

BRL-K14003

2022-01-07

Evaluation Guideline

for the Kiwa product certificate for
Thermostatic regulating valves



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Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of thermostatic regulating valves 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.

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The use of this evaluation guideline by third parties, for any purpose whatsoever, is only allowed after a written agreement is made with Kiwa to this end.

Binding declaration

This evaluation guideline has been declared binding by Kiwa on 2022-01-07

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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 certificate for products used for thermostatic regulating valves.

This evaluation guideline replaces BRL-K14003/02, dated 01-02-2012.
The quality declarations issued and based on that guideline will remain valid.

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 circulation systems in tap water installations, with a maximum operating pressure of 1000 kPa and a maximum water temperature of 90 °C.

After commissioning, a pre-set minimum temperature upstream of the regulating valve is maintained, while maintaining the hydraulic balance.

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.
- **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.
- **Hot tap water:** water intended or partly intended for drinking, cooking or food preparation or other domestic purposes, which is heated before it is made available for those applications.
- **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.
- **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.

- **Regulating valve:** a valve which, after commissioning, maintains a pre-set minimum temperature upstream;
- **Automatic regulating valves:** a valve that, during a disinfection time, automatically adopts factory temperature settings;
- **Manual regulating valves:** a valve whose temperature setting must be manually adjusted during a disinfection period;
- **Disinfection period:** a period in which a pipe section is thermally disinfected after water temperature of the heat source is increased up to the disinfection temperature;
- **Disinfection flow rate:** the flow rate at which a thermal disinfection cycle is carried out;
- **Effective pressure:** the effective pressure (p_e) is the difference between the absolute pressure (p) and the ambient pressure (p_{amb}). The formula is: $p_e = p - p_{amb}$;
- **Working pressure (p_w):** the highest occurring effective pressure under normal circumstances in drinking water installations or parts thereof;
- **Kv value:** see NEN-EN 736-3;
- **Nominal diameter (DN):** a numerical designation for the diameter that is generally used for all parts in a pipe system, with the exception of those parts which have an outside diameter or screw thread size designation. It is a convenient round number for reference purposes and shows only a loose correspondence with the fabrication dimensions.

Remarks

1. The parts are indicated with DN, followed by a number.
2. The nominal diameter (DN) is not the measured internal diameter and may not be used for making calculations.

- **Nominal flow rate (q_n):** the flow rate by a regulating valve at a preset temperature;
- **Stabilization time (t_s):** the time period necessary for stabilization after changing the flow rate, the water temperature or the regulating valve setting;
- **Hot water installation:** tap water installation that provides hot tap water.

3 Procedure for granting a product certificate

3.1 Initial investigation

The initial investigation 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 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.

3.3 Investigation into the product and/or performance requirements

Kiwa will investigate the to be certified products against the certification requirements as stated in the certification requirements.

The necessary samples will be drawn by or on behalf of Kiwa.

3.4 Production process assessment

When assessing the production process, it is investigated whether the producer is capable of continuously producing products that meet the certification requirements.

The evaluation of the production process takes place during the ongoing work at the producer.

The assessment also includes at least:

- The quality of raw materials, half-finished products and end products;
- Internal transport and storage.

3.5 Contract assessment

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

This written agreement, which is available for Kiwa, includes at least:

- Accreditation bodies, scheme managers and Kiwa will be given the opportunity to observe the certification activities carried out by Kiwa or on behalf of Kiwa at the producer.

4 Requirements

4.1 General

This chapter contains the requirements that thermostatic regulating valves have to fulfil.

4.2 Regulatory requirements

4.2.1 *Suitability for contact with 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 declaration¹, 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 Product requirements

4.3.1 *Corrosion resistance*

The materials used shall be corrosion resistant or protected against corrosion and shall not give rise to any contact corrosion.

4.3.1.1 *Metallic coatings*

Metallic, corrosion resistant coatings shall meet the requirements of EN 248.

