AR 15

Datum jjjj-mm-dd

bindendverklaring

Approval requirement 15

Steel pipes for welding or threading

kiwa

GASTEC Qa

Trust
Quality
Progress

Foreword

This GASTEC QA Approval requirement has been approved by the Board of Experts product certification GASTEC QA, in which relevant parties in the field of gas related products are represented. This Board of Experts supervises the certification activities and where necessary require the GASTEC QA Approval requirement to be revised. All references to Board of Experts in this GASTEC QA Approval requirement pertain to the above mentioned Board of Experts.

This GASTEC QA Approval requirement will be used by Kiwa Nederland BV in conjunction with the GASTEC QA general requirements and the KIWA regulations for product certification. This regulation details the method employed by Kiwa during product certification.

Approved by Board of Experts : xxx

Accepted by Kiwa Nederland B.V. : xxx

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Contents

1 Introduction

1.1 General

This GASTEC QA approval requirement in combination with the GASTEC QA general requirements include all relevant requirements, which are adhered by Kiwa as the basis for the issue and maintenance of a GASTEC QA certificate for steel pipes for welding or threading.

This GASTEC QA approval requirements replace the GASTEC QA Approval Requirements 15 “Steel pipes and sockets for the transport of gas”, dated January 2012.

List of changes:

- Requirements for resistance to high temperatures added
- Update to the new format for GASTEC QA approval requirements
- These approval requirements have been fully reviewed textually.
- All general requirements have been deleted and included in the GASTEC QA general requirements document
- Change of paragraphs

The product requirements have been changed

1.2 Scope

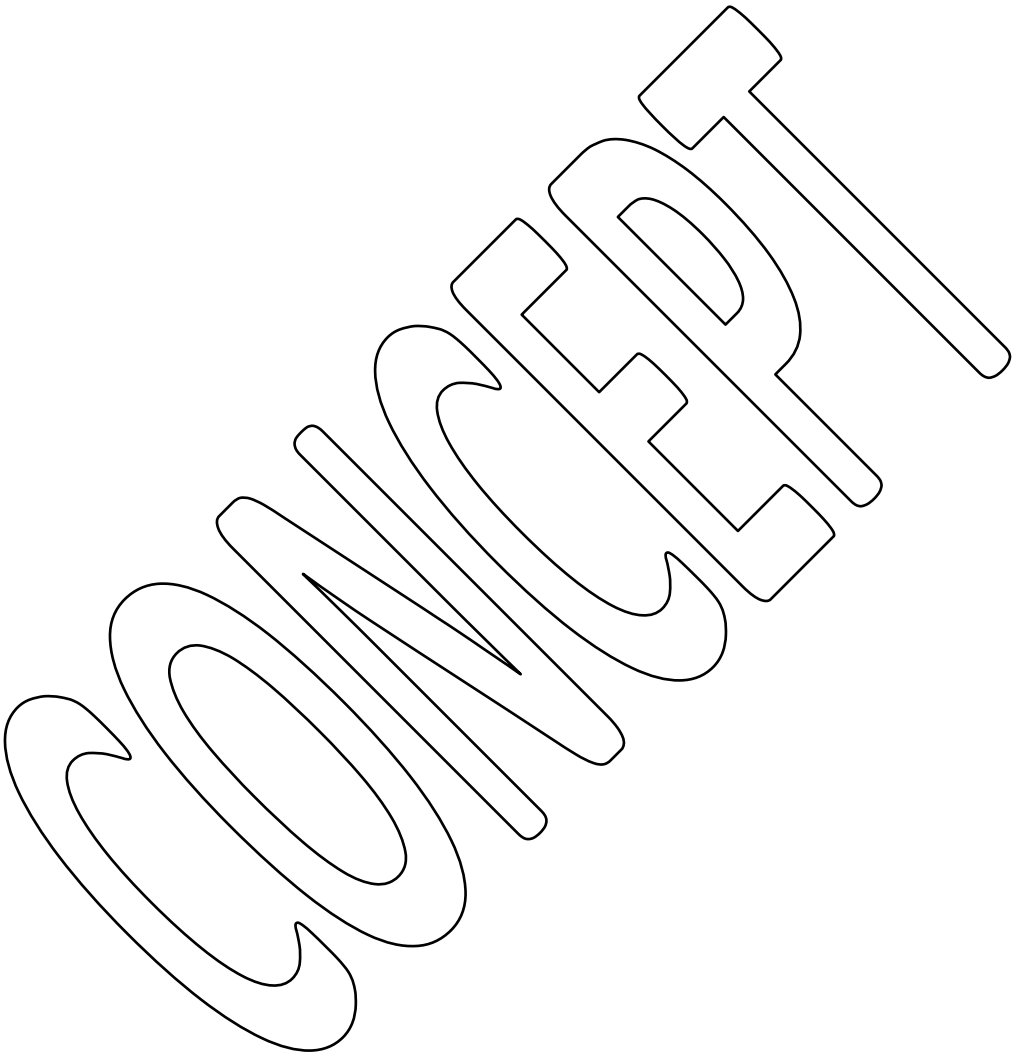
These approval requirements specify the requirements for steel pipes for welding and treading.

