BRL-K777
2016-12-23

Evaluation Guideline

for the Kiwa product certificate for
repair clamps

Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of drinking water applications 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 Product Certification.

This evaluation guideline is to be assessed by the Board of Experts at least every 5 years, but at the latest before 23-12-2021.

Kiwa Nederland B.V.
Sir Winston Churchilllaan 273
P.O. Box 70
2280 AB RIJSWIJK
The Netherlands

Tel. +31 088 998 44 00
info@kiwa.nl
www.kiwa.nl

Validation
This evaluation guideline has been validated by Kiwa on August 12, 2016

Contents

1 Introduction

1.1 General

This evaluation guideline includes all relevant requirements which are adhered to by Kiwa as the basis for the issue and maintenance of a certificate for products used for repair clamps.

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 products are intended to be used in piping systems with a maximum water pressure of 1,0 MPa, a water temperature of not more than 30°C and a nominal diameter greater than or equal to 15 mm and less than or equal to 400 mm. The products are intended to repair cracks, holes and fractures and to make permanent connections with the mentioned piping systems.

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 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 an 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 “Water Cycle” (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 net:** assembly of piping and associated fittings, valves and other technical facilities for transportation and supply of drinking water, other than a collective distribution (Source: Drinking Water Act).
- **DN:** in accordance with NEN-EN-ISO 6708.
- **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 directly or indirectly 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.
- **House hold water:** non-potable water that may only be used within premises for flushing toilets (source Dutch Drinking Water Act);
- **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.
- **Piping system:** piping system for the transport of tap water with the aid of pipes and their connections, made from different materials.
- **PFA:** allowable operating pressure: in accordance with NEN-EN 805.
- **PMA:** allowable maximum operating pressure, in accordance with NEN-EN 805.
- **PEA:** allowable site test pressure in accordance with NEN-EN 805.
- **PN:** alpha-numeric code that is used for reference purposes and which relates to a combination of mechanical and dimensional properties of a component of a piping system in accordance with NEN-EN 1333.
- **Pre-certification tests**: 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.

- **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.

- **Raw water:** ground water, surface water or sea water which is used for the purpose of the preparation of drinking water.

- **Repair clamp:** clamp intended to repair cracks, holes and fractures and to make permanent connections with piping systems.

- **Supplier**: the party that is responsible for ensuring that the products meet and continue to meet the requirements on which the certification is based.

- **Tap water:** water intended for drinking, cooking, food preparation or other domestic purposes.
  Note: Tap water may be drinking water, hot water or household water.

3 Procedure for granting a product certificate

3.1 Pre-certification tests

The pre-certification tests to be performed are based on the (product) requirements as contained in this evaluation guideline, including the test methods, and comprises the following:

- type testing to determine whether the products comply with the product 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 product certificate

After finishing the pre-certification tests, 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 the repair clamps have to fulfil, as well as the testing methods used to determine whether the requirements are met.

4.2 Regulatory requirements

4.2.1 Requirements to avoid deterioration of the quality of drinking water

The requirements in this chapter are public law requirements.

To prevent harmful effects on the quality of drinking water, the following government imposed provisions apply.
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 recognised 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.

4.3 Private requirements

4.3.1 Technical product information

In the technical product information, the supplier shall indicate, in Dutch,:

- the minimum and maximum pipe diameter to which the repair clamp may be applied;
- the maximum surface that can be covered with a certain type of repair clamp;
- the torque required to ensure a watertight connection;
- the type of pipe materials upon which the repair clamp may be used .

4.3.2 General product requirements

4.3.2.1 Hygienic treatment of products in contact with drinking water

The supplier shall have a procedure to protect the products in such a way that hygiene is ensured during storage and transport.
In addition, the supplier shall inform customers about handling of the products supplied under the certificate that come into contact with drinking water and hot water, during the period from arriving at the construction site through to the execution and commissioning.
The primary reason for the information is the contribution to the awareness of the importance of hygienic work as a 'preventive measure'.

4.3.2.2 Pressures

Repair clamps intended for piping systems are referred to with a PN-value and shall be designed so that they can withstand the pressures PFA, PMA and PEA, as defined in Table 1.

[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.