4.3.1.2 *Plastic coating*

The thickness of the applied coatings on control elements shall be at least 25 µm. Plastic coatings shall comply, after testing according to 5.2, with:

- EN 248, Article 7.1.1 with respect to corrosion resistance;
- ISO 2409, table 1, class 0 or 1, with respect to adhesion.

4.3.2 *Seals*

One of the following materials shall be used for the seal of the regulating valve:

- soft copper;
- hard fiber;
- rubber rings, or "O-rings";
- equivalent ring(s) with low friction.

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.

4.3.3 Operation

4.3.3.1 Operating device

The operating device shall, where applicable, be attached without noticeable slack. The attachment may be performed by means of interference fit or with fasteners.

4.3.3.2 Operating Spindle

The operating spindle can be rising, or non-rising. The movement screw thread on the spindle shall be carried out in such a way that, without the application of an external moment, the setting on the regulating valve cannot be changed.

4.3.3.3 Direction of rotation

If applicable, the flow rate shall be reduced by turning the operating device in a clockwise direction. The relationship between the rotation direction of the operating device and the temperature *setting* shall be indicated in a clear manner. It is recommended that the temperature setting shall reduce by turning in a clockwise direction.

4.3.4 Nominal diameter

The nominal diameter (DN) of a regulating valve shall comply with Table 1.

Table 1 - Dimensions of connection ends

Type		Designation	DN					
Kind	Standard		15	20	25	32	40	50
Female thread	ISO 7-1	Rp	½	¾	1	1¼	1½	2
Male thread	ISO 7-1	R	½	¾	1	1¼	1½	2
Male thread	ISO 228-1	G	¾ B	1 B	1¼ B	1½ B	1½ B 1¾ B	2 B
Male thread with shoulder	ISO 228-1	G	½ B	¾ B	1 B	1¼ B	1½ B 1¾ B	2 B 2¾ B
Capillary (outside)	BRL-K623	mm	15-18	22	28	35	42	54
Compression, press and push-fit fittings	BRL-K640							

4.3.5 Connection ends

Regulating valves shall be equipped with two of the following connection ends:

- internal thread;
- male thread;
- compression, press or push-fit fitting for metal and / or plastic pipes;
- captive nut;
- capillary solder end (only as part of two-piece coupling).

The connection ends can be the same or different. Table 1 indicates the screw threads and outer diameters for which the fittings shall be suitable.

4.3.6 Design of connection ends

4.3.6.1 Connection ends with threads

The thread shall comply with ISO 7-1 or ISO 228-1.

The thread length and the total length of the connection ends with a male thread shall meet Kiwa evaluation guideline BRL-K623.

4.3.6.2 *Connection ends with compression, press or push-fit fittings*

Connection ends with socketscompression, press or push-fit fittings shall comply with the technical requirements as stated in the Kiwa evaluation guideline BRL-K639.

4.3.6.3 *Connection ends with captive nut*

The usable thread length after assembly shall at least comply with the values as stated in Kiwa evaluation guideline BRL-K623. The connection end shall, over a length which is at least equal to the depth of the union nut, measured from the pressure surface before the gasket, be cylindrical.

4.3.6.4 *Connection ends with capillary solder ends*

The dimensions of the capillary solder end, as part of a two-piece coupling, shall meet the requirements of the Kiwa evaluation guideline BRL-K623.

4.3.7 *Possibility of draining*

Regulating valves may be provided with two drain connections for attaching a drain valve or another device, to drain the hot water system.

These shall be placed opposite each other and, if applicable, upstream of the closure element. The thread must be at least G $\frac{1}{4}$, according to ISO 228/1.

The thread length shall comply with the Kiwa evaluation guideline BRL-K623. The bore shall be at least 6 mm. The outside diameter of the drain connection shall be at least 17 mm.

4.3.8 *Attachment of the sealing element*

When screw-thread is used for the attachment of the sealing element, this may not come into contact with water.

4.3.9 *Wall thickness of the housing*

The wall thickness of the housing of regulating valves that are made of brass or bronze shall at least comply with Table 2.

