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# CEN/TS 1555-7

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Supersedes CEN/TS 1555-7:2003

English Version

# Plastics piping systems for the supply of gaseous fuels - Polyethylene (PE) - Part 7: Guidance for the assessment of conformity

Systèmes de canalisations en plastique pour la distribution de combustibles gazeux - Polyéthylène (PE) - Partie 7: Guide pour l'évaluation de la conformité

Kunststoff-Rohrleitungssysteme für die Gasversorgung - Polyethylen (PE) - Teil 7 : Empfehlungen für die Beurteilung der Konformität

This Technical Specification (CEN/TS) was approved by CEN on 11 September 2012 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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# Contents

Page

# Foreword

This document (CEN/TS 1555-7:2013) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TS 1555-7:2003.

EN 1555 is composed of the following parts:

— EN 1555-1, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 1: General*;

— EN 1555-2, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 2: Pipes*;

— EN 1555-3, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 3: Fittings*;

— EN 1555-4, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 4: Valves*;

— EN 1555-5, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 5: Fitness for purpose of the system*;

— CEN/TS 1555-7, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 7: Guidance for the assessment of conformity* (the present Technical Specification).

This issue of CEN/TS 1555-7 takes into account the technical changes made in the revision of EN 1555-1, -2, -3, -5 and -4, published in 2010 and respectively in 2011. Guidance for the assessment of conformity given in this document has been revised to reflect the changes made to test methods and requirements given in EN 1555-1, -2, -3, -4 and -5. Two new types of pipe have been introduced, i.e. coextruded pipes and peelalable layer pipes. The sampling procedures and sampling frequencies for these types of pipes have been introduced into the tables for TT, BRT, PVT and AT tests for pipes.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# Introduction

Figures 1 and 2 are intended to provide general information on the concept of testing and organisation of those tests used for the purpose of the assessment of conformity. For each type of test, i.e. type testing (TT), batch release test (BRT), process verification test (PVT), and audit test (AT), this part of EN 1555 details the applicable characteristics to be assessed as well as the frequency and sampling of testing.

A typical scheme for the assessment of conformity of compounds, pipes, fittings, valves, joints or assemblies by manufacturers is given in Figure 1.

