

BRL-K771/03
2015-06-01

Evaluation Guideline

for the Kiwa product certificate for
Steel pipes for general applications



Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of steel pipes for general 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 has been validated by Kiwa per June 1, 2015.

This evaluation guideline is to be assessed by the Board of Experts at least every 5 years.

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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.

Validation

This evaluation guideline has been validated by Kiwa on June 1, 2015

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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 steel pipes for general applications.

This guideline replaces the evaluation guideline BRL-K771/02, dated August 2012. The quality declarations issued and based on that guideline will lose their validity at least two years after the validation date of this evaluation guideline.

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 for general purposes such as construction and equipment manufacturing, as well as for the transport of liquids and gases in pipe installations, equipment manufacturing, tank construction and petrochemicals.

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:

- **Evaluation Guideline (BRL):** the agreements made within the Board of Experts on the subject of certification.
- **Board of Experts:** the Board of Experts “Water Cycle” (CWK).
- **Supplier:** the party that is responsible for ensuring that the products meet and continue to meet the requirements on which the certification is based.
- **IQC scheme (IQCS):** a description of the quality inspections carried out by the supplier as part of his quality system.
- **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.
- **Pre-certification tests:** tests in order to ascertain that all the requirements recorded in the evaluation guideline are met.
- **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.
- **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.

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 8.2) 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 steel pipes for general applications have to fulfil.

4.2 Product requirements

The requirements of the product and assessment methods are specified in:

Number	Title
NEN-EN 10216	Seamless steel tubes for pressure purposes-Technical delivery conditions-Part 5: Stainless steel tubes
NEN-EN 10255	Non-alloy steel tubes suitable for welding or threading-Technical delivery conditions

4.3 Additional product requirements

In addition to requirements mentioned in 4.2, the following applies:

4.3.1 External corrosion coating

4.3.1.1 Coating

External corrosion coatings should not contain any polycyclic aromatic hydrocarbons (PAH).

4.3.1.2 External PE coating

External PE coatings, for corrosion protection, for underground steel pipe fitting, should comply with BRL-K767.

Remark: Applied PE coatings included in a Kiwa BRL-K767 product certificate are deemed to fulfil this condition.

4.3.2 Screw-thread

Screw-threads shall comply with NEN-EN 10266-1: Pipe threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads-dimensions, tolerance and designation.

4.3.3 Packaging

Before transport, the manufacturer shall protect the ends of the steel pipes against external contamination.

5 Marking

5.1 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.

5.2 NEN-EN 10216-5, Article 12.1

- name or logo of the manufacturer;
- dimensions of the pipes;
- number of this standard (EN 10216-5);
- cast number or a code number;
- test category;
- identification number (e.g. order or item number) which permits the correlation of the product or delivery unit to the related document.

At the discretion of the manufacturer a mark may be added according to NEN-EN 10216-5, Table 1.

5.3 NEN-EN 10255, Article 10

- name or logo of the manufacturer;
- symbol to indicate the series (H or M) (see Table 2) or the type (L, L1 or L2) (see Annex B);
- symbol S (seamless) or W (welded), to indicate the pipe manufacturing process;
- cast number or a code number;

Marking shall be applied within 1m of each end of the pipe.

At the discretion of the manufacturer colour coding may be used as follows:

- Heavy: red;
- Medium: blue;
- Types: according to Annex B.

Color coding bands shall be approximately 50mm wide.

5.4 Certification mark

After concluding a Kiwa certification agreement, the certified products shall be indelible marked with the certification mark: **KIWA**.

6 Requirements in respect of the quality system

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

6.1 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.

6.2 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.

6.3 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.

6.4 Other requirements

The supplier shall be able to submit the following:

- The organization chart;
- The qualification of the personnel involved.

7 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.

7.1 Test matrix

Description of requirements	Article BRL	Tests within the scope of	
		Pre-certification	Inspection by Kiwa after granting of certificate ^{a,b)}
	BRL-K771		
Product requirements			
External corrosion coating	4.3.1	X	X
Screw-thread	4.3.2	X	X
Packaging	4.3.3	X	X
Marking			
General	5.1	X	X
NEN-EN 10216-5, Article 12	5.2	X	X
NEN-EN 10255, Article 10	5.3		
Certification mark	5.4	X	X
	NEN-EN 10216-5		
Symbols	4	X	X
Classification	5.1	X	X
Designation	5.2	X	X
Mandatory information	6.1	X	X
Options	6.2	X	X
Examples of an order	6.3	X	X
Steel making process	7.1	X	X
Tube manufacturer and delivery conditions	7.2	X	X
Chemical composition	8.2	X	X
Mechanical properties	8.3	X	X
Corrosion resistance	8.4	X	X
Appearance	8.5.1	X	X
Soundness	8.5.2	X	X
Straightness	8.6	X	X
Preparation of end	8.7	X	X
Outside diameter and wall thickness	8.8.1	X	X
Mass	8.8.1	X	X
Lengths	8.8.3	X	X
Tolerance	8.8.4	X	X
Type of inspection documents	9.2.1	X	X
Content of inspection documents	9.2.2	X	X
Marking to be applied	12.1	X	X
Handling and packaging	13	X	X
	NEN-EN 10255		
Mandatory information	5.1	X	X
Options	5.2	X	X
Examples of ordering	5.3	X	X
Steelmaking process	6.1	X	
Tube manufacturing process	6.2	X	X

