH for ordinary cement with low hydration heat;
- CE marking according to ZA.3
  a) identification number of the accredited certification body;
  b) name or identification mark and registered address of the manufacturer;
  c) the last two digits of the year in which the CE marking was affixed;
  d) number of the EC certificate of conformity of factory production control (if applicable);
  e) reference to this European standard;
  f) description of the product: general name and intended application;
  g) information to be specified for the relevant essential characteristics listed in Table ZA.1 shown as:
     1) specified values and, where applicable, levels or classes (including pass for fail / fail requirements where appropriate) for each essential characteristic indicated in "Comments" in Table ZA.1;
     2) alternatively, normalized indication (s), alone or in combination with specified values as above, and
     3) "No performance determined" for properties for which this is relevant.

6.2 Applied cement mortar in production environment

6.2.1 General

The following marks and indications shall be applied soundly and clearly visible to each cemented product:

- factory name and / or registered trademark;
- production date or coding;
- type of indication

6.2.2 Certification mark

For products intended for contact with drinking water:
the Kiwa Water Mark "KIWA ".

6.3 Application of cement mortar at location

6.3.1 Use certificate and certification mark

The supplier includes the Kiwa Water Mark “KIWA ” in the reports related to the activities carried out.

7 Requirements in respect of the quality system

This chapter contains the requirements which have to be met by the supplier's quality system.

7.1 Manager of the quality system

Within the supplier's organizational structure, an employee who will be in charge of managing the supplier's quality system must have been appointed.

7.2 Internal quality control/quality plan

The supplier shall have an internal quality control scheme (IQC scheme) which is applied by him.

The following must be demonstrably recorded in this IQC scheme:

- which aspects are checked by the supplier;
- according to what methods such inspections are carried out;
- how often these inspections are carried out;
- in what way the inspection results are recorded and kept.

This IQC scheme should at least be an equivalent derivative of the model IQC scheme as shown in the Annex.

7.3 Control of test and measuring equipment

The supplier shall verify the availability of necessary test and measuring equipment for demonstrating product conformity with the requirements in this evaluation guideline.
When required the equipment shall be kept calibrated (e.g recalibration at interval).
The status of actual calibration of each equipment shall be demonstrated by traceability through an unique ID.
The supplier must keep records of the calibration results.
The supplier shall review the validity of measuring data when it is established at calibration that the equipment is not suitable anymore.

7.4 Procedures and working instructions

The supplier shall be able to submit the following:

- procedures for:
  - dealing with products showing deviations;
  - corrective actions to be taken if non-conformities are found;
  - dealing with complaints about products and/or services delivered;
- the working instructions and inspection forms used.

7.5 Other requirements

The supplier shall be able to submit the following:

- the organisation's organogram;
- qualification requirements of the personnel concerned.

8 Summary of tests and inspections

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

- **initial investigation:** tests in order to ascertain that all the requirements recorded in the evaluation guideline are met;
- **inspection test:** tests carried out after the certificate has been granted in order to ascertain whether the certified products continue to meet the requirements recorded in the evaluation guideline;
- **inspection of the quality system of the supplier:** monitoring compliance of the IQC scheme and procedures.

8.1 Test matrix

Description of requirement	**Article no. of BRL**	**Tests within the scope of:**	
		Pre-certification	**Inspection by Kiwa after granting of certificate** [a,b]
Material			
Requirements to avoid deterioration of the quality of the drinking water	4.2.1	X	X
Suitability of cement	**Error! Reference source not found.**	X	X
Product requirements			
Product requirements	**Error! Reference source not found.**	X	X
Mixing the cement mortar	4.3.2.1	X	X
Hygienic treatment of products in contact with drinking water	**Error! Reference source not found.**	X	X
Other requirements			
Application of cement mortar in a production environment	5.2	X	X
Application of cement mortar at location			**per project**
Application of cement mortar at location	5.3	X	X
Cleaning and assessing surface condition	5.3.1	X	X
Cementing process	5.3.2	X	X
Finishing and after-treatment	5.3.3	X	X
Cement mortar coating	5.3.4	X	X
Certification mark			
Cement	6.1	X	X
Applied cement mortar in production environment	6.2		X
General	6.2.1	X	X
Certification mark	6.2.2	X	X
Application of cement mortar at location	6.3	X	X

Description of requirement	Article no. of BRL	Tests within the scope of:	
		Pre-certification	Inspection by Kiwa after granting of certificate a,b)
Use certificate and certification mark	6.3.1	X	X

a) In case the product or production process changes, it must be determined whether the performance requirements are still met.

b) During the inspection tests, the inspector verifies the products on basis of a selection from the above mentioned product requirements. The frequency of inspection visits is defined in chapter 9.6 of this evaluation guideline.