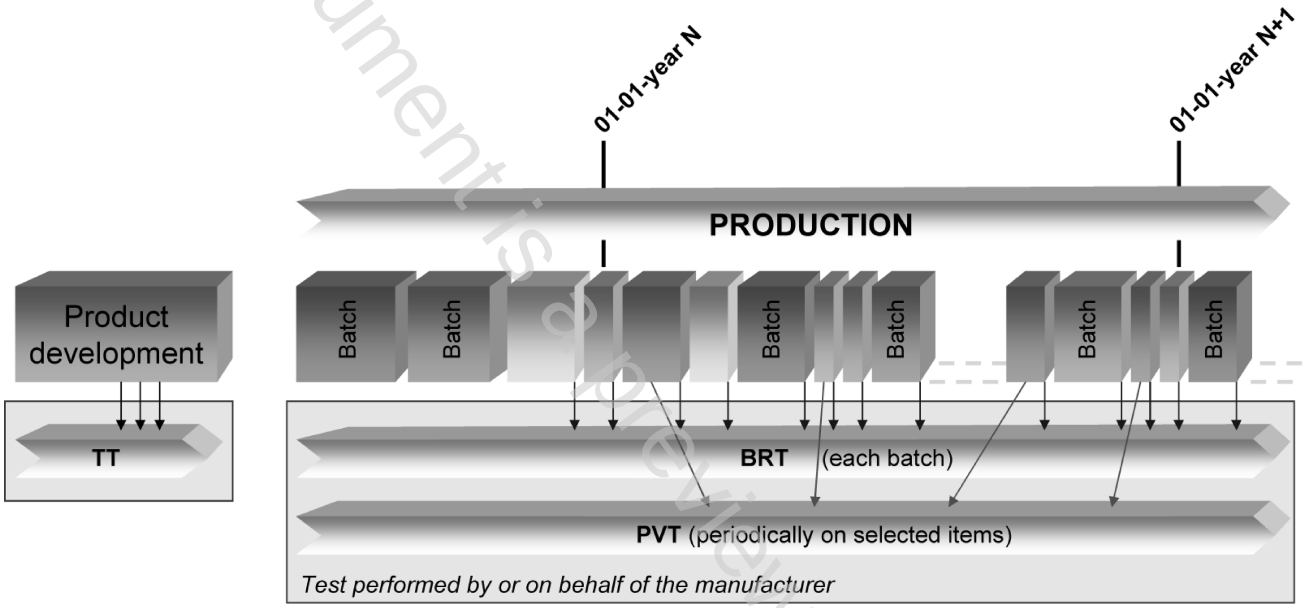


**Figure 1 — Typical scheme for the assessment of conformity by a manufacturer**

A typical scheme for the assessment of conformity of compounds, pipes, fittings, valves, joints or assemblies by manufacturers, including certification, is given in Figure 2.

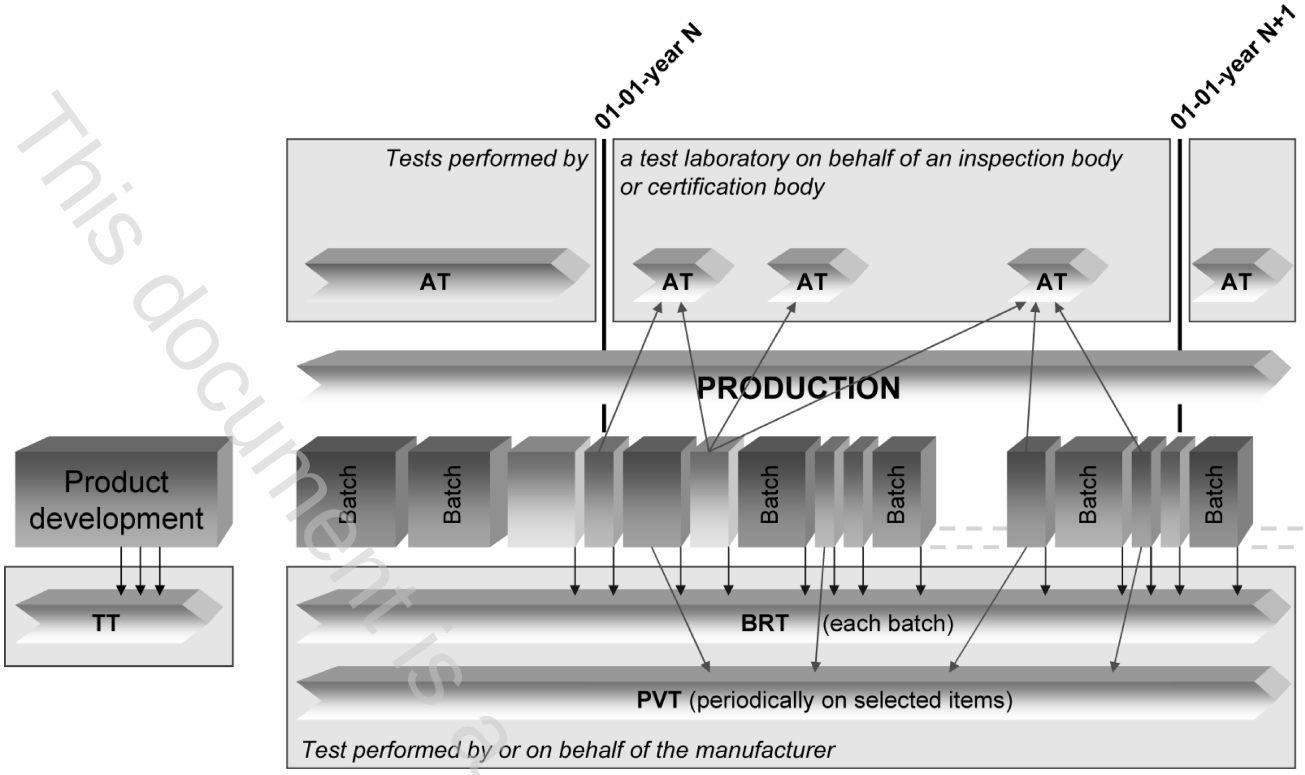


**Figure 2 — Typical scheme for the assessment of conformity by a manufacturer, including certification**

# 1 Scope

This Technical Specification gives guidance for the assessment of conformity of compounds, products, joints and assemblies in accordance with the applicable part(s) of EN 1555 intended to be included in the manufacturer's quality plan as part of the quality management system and for the establishment of certification procedures.

