INTERNATIONAL STANDARD

ISO 11414

First edition
1996-06-01

Plastics pipes and fittings — Preparation of polyethylene (PE) pipe/pipe or pipe/fitting test piece assemblies by butt fusion

Tubes et raccords en matières plastiques — Préparation d'éprouvettes par assemblage tube/tube ou tube/raccord en polyéthylène (PE) par soudage bout à bout

Reference number
ISO 11414:1996(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11414, was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications.*

Annexes A and B form an integral part of this International Standard.

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Printed in Switzerland

Plastics pipes and fittings — Preparation of polyethylene (PE) pipe/pipe or pipe/fitting test piece assemblies by butt fusion

1 Scope

This International Standard specifies a method for preparing butt-fusion-jointed test piece assemblies between polyethylene (PE) pipes and spigot-ended fittings.

It specifies the assembly parameters involved, such as the ambient temperature, joint geometry and fusion parameters, taking into account the service condition limits specified in the relevant product standards, as well as the type of pipe to be used.

This International Standard is intended to enable the effect of site assembly variables on joint performance to be determined. The fusion-jointing procedures and parameters used in the field can differ from those in this document, depending on the manufacturer's written procedures and/or local standards.

NOTE 1 The assembly and fusion-jointing technique described in this International Standard is applicable whatever the polyethylene resin employed, provided it is used in accordance with ISO/TR 11647. Deviations from the fusion cycle specified, in order to demonstrate joint performance, are permitted.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4427:—[1], *Polyethylene (PE) pipes for water supply —Specifications.*

ISO 4437:—[2], *Plastics pipes and fittings — Buried polyethylene (PE) pipes for the supply of gaseous fuels — Metric series — Specifications.*

ISO 8085-2:—[1], *Polyethylene fittings for use with polyethylene pipes for the supply of gaseous fuels — Metric series — Specifications — Part 2: Spigot fittings for butt fusion jointing, for socket fusion using heated tools and for use with electrofusion fittings*

ISO/TR 11647:1996, *Fusion compatibility of polyethylene (PE) pipes and fittings.*

3 Symbols used

3.1 Symbols used in more than one phase of the fusion-jointing cycle

e_n the nominal pipe wall thickness;

d_n the nominal external diameter of the pipe;

p the pressure applied to the butt-fusion joint interface;

t the length of each phase in the fusion cycle;

1) To be published.

2) To be published. (Revision of ISO 4437:1988)