Table 2 - Minimum wall thickness

Type	DN					
	15	20	25	32	40	50
Cast	1,4	1,5	1,6	1,8	2,2	2,3
Hot Pressed	1,2	1,4	1,5	1,6	1,8	2,0

4.4 Functional requirements

4.4.1 *Leaktightness*

Following the test according to article 5.4, the regulating valve shall show no leakage or any sign of damage.

4.4.2 *Flow rate*

The Kv value in the indicated direction on the regulating valve (if applicable) will be indicated in the specifications of the manufacturer.

Upon verification of the Kv value at a set temperature of 55 °C, with a pressure loss of

10 kPa, shall the measured value of K_v , in accordance with NEN-EN 1267, deviate no more than 15% from the value specified by the manufacturer.

4.4.3 **Reaction to temperature change**

After the execution of the cycle according to Figure 1, the water temperature shall not be lower than 58 °C and not higher than 62 °C, upon reaching $q^{\text{min.1}}$ for the second time. This shall be determined in accordance with article 5.5.

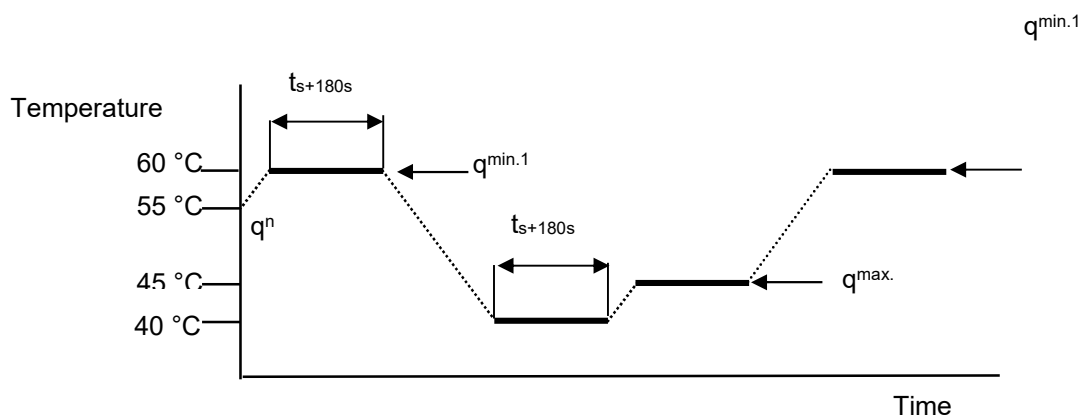


Figure 1

4.4.4 **Disinfection Period (only applicable for automatic regulating valve)**

During the disinfection period, the set disinfection temperature shall be maintained during the purge time.

It shall be noted if the regulating valve reacts as defined in the specifications of the manufacturer.

Remark

For the purpose of thermal disinfection, in the context of legionella prevention, the rinsing time shall be maintained as indicated in the management plan model.

4.4.5 **Durability of temperature control**

To gain insight into the durability of the regulating valve, a test shall be carried out according to article 5.6.

After the test, the regulating valve shall comply with articles 4.4.1 and 4.4.3.

4.4.6 **Mechanical strength - resistance against forces**

4.4.6.1 **Resistance against forces on the control device**

During the test in accordance with article 5.7, with water at a temperature of 90 °C,

there shall be no deformation or fracture of the control device and / or regulating valve. After the test, the regulating valve shall comply with article 4.4.1.

4.4.6.2 *Resistance against forces on the connection end*

During the test in accordance with article 5.8, no deformation or fracture shall occur. After the test, the regulating valve shall comply with article 4.4.1.

4.5 Additional requirements

4.5.1 *Instructions*

Regulating valves shall be supplied with Dutch installation and operating instructions.

5 Test methods

5.1 General

For a series of regulating valves with similar construction, similar manufacturing method and use of the same or equivalent materials, test results obtained with a particular DN value, are, on the basis of technical conformity, also applicable to regulating valves with a DN value of two consecutive sizes bigger- and two consecutive sizes smaller.