It is recommended that the quality management system conforms to or is no less stringent than the relevant requirements to EN ISO 9001 [2].

NOTE 1 If certification is involved, the certification and inspection body is preferably compliant with EN 45011 [3], EN 45012 [4] or EN ISO/IEC 17020 [5], as applicable.

In conjunction with Parts 1 to 5 of EN 1555 (see Foreword), this Technical Specification is applicable to polyethylene (PE) plastics piping systems for the supply of gaseous fuels. It is applicable to PE pipes, fittings, and valves, their joints and to joints with components of other materials intended to be used under the following conditions:

a) a maximum operating pressure, MOP, up to and including 10 bar[1)];

b) an operating temperature of 20 °C as reference temperature.

NOTE 2 For other operating temperatures, derating coefficients can be used; see EN 1555-5.

For mechanical fittings conforming to ISO 10838-1 [6], ISO 10838-2 [7] or ISO 10838-3 [8], as applicable, guidance for assessment of conformity is not given in this part of EN 1555. When requested, a quality plan based on the tests mentioned in ISO 10838-1 [6], ISO 10838-2 [7] or ISO 10838-3 [8], as applicable, should be set up in agreement between user and manufacturer.

EN 1555 covers a range of maximum operating pressures and gives requirements concerning colours and additives.

NOTE 3 It is the responsibility of the purchaser or specifier to make the appropriate selections from these aspects, taking into account their particular requirements and any relevant national regulations and installation practices or codes.

# 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1555-1:2010, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 1: General*

EN 1555-2:2010, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 2: Pipes*

EN 1555-3:2010, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 3: Fittings*

EN 1555-4:2011, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 4: Valves*

EN 1555-5:2010, *Plastics piping systems for the supply of gaseous fuels — Polyethylene (PE) — Part 5: Fitness for purpose of the system*

1) 1 bar = 0,1 MPa.

EN ISO 6259-1, *Thermoplastics pipes — Determination of tensile properties — Part 1: General test method (ISO 6259-1)*

EN ISO 12162, *Thermoplastics materials for pipes and fittings for pressure applications — Classification, designation and design coefficient (ISO 12162)*

EN ISO 13477, *Thermoplastics pipes for the conveyance of fluids — Determination of resistance to rapid crack propagation (RCP) — Small-scale steady-state test (S4 test) (ISO 13477)*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions given in EN 1555-1:2010, EN 1555-2:2010, EN 1555-3:2010, EN 1555-4:2011 and EN 1555-5:2010 and the following apply.

**3.1**
**certification body**
impartial body, governmental or non-governmental, possessing the necessary competence and responsibility to carry out certification of conformity according to given rules of procedure and management

Note 1 to entry: A certification body is preferably compliant with EN 45011 [3].

**3.2**
**inspection body**
body that performs inspection

Note 1 to entry: A body can be an organisation or part of an organisation.

Note 2 to entry: An inspection body is accredited to EN ISO/IEC 17020 [5].

**3.3**
**testing laboratory**
laboratory which measures, tests, calibrates or otherwise determines the characteristics of the performance of materials and products

Note 1 to entry: In the context of this part of EN 1555, the materials and products can be subjected to type testing, batch release testing, process verification testing, audit testing, and witness testing, as applicable.

Note 2 to entry: A testing laboratory is preferably compliant with EN ISO/IEC 17025[9].

**3.4**
**quality management system**
management system to direct and control an organisation with regard to quality

Note 1 to entry: Requirements for quality management systems are given in EN ISO 9001 [2].

**3.5**
**quality plan**
document setting out the specific quality practices, resources and sequence of activities relevant to a particular product or range of products

**3.6**
**type testing**
TT
testing performed to prove that the material, product, joint or assembly is capable of conforming to the requirements given in the relevant standard

Note 1 to entry: The type test results remain valid until there is a change in the material or product or assembly provided that the process verification tests are done regularly.