8.2 Inspection of the quality system of the supplier

The quality system of the supplier will be checked by Kiwa on the basis of the IQC scheme.

The inspection contains at least those aspects mentioned in the Kiwa Regulation for Certification.

9 Agreements on the implementation of certification

9.1 General

Beside the requirements included in these evaluation guidelines, the general rules for certification as included in the Kiwa Regulations for Product Certification also apply. These rules are in particular:

- the general rules for conducting the pre-certification tests, in particular:
  - the way suppliers are to be informed about how an application is being handled;
  - how the test are conducted;
  - the decision to be taken as a result of the pre-certification tests.
- the general rules for conducting inspections and the aspects to be audited,
- the measures to be taken by Kiwa in case of Non-Conformities,
- the measures taken by Kiwa in case of improper use of Certificates, Certification Marks, Pictograms and Logos,
- terms for termination of the certificate,
- the possibility to lodge an appeal against decisions of measures taken by Kiwa.

9.2 Certification staff

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

- Certification assessor (**CAS**): in charge of carrying out the pre-certification tests and assessing the inspectors' reports;
- Site assessor (**SAS**): in charge of carrying out external inspections at the supplier's works;
- Decision maker (**DM**): in charge of taking decisions in connection with the pre-certification tests carried out, continuing the certification in connection with the inspections carried out and taking decisions on the need to take corrective actions.

9.2.1 Qualification requirements

The qualification requirements consist of:

- qualification requirements for personnel of a certification body which satisfies the requirements EN ISO / IEC 17065, performing certification activities
- qualification requirements for personnel of a certification body performing certification activities set by the Board of Experts for the subject matter of this evaluation guideline

Education and experience of the concerning certification personnel shall be recorded demonstrably.

Basic requirements	**Evaluation criteria**
Knowledge of company processes Requirements for conducting professional audits on products, processes, services, installations, design and management systems.	*Relevant experience: in the field* **SAS, CAS** : 1 year **DM**: 5 years inclusive 1 year with respect to certification Relevant technical knowledge and experience on the level of: **SAS**: High school **CAS, DM** : Bachelor

Basic requirements	Evaluation criteria
Competence for execution of site assessments. Adequate communication skills (e.g. reports, presentation skills and interviewing technique).	**SAS**: Kiwa Audit training or similar and 4 site assessments including 1 autonomic under review.
Execution of initial examination	**CAS**: 3 initial audits under review.
Conducting review	**CAS**: conducting 3 reviews

Technical competences	Evaluation Criteria
Education	**General**: Education in one of the following technical areas: • Civil Enginereing; • Enginering.
Testing skills	**General:** • 1 week laboratory training (general and scheme specific) including measuring techniques and performing tests under supervision ; • Conducting tests (per scheme).
Experience - specific	**CAS** • 3 complete applications (excluding the initial assessment of the production site) under the direction of the **CAS** • 1 complete application self-reliant (to be evaluated by **PM**) • 1 initial assessments of the production site under the direction of the **PM** • 1 initial assessment of the production site self-reliant (witnessed by **PM**) **SAS** • 1 inspection visits conducted self-reliant (witnessed by **PM**)
Skills in performing witnessing	**PM** Internal training witness testing

Legenda:
- Certification assessor (**CAS**)
- Decision maker (**DM**)
- Product manager (**PM**)
- Site assessor (**SAS**)

9.2.2 Qualification

The qualification of the Certification staff shall be demonstrated by means of assessing the education and experience to the above mentioned requirements. In case staff is to be qualified on the basis of deflecting criteria, written records shall be kept.

The authority to qualify staff rests with the:
- PM: qualification of CAS and SAS;
- management of the certification body: qualification of DM.