5.2 Adhesion and durability of plastic coatings

5.2.1 Test and installation tools

For the determination of the adhesion and durability of plastic coatings, the test pieces shall first be conditioned in a bath in which the water temperature is automatically maintained at the required temperature. The applicable tools for the determination of the adhesion shall comply with NEN-EN-ISO 2409.

5.2.2 Test piece

The number of regulating valves necessary to have a testing surface of at least 10.000 mm².

5.2.3 Test requirements

During the conditioning of the test pieces, shall:

- the water temperature of the bath be 90 ± 3 °C;
- the ambient temperature be 20 ± 10 °C.

5.2.4 Test method

- a. Place the test pieces in the bath for 1 h;
- b. Cool the test pieces down to the ambient temperature;
- c. Determine the adhesion of one test piece according to NEN-EN-ISO 2409;
- d. For the remaining test piece, determine the compliance with EN 248.

5.3 Test setup

For the tests of articles 5.4 to 5.7, the regulating valve shall be mounted in a test installation in which the required pressures and temperatures can be achieved by adding water, and with which the desired forces and moments can be obtained. The installation shall be vented before the test. The water pressure shall be measured by a precision pressure gauge in accordance with DIN 927.

5.4 Leaktightness

5.4.1 Test piece

For this test, a new test piece is required.

5.4.2 Test method

- a. Open the regulating valve and fill it with water;
- b. Close the outlet side;
- c. Raise the pressure in the tap steadily within 15 s until (1600 ± 50) kPa and maintain this pressure for (60 ± 5) s;
- d. Decrease, if an O-ring is used for the seal, the pressure to (20 ± 2) kPa and maintain this pressure

5.5 Reaction to temperature change

5.5.1 Test installation

For the determination of the reaction to temperature change, the regulating valve shall be included in a test installation in accordance with Figure 2.

5.5.2 Test piece

For this test, the same sample that was tested in article 6.4 shall be used.

5.5.3 Test method

- a. Set the water temperature to (55 ± 1) °C and determine the q^n value;
- b. Increase the water temperature to (60 ± 1) °C and determine, after the stabilization period, the $q^{\text{min.1}}$ value;
- c. Decrease the water temperature to (40 ± 1) °C;
- d. Increase the water temperature, after the stabilization, period to (45 ± 1) °C;
- e. Determine, after the stabilization period, the q^{max} ;
- f. Increase the water temperature again to $q^{\text{min.1}}$ and determine the water temperature.

5.6 Durability of temperature control

5.6.1 Test installation

- In order to determine the durability of the temperature control, the regulating valve shall be included in a test installation according to Figure 2.
- When performing the test according to article 5.6.3, in the achievement of reaching the mentioned temperatures, a stabilization period of at least 180 s is to be taken into account.

5.6.2 Test piece

For this test, the same sample that was tested in article 5.5 shall be used.

5.6.3 Test method

- a. Set the water temperature to (55 ± 1) °C;
- b. Increase the water temperature to (60 ± 1) °C;
- c. Decrease the water temperature to (40 ± 1) °C;
- d. Increase the water temperature, after the stabilization period, to (45 ± 1) °C;
- e. Determine, after the stabilization period, the q^{max} ;
- f. Increase the water temperature again to 60 °C;
- g. Repeat steps c to f for 2000 times.