The steel pipes are used for the transport of gaseous fuels in accordance with the 2nd and 3rd family as per EN 437. These pipes shall be manufactured by a seamless or longitudinally welded process provided with sockets, threaded ends or with plain ends.

2 Definitions

In this approval requirement, the following terms and definitions are applicable:

Board of Experts: The Board of Experts Gastec QA.



3 Product requirements

3.1 General

The products shall comply with NEN-EN 10255: 2004 + A1: 2007 with the following addition.

3.1.1 Wall thickness and threaded ends

Supplementary to NEN-EN 10255 the following requirements shall be met:

- The pipes shall have a wall thickness as specified in NEN-EN 10255, table 2: heavy series H and medium series M.
- Threaded ends shall be in accordance with EN 10226-1.
- The maximum allowed thread size is 2".

4 Performance requirements and test methods

4.1 Resistance to high temperature

The steel pipes (including protection/isolation) shall be resistant to a radiation heat of 10 kW/m^2 during 30 minutes. The leakage shall be ≤ 5 l/h after testing.

The test shall be performed at a temperature of 20 °C ± 5 °C. The test samples shall be conditioned at least 24h before testing at a temperature of 30 °C ± 5 °C and a humidity of 60 % ± 20 %.

The test is performed in a horizontally test equipment as shown in figure 1. The leakage shall be measured in accordance to Annex A of EN 1775:2007.

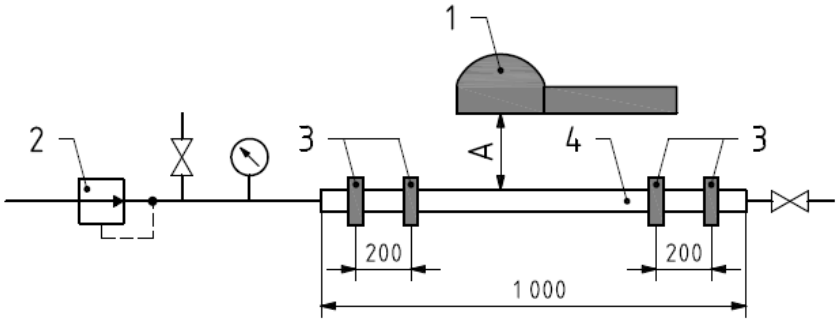


Figure 1

Legend:
1 heat cup
2 measuring system as described in appendix A of NEN-EN 1775:2007
3 mounting brackets
4 to be tested sample
A distance between heat cup and surface of the assembled component (for example the outside of a casing)

The test sample shall be mounted in the test equipment without stress or tension on the test sample, see figure 1.

Before the start of the high temperature test, the sample is tested on leakage at 200 mbar during 5 minutes. Record the leakage value (l/h)

Expose the test sample during 30 minutes to a heat radiation of 10 kW/m^2. The distance between the heating cup and the sample shall be calculated with the data on the calibration file of the heating cup.

Determine the leakage after the high temperature test during 5 minutes at 200 mbar. Record the value (l/h)