Description of requirements	Article BRL	Tests within the scope of	
		Pre-certification	Inspection by Kiwa after granting of certificate ^{a,b)}
General	7.1	X	
Suitability for hot dip galvanizing	7.2	X	X
Hot dip galvanized condition	7.4	X	X
Chemical composition and mechanical properties	8.2	X	X
Appearance	8.3	X	X
Dimensions, masses and tolerances	8.4	X	X
Leak tightness	8.5	X	X
Dangerous substances	8.6	X	
Reaction to fire	8.7	X	
Type of inspection	9.1	X	
Inspection documents	9.2	X	X
Tensile test	9.3	X	X
Bend test	9.4	X	X
Flattening test	9.5	X	X
Leak tightness test	9.6	X	X
Temporary protective coating	12	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 8.6 of this evaluation guideline.

7.2 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.

8 Agreements on the implementation of certification

8.1 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.

8.2 Certification staff

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

- certification experts: they are in charge of carrying out the pre-certification tests and assessing the inspectors' reports;
- inspectors: they are in charge of carrying out external inspections at the supplier's works;
- decision-makers: they are 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.

8.2.1 Qualification requirements

The qualification requirements consist of:

- qualification requirements for personnel of a certification body which satisfies the requirements NEN-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.

NEN-EN-ISO/IEC 17065	Certification Expert	Inspector	Decision maker
Education - general	<ul style="list-style-type: none"> • Technical higher-level professional education • Internal training certification and Kiwa policy • Training auditing 	<ul style="list-style-type: none"> • Intermediate-level professional education • Internal training certification and Kiwa policy • Training auditing 	<ul style="list-style-type: none"> • Higher level professional education • Internal training certification and Kiwa policy • Training auditing
Education - specific	<ul style="list-style-type: none"> • for BRL relevant technical education • specific studies and training (know-how and skills) 	<ul style="list-style-type: none"> • for BRL relevant technical education • specific studies and training (know-how and skills) 	<ul style="list-style-type: none"> • not applicable unless specific requirements have been specified by the BoE

NEN-EN-ISO/IEC 17065	Certification Expert	Inspector	Decision maker
Experience - general	<ul style="list-style-type: none"> • 1 year of relevant work experience with at least 4 pre certification tests of which one carried out independent under supervision. 	<ul style="list-style-type: none"> • 1 year of relevant work experience with at least 4 inspections of which one carried out independent under supervision 	<ul style="list-style-type: none"> • 4 year of relevant work experience with at least 1 year in certification
Experience - specific	<ul style="list-style-type: none"> • Detailed knowledge of the BRL and 4 certification tests carried out on the basis of the BRL or one related. 	<ul style="list-style-type: none"> • Detailed knowledge of the BRL and 4 inspections carried out on the basis of the BRL or one related. 	<ul style="list-style-type: none"> • general knowledge of the BRL

8.2.2 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 is dedicated to::

- decision makers: qualification of certification experts and inspectors,
- management of Kiwa: qualification of decision makers.

8.3 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.

8.4 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.

8.5 Layout of quality declaration

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

8.6 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 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.

8.7 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.

8.8 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 service portal (www.kiwa.nl) in the corresponding BRL-K536, section A.

8.9 Interpretation of requirements

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

9 Titles of standards

9.1 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)


9.2 Standards / normative documents

Number	Title	Version*
BRL-K767	External PE coating of underground steel pipes and fittings	
NEN-EN 10216	Seamless steel tubes for pressure purposes-technical delivery conditions	
NEN-EN 10220	Seamless and welded steel tubes-Dimensions and masses per unit length	
NEN-EN 10240	Internal and/or external protective coatings for steel tubes-Specification for hot dip galvanized coatings applied in automatic plants	
NEN-EN 10255	Non-alloy steel tubes suitable for welding or threading-Technical delivery conditions	
NEN-EN 10266-1	Pipe threads where pressure tight joints are made on the threads-Part 1: Taper external threads and parallel internal threads-Dimensions, tolerances and designations	
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	
NEN-EN-ISO 9001	Quality management systems-Requirements	

*) When no date of issue has been indicated, the latest version of the document is applicable.

I Model certificate (informative)

Product certificate
KXXXXXX/0X


kiwa 
Partner for progress

Issued
Replaces
Page 1 of 2

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-**K** nummer "Titel" + datum bindend.


Luc Leroy
Kiwa

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

Supplier

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Certification process consists of initial and regular inspection of:

- quality system
- product

Certificate

II Model IQC-scheme (informative)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or materials supplied: - recipe sheets - 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 - internal transport - storage - preservation - packaging - identification				