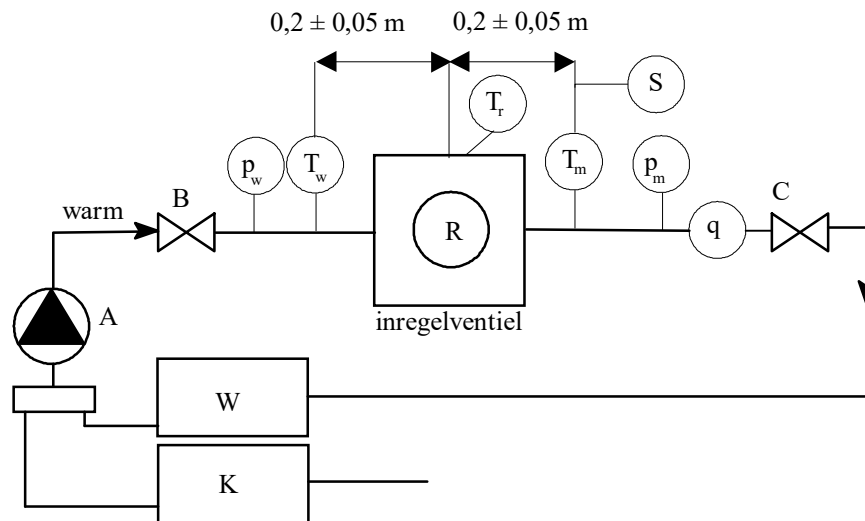


Figure 2

Explanation of symbols

- A = circulation pump
- B = hot water shut-off valve
- R = temperature setting button
- S = data recorder
- T_w = hot water temperature
- T_r = water temperature in regulating valve
- T_m = water temperature downstream of the regulating valve
- P_w = pressure in the hot water system
- P_m = pressure in the hot water system downstream of the regulating valve
- q = flow rate of hot water
- W = hot water supply
- K = cold water supply

5.7 Resistance against forces on the operating device

5.7.1 Test piece

For this test, a new regulating valve shall be used.

5.7.2 Test method

- a. Turn the operating device clockwise to the stop;
- b. For (60 + 5) s, apply a clockwise torque on the operating device, in a plane perpendicular to the operating spindle, with a value according to Table 3;
- c. Turn the operating device counter-clockwise to the stop;
- d. For (60 + 5) s, apply a counter-clockwise torque on the operating device, in a plane perpendicular to the operating spindle, with a value according to Table 3.

Table 3 – Test torques per nominal diameter

	DN					
	15	20	25	32	40	50
Operating device (Nm)	6 ±1	6 ±1	6 ±1	10 ±1	10 ±3	10 ±3
Connection ends (Nm)	70 ±5	100 ±5	150 ±5	200 ±5	350 ±10	600 ±10

5.8 Resistance against forces on the connection ends

5.8.1 Test piece

For this test, the same sample that was tested in article 5.7 shall be used. The connecting ends can be, if necessary, provided with adaptors so that the required torque can be exerted on the parts involved.

Remark

For connection ends with screw thread that are not provided with wrench flats, the connection ends shall be fitted with an adaptor with threads and wrench flats.

5.8.2 Test method

- a. Clamp the test piece with one connection end, if necessary with the aid of an adaptor, in the test device;
- b. For (60 + 5) s, apply a torque to the free connection end with a value according to Table 3 in a plane parallel to the axis of the two connecting ends;
- c. Then, apply a torque to the connection ends with screw threads, a value according to Table 3, in a plane perpendicular to the axis of the connection ends.


6 Marking

6.1 General

The regulating valve shall be marked legibly and indelibly with the following marks:

- On the house:
 - flow direction;
 - nominal diameter (DN);
 - trade mark.
- On the nut of the compression fitting (if applicable)
 - trade mark;
 - production code;
 - nominal size.

6.2 Certification mark

After concluding a Kiwa certification agreement, the certified products shall be indelible marked with the water mark “Kiwa ”.

The packaging may be provided with the following mark:



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.