5 Marking

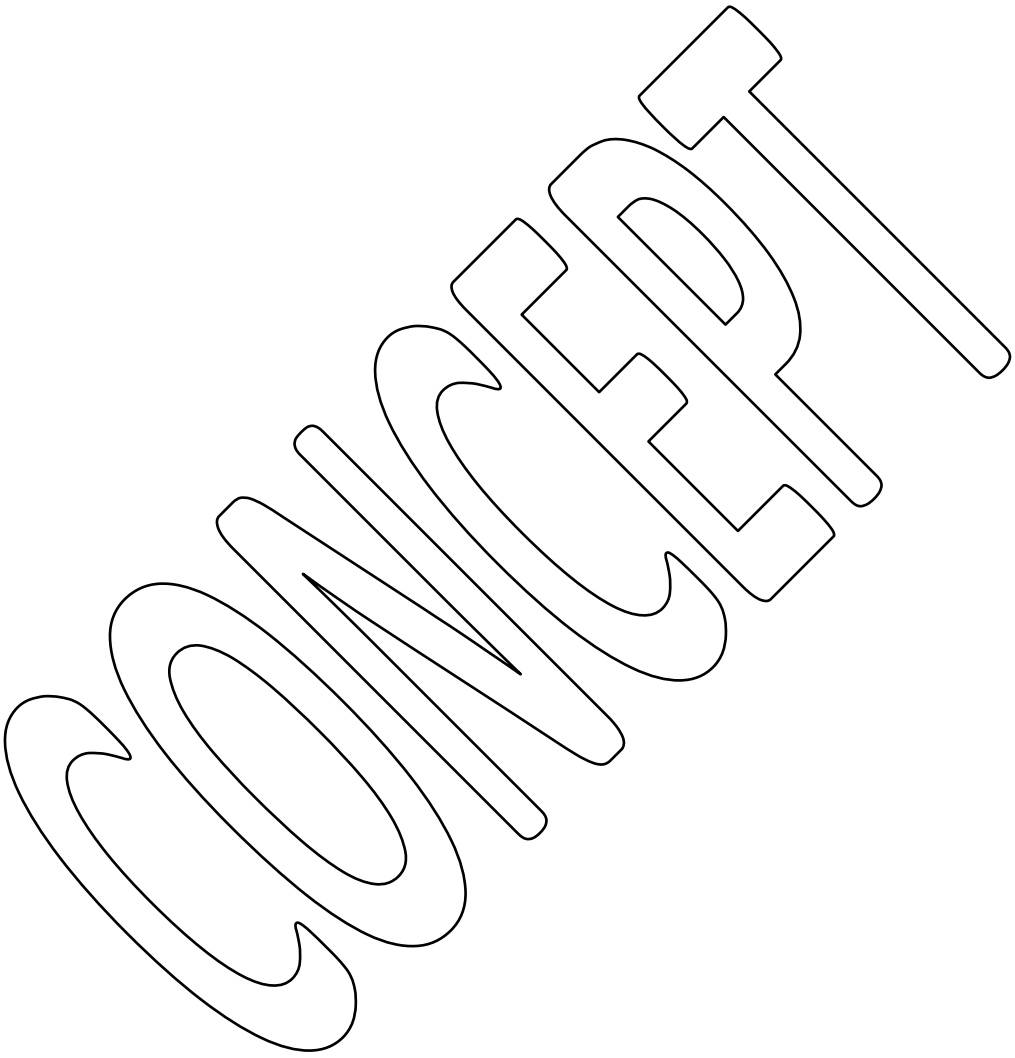
5.1 Marking

The pipes shall be marked in accordance with NEN-EN 10255 with the following addition:

- The GASTEC QA word mark, logo or punch mark.

6 Quality system requirements

The supplier shall make a risk assessment of the product and production process according to chapter 3.1.1.1 and 3.1.2.1 of the GASTEC QA general requirements. The risk assessments shall be available to Kiwa for review.



7 Summary of tests

This chapter contains a summary of tests to be carried out during:

- The initial product assessment;
- The periodic product verification;

7.1 Test matrix

Description of requirement	Clause EN 10255	Test within the scope of		
		Initial product assessment	Product verification	
			Inspection	Frequency
Manufacturing process	6	X		
Delivery conditions	7	X		
Chemical composition	8.2	X	X	1x/ year
Appearance	8.3	X	X	1x/ year
Dimensions, masses and tolerances	8.4	X	X	1x/ year
Leak tightness	8.5	X		
Dangerous substances	8.6	X		
Reaction to fire	8.7	X		
Tensile strength and elongation test	9.3	X	X	1x/year
Bending test	9.4	X		
Flattening test (deformability)	9.5	X		
Marking	10	X	X	1x/ year
Additional GASTEC QA requirements:				
Wall thickness and threaded ends	3.1.1	X	X	1x/ year
Resistance to high temperatures	4.1	X	X	1x/ year
Marking	5	X	X	1x/ year

For the initial product assessment the steel pipes shall comply with the NEN-EN 10255.
Product verification tests will be assessed by the auditor at the manufacturers location.
The product verification tests depend on the options as specified in the NEN-EN 10255.

8 List of referenced documents

8.1 Standards / normative documents

All normative references in this Approval Requirement refer to the editions of the standards as mentioned in the list below.

EN 437: 2003+A1: 2009	Test gases- test pressure – appliance categories
EN 10255: 2004 + A1: 2007	Non-alloy steel tubes suitable for welding and threading – technical delivery conditions
NEN 1078: 2018	Supply for gas with an operating pressure up to and including 500 mbar - Performance requirements - New estate

8.2 Source

Parts of the text of this approval requirement have been based on NEN 1078