9.3 Report initial investigation

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 evaluation guideline;
- 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 his decision on the findings included in the report.

9.4 Decision for granting the certificate

The decision for granting the certificate shall be made by a qualified Decision maker which has not been involved in the pre-certification tests. The decision shall be recorded in a traceable manner.

9.5 Layout of quality declaration

The product certificate shall be in accordance with the model included in the Annex.

9.6 Nature and frequency of third party audits

The certification body shall carry out surveillance audits on site at the supplier at regular intervals to check whether the supplier complies with his obligations. The Board of Experts decides on the frequency of audits.

At the time this BRL entered into force, the frequency of audits amounts 1 audit(s) on site per year for suppliers with a quality management system in accordance with ISO 9001 for their production, which has been certified by an acknowledged body (in accordance with ISO/IEC 17021) and where the IQC scheme forms an integral part of the quality management system.
In case the supplier is not in possession of any product certificate (issued by Kiwa or any other accredited certification body), the frequency is increased to 2 visits for the duration of one year.

The audit program on site shall cover at least:
- the product requirements;
- the production process;
- the suppliers IQC scheme and the results obtained from inspections carried out by the supplier;
- the correct way of marking certified products;
- compliance with required procedures;
- handling complaints about products delivered.

For suppliers with a private label certificate the frequency of audits amounts to one audit per 2 years. These audits are conducted at the site of the private label certificate holder. The audits are conducted at the site of private label holder and focussed on the aspects inserted in the IQC scheme and the results of the control performed by the private label holder. The IQC scheme of the private label holder shall refer to at least:
- the correct way of marking certified products;
- compliance with required procedures for receiving and final inspection;
- the storage of products and goods;
- handling complaints.

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

9.7 Non conformities

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

9.8 Report to the Board of Experts

De certification body shall report annually about the performed certification activities. In this report the following aspects are included:

- mutations in number of issued certificates (granted/withdrawn);
- number of executed audits in relation to the required minimum;
- results of the inspections;
- required measures for established Non-Conformities;
- received complaints about certified products.

9.9 Interpretation of requirements

The Board of Experts may record the interpretation of requirements of this evaluation guideline in one separate interpretation document.

9.10 Specific rules set by the Board of Experts

The Board of Experts may define the following specific rules. These rules shall be followed by the certification body.

10 Titles of standards

10.1 Public law rules

BJZ2011048144	Regeling van de Staatssecretaris van
29 juni 2011	Infrastructuur en Milieu[1]
305/2011/EU	Regulation that establishes harmonized conditions for the marketing of construction products

10.2 Standards / normative documents

Number	Title
EN 197-1	Cement - Part 1: Composition, specifications and conformity criteria for ordinary cement types
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
PCD 1-7-2016	Werkboekje bij de 'Hygiënecode Drinkwater, Opslag, transport en distributie'
NEN-EN ISO/IEC 17020	Conformity assessment - General criteria for the operation of various types of bodies performing inspection
NEN-EN ISO/IEC 17021	Conformity assessment - Requirements for bodies providing audit and certification of management systems
NEN-EN ISO/IEC 17024	Conformity assessment - General requirements for bodies operating certification of persons
NEN-EN ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories
NEN-EN ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes and services

[1] Valid from 1 July 2017

I Model certificate (example)

CERTIFICATE

Process certificate
KXXXXXX/0X

Issued

Replaces

Page *1 of 1*

Name product

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

Name customer

may, on delivery, be relied upon to comply with the Kiwa audit guideline BRL "" date XXXX-XX-XX.

Name Director
Kiwa

Publication of this certificate is allowed.
Advice: consult www.kiwa.nl in order to ensure that this certificate is still valid.

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Tel. +31 88 998 44 00
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info@kiwa.nl
www.kiwa.nl

Company
Name customer
Address customer

Phone number
Fax number
www.
Email

Certification process consists of initial and regular inspection of:
- **quality system**
- **process**

140410

II Model IQC-scheme (example)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or materials supplied: • Cement • Water • Quartz sand • Auxiliary materials • Packaging materials				
Production process, production equipment, plant: • Blending • Grain size measurement • Applying				
Finished-products • visual control • layer thinkness				
Measuring and testing equipment • Scale • Water flow meter • Layer thinkness gauge				
Logistics • traceability				