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-K14003	Tests within the scope of:	
		Pre-certification	Inspection by Kiwa after granting of certificate ^{a,b)}
Regulatory requirements	4.2		
Requirements to avoid deterioration of the quality of the drinking water	4.2.1	X	X
Product requirements	4.3		
Corrosion resistance	4.3.1	X	X
Seals	4.3.2	X	X
Operation	4.3.3	X	X
Nominal diameter	4.3.4	X	
Connection ends	4.3.5	X	X
Design of connection ends	4.3.6	X	X
Possibility of draining	4.3.7	X	
Attachment of the sealing element	4.3.8	X	
Wall thickness of the housing	4.3.9	X	
Functional requirements	4.4		
Leaktightness	4.4.1	X	X
Flow rate	4.4.2	X	X
Reaction to temperature change	4.4.3	X	
Disinfection period	4.4.4	X	
Durability of temperature control	4.4.5	X	
Mechanical strength- resistance against forces	4.4.6	X	X
Additional requirements	4.5		
Instructions	4.5.1	X	X
Marking	6		
General	6.1	X	X
Certification mark	6.2		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, 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 Regulations 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.	<i>Relevant experience: in the field</i> 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: <ul style="list-style-type: none"> • Civil Engineering; • Engineering.
Testing skills	General: <ul style="list-style-type: none"> • 1 week laboratory training (general and scheme specific) including measuring techniques and performing tests under supervision; • Conducting tests (per scheme).
Experience - specific	CAS <ul style="list-style-type: none"> • 3 complete applications (excluding the initial assessment of the production site) under the direction of the PM • 1 complete application self-reliant (to be evaluated by PM) • 3 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 <ul style="list-style-type: none"> • 5 inspection visits together with a qualified SAS • 3 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 two audits 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 a quality management system certificate (issued by Kiwa or any other accredited certification body), the frequency is increased to three 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 two 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 through the “News and publications” 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.

10 Titles of standards

10.1 Public law rules

BJZ2011048144
29 juni 2011

Regeling van de Staatssecretaris van
Infrastructuur en Milieu¹

10.2 Standards / normative documents

Number	Title
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
BRL-K623	Plumbing fittings for capillary soldering and/or thread connections to copper tubes
BRL-K640	Fittings to be tightened with matching compression tool, compression- and push fit fittings as part of appliances and installations
ISO 7-1	Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designations
ISO 228-1	Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designations
NEN-EN-ISO 2409	Paints and varnishes - Cross-cut test
NEN 1006	General requirements for water supply installations
NEN 927	Pressure gauges - Testing and gauging
NEN-EN 248	General specification for electrodeposited coatings of Ni-Cr
NEN-EN 1267	Industrial valves - Test of flow resistance using water as test fluid

Kiwa Regulations for Product Certification

¹ Valid from 1 July 2017

I Model certificate (example)



CERTIFICATE

Product certificate Kxxxxx/01



Issued XXXX-XX-XX

Replaces -

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Name product

STATEMENT BY KIWA

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

Name certificate holder

as specified in this product certificate and marked with the Kiwa[®]-mark in the manner as indicated in this product certificate may, on delivery, be relied upon to comply with Kiwa evaluation guideline BRL-K xxx "xxxxxxxxxxxxxxxx", dated xx-xx-xxxx.

Name Director
Kiwa

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

Company
Name
Address
Telephone
Internet

Kiwa Nederland B.V.
Sir Winston Churchilllaan 273
Postbus 70
2280 AB RIJSWIJK
The Netherlands
Tel. +31 88 998 44 00
Fax +31 88 998 44 20
Info@kiwa.nl
www.kiwa.nl

20070103

Certification process
consists of initial and
regular assessment of:

- quality system
- product

Name Product

Technical specification

The products mentioned below belong to this product certificate;

products

APPLICATION AND USE

Scope / limits for correct use

MARKING

The Kiwa®-mark products are marked with ...

Place of the mark:

- place

Compulsory specifications:

- a;
- b;
- c;
- d.

RECOMMENDATIONS FOR CUSTOMERS

Check at the time of delivery whether:

- the supplier has delivered in accordance with the agreement;
- the mark and the marking method are correct;
- the products show no visible defects as a result of transport etc.

If you should reject a product on the basis of the above, please contact:

- name

and, if necessary,

- Kiwa Nederland B.V.

Consult the supplier's processing guidelines for the proper storage and transport methods.

II Model IQC-scheme (example)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or materials supplied: <ul style="list-style-type: none"> • incoming goods inspection raw materials • incoming goods inspection semi-finished products 				
Production process, production equipment, plant: <ul style="list-style-type: none"> • procedures • working instructions • equipment • material • surface 				
Finished-products <ul style="list-style-type: none"> • closing • water-tightness 				
Measuring and testing equipment <ul style="list-style-type: none"> • measuring equipment • calibration 				
Logistics <ul style="list-style-type: none"> • marking • traceability • protections 				