Table 1: Pressures

PN	PFA (bar)	PMA (bar)	PEA (bar)[2]
6	6	8	12
10	10	12	17

4.3.2.3 Fastening products

The fastening products used for the clamping fuction of the repair clamp shall comply with:

- NEN-EN-ISO 4016: Hexagon head bolts - Product grade C;
- NEN-EN-ISO 4034: Hexagon regular nuts - Product grade C;
- NEN-EN-ISO 7091: Plain washers - Normal series - Product grade C.

4.3.2.4 Sealing Material

Rubber sealing material shall comply with BRL-K17504, Chapters 2.4 and 2.5.

4.3.3 Protection against corrosion

Repair clamps that by nature are not considered as corrosion resistant shall be fitted with a corrosion-protective layer according to 4.3.3.1 and 4.3.3.2.

4.3.3.1 Coating Systeem in contact with drinking water

The coating system shall meet the requirements of BRL-K759. The application of the coating shall be carried out according to relevant aspects in accordance with BRL-K746.

Remarks:

- *When the applied coating is included in a Kiwa product-certificate according to BRL-K759, this condition is considered to be met.*
- *When the coating process is included in a Kiwa process-certificate according to BRL-K746, this condition is considered to be met.*

4.3.3.2 Exterior coating

When the outside of the pipes and fittings are equipped with a passive protective layer, then it shall comply with article 5.4.1 of NEN-EN 545.

4.3.4 Functional product requirements

4.3.4.1 Mechanical strength

When tested according to the test method in 5.2, repair clamps shall withstand an internal pressure of the higher of the following two values: PEA or 1,5 x PFA.

4.3.4.2 Watertightness under internal hydrostatic pressure

When tested according to the test method in 5.3, repair clamps shall resist an internal hydrostatic pressure of (1.5 x PFA) bar over a period of 2 hours and shall not show any leakage or permanent deformation during the test.

4.3.4.3 Watertightness under external hydrostatic pressure

When tested according to the test method in 5.4, repair clamps shall withstand an absolute pressure of 0,1 ± 0,02 bar for a period of 2 hours. According to 5.4, the pressure may not increase more than 0,09 bar.

[2] PEA may not be smaller than 1,5 x PMA or PMA + 5, whichever is smaller

4.3.4.4 Watertightness under bending

When tested according to the test method in 5.5, repair clamps shall comply with 4.3.4.2.

4.3.4.5 Watertightness under variable internal hydrostatic pressure

When tested according to the test method in 5.6, repair clamps shall comply with 4.3.4.2after 24,000 cycles of pressures varying between PMA and PMA-5.

5 Test methods

5.1 General

5.1.1 Pressures and temperatures

For carrying out the following tests, whereby, with the addition of water, the required pressures can be achieved, the following applies:

- pressures shall be measured with a precision pressure gauge according to NEN-EN 927;
- the ambient pressure is atmospheric;
- the test pressure shall not higher than the required pressure and not lower than 95% of the test pressure;
- the water temperature shall be lower than 30°C;
- the ambient temperature shall be 20 ± 10 °C.

5.1.2 Models to be tested

Table 2 indicates, per DN group, which DN shall be tested.

Table 2: Models to be tested

DN group	15<DN≤100	100<DN≤200	Per
Model to be tested	DN 50	DN 150	DN 300
PN	PN 10[3]	PN 10	PN 10
Length, L	0,5 m	1,5 m	2,0 m

5.1.3 Assembly of repair clamps

The tests described below are carried out with two separate pipe sections and a repair clamp. The repair clamp shall be fixed in accordance with the supplier's installation instructions.
The tests according to 5.3, 5.4 and 5.5 are carried out on the piping materials as shown in the Technical product information (see section 4.3.1).

5.2 Determination of mechanical strength under internal pressure

5.2.1 Test installation and tools

For the determination of the mechanical strength under internal hydrostatic pressure, the repair clamp is installed in the test installation according to *Figure 1*.

5.2.2 Process

(a) Fill the test installation with water, vent it and close the vent opening. Make certain that force F will not be applied;
(b) Gradually apply, within 30s, a pressure to the test installation up to a pressure according to 4.3.4.1 and maintain this pressure for 2 hours;
(c) During the test, no leakage or permanent deformation shall occur.

5.3 Determination of watertightness under internal hydrostatic pressure

5.3.1 Test installation and tools

For the determination of watertightness under internal hydrostatic pressure, the repair clamp is installed in the test installation according to *Figure 1*.

[3] PN 10 includes PN6.

5.3.2 Process

(a) Fill the test installation with water, vent it and close the vent opening. Make certain that force F will not be applied;
(b) Gradually apply, within 30 s, a pressure to the test installation up to the pressure according to **Error! Reference source not found.** and maintain this pressure for 2 hours;
(c) During the test, no leakage or permanent deformation shall occur.

5.4 Determination of watertightness under external hydrostatic pressure

5.4.1 Test installation and tools

For the determination of watertightness under external hydrostatic pressure, the repair clamp is installed in the test installation according to *Figure 1*. Make certain that force F will not be applied.

5.4.2 Process

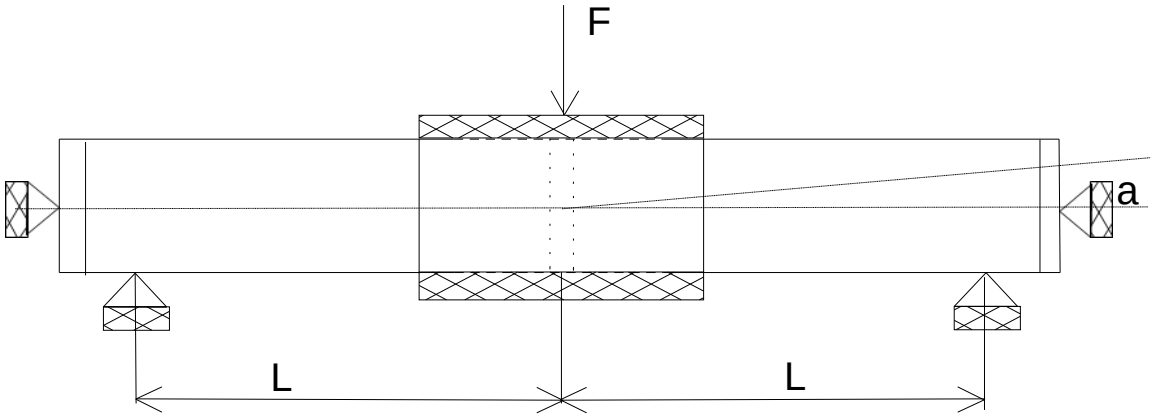
(a) Empty the test installation and connect a vacuum pipe to the vent opening;
(b) Gradually apply, within 30 s, a vacuum to the test installation down to the pressure according to 4.3.4.3and maintain this pressure for 2 hours;
(c) During the test, this pressure may not increase by more than 0,09 bar.

5.5 Determination of watertightness under bending

5.5.1 Test installation and tools

The repair clamp is installed in the test installation according to *Figure 1*.

Figure 1: Installation for bending test



5.5.2 Test requirements

Table 3: Relation between DN and bending

DN	Angle a
40<DN≤300	3°30’
300<DN≤400	2°30’

5.5.3 Process

(a) Fill the test installation with water, vent it and close the vent opening;
(b) Gradually apply, within 30 s, a pressure to the test installation up to a pressure according to 4.3.4.2 **Error! Reference source not found.** and apply the bending force F; maintain both for 2 hours;
(c) During the test, no leakage or permanent deformation shall occur.

5.6 Determination of watertightness under variable internal hydrostatic pressure

5.6.1 Test installation and tools

The repair clamp is installed in the installation according to *Figure 1*.

5.6.2 Process

(a) Fill the test installation with water, vent it and close the vent opening;
(b) Gradually apply, within 5 s, a pressure to the test installation up to pressure PMA;
(c) Lower the pressure gradually, within 5 s, to (PMA-5) and maintain this pressure for 5 s;
(d) Increase the pressure gradually, within 5 s, to PMA and maintain this pressure for 5 s;
(e) Repeat steps (b) through (d) 24.000 times;
(f) During the test, no leakage or permanent deformation shall occur.

6 Marking

6.1 General

The products shall be marked with following indelible marks and indications:

- name or logo of the manufacturer;
- data or code indicating the date of production;
- type indication;
- minimum and maximum pipe diameter for which the repair clamp may be used.

6.2 Certification mark

After concluding a Kiwa certification agreement, the certified products shall be indelibly marked with the certification mark:

For products which come in contact with drinking water:

The Kiwa Water Mark "KIWA"

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:

- pre-certification tests;
- inspection test;
- inspection of the quality system of the supplier.

8.1 Test matrix

Description of requirement	Article BRL	Tests within the scope of	
		Pre-certification	inspection[2)]
Material requirements			
Requirements to avoid deterioration of the quality of drinking water	4.2.1	X	X
Product requirements			
Technical product information	4.3.1	X	X
Pressures	4.3.2.2	X	X
Fastening products	4.3.2.3	X	X
Sealing material	4.3.2.4	X	X
Protection	4.3.3	X	X
Mechanical strength	4.3.4.1		
Watertightness under internal hydrostatic pressure	4.3.4.2		
Watertightness under external hydrostatic pressure	4.3.4.3		
Watertightness under bending	4.3.4.4	X	
Watertightnes under variable internal hydrostatic pressure	4.3.4.5	X	
Marking			
General	6.1	X	X
Certification mark	6.2	X	X

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

b) All product characteristics that can be determined within the visiting time (maximum 1 day) are determined by the inspector or by the supplier in the presence of the inspector. In case this is not possible, an agreement will be made between the certification body and the supplier about how the inspection will take place. 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 Regulations for Product 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
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** • 1 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** • 2 inspection visits together with a qualified **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 pre-certification tests

The certification body records the results of the pre-certification tests 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 2 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 3 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 1 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 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.

9.8 Non conformities

When the certification requirements are not met, measures are taken by Kiwa in accordance with the sanctions policy, namely what is published on the Kiwa website (www.kiwa.nl) through the link to Kiwa Regulations for Product Certification on the Kiwa portal.

9.9 Interpretation of requirements

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

10 Titles of standards

10.1 Public law rules

"Staatscourant" (Dutch Government Gazette) from 18 July 2011, no. 11911	"Regeling Materialen en Chemicaliën drink- en warm tapwatervoorziening" (Regulation on materials and chemicals drinking water and warm tap water supply)

10.2 Standards / normative documents

Number	Title
BRL-K746	Coating system applications for drinking water applications
BRL-K759	Coating systems for drinking water applications
BRL-K17504	Certification of vulcanised rubber products for cold and hot drinking water applications
NEN 927	Pressure gauges – testing and gauging
NEN-EN 805	Water supply – Requirements for systems and components outside buildings
NEN-EN 1333	Flanges and their joints – Pipework components – Definition and selection of PN
NEN-EN-ISO 4016	Hexagon head bolts – Product grade C
NEN-EN-ISO 4034	Hexagon regular nuts (style 1) – Product grade C
NEN-EN-ISO 7091	Plain washers – Normal series – Product grade C
NEN-EN-ISO 9001	Quality management systems – Requirements
NEN-EN-ISO 6708	Pipe components – Definition and selection of DN (nominal size)
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/IEC17065 or NEN-EN-ISO 45011	Conformity assessment – Requirements for bodies certifying products, processes and services

I Model certificate (informative)

Certificate

Product certificate
KXXXXX/0X

kiwa
Partner for progress

Issued

Replaces

Page 1 of 2

Name Product

STATEMENT BY KIWA
With this product certificate, issued in accordance with the Kiwa Regulations for Product Certification, Kiwa declares that legitimate confidence exists that the products supplied by

Name supplier

complying with the technical specifications as laid down in this product certificate and marked with the certification mark indicated in this product certificate under marking, on delivery may be relied upon to comply with Kiwa evaluation guideline BRL- K777 "Repair clamps" 2016-08-12,.

Luc Leroy
Kiwa

Publication of the certificate is allowed.

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

Kiwa Nederland B.V.
Sir W. Churchill-laan 273
P.O. Box 70
2280 AB RIJSWIJK
The Netherlands
Tel. +31 88 998 44 00
Fax +31 88 998 44 20
E-mail info@kiwa.nl
www.kiwa.nl

Supplier

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

II Model IQC-scheme (informative)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or materials supplied: - incoming goods -inspection raw materials				
Production process, production equipment, plant: - procedures - working instructions - equipment - release of product				
Finished products				
Measuring and testing equipment - measuring equipment - calibration				
Logistics				