

This is a preview of "ISO 21307:2011". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2011-05-15

Corrected version
2011-06-01

Plastics pipes and fittings — Butt fusion jointing procedures for polyethylene (PE) pipes and fittings used in the construction of gas and water distribution systems

*Tubes et raccords en matières plastiques — Modes opératoires
d'assemblage par soudage bout à bout de tubes et raccords en
polyéthylène (PE) utilisés pour la construction de systèmes de
distribution de gaz et d'eau*



Reference number
ISO 21307:2011(E)

© ISO 2011

This is a preview of "ISO 21307:2011". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 21307:2011". [Click here to purchase the full version from the ANSI store.](#)

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Butt fusion jointing process.....	3
4.1 General	3
4.2 Principle.....	4
4.3 Cleaning the pipe or fitting ends, planing unit and heater surfaces.....	4
4.4 Clamping the components	4
4.5 Planing the pipe or fitting ends.....	5
4.6 Aligning the pipes or fittings.....	5
4.7 Measuring the drag pressure	5
4.8 Melting the pipe or fitting ends	5
4.9 Jointing the pipe or fitting ends.....	5
4.10 Cooling the pipe or fitting ends	5
5 Butt fusion jointing procedures.....	5
5.1 Single low-pressure fusion jointing procedure.....	6
5.2 Dual low-pressure fusion jointing procedure.....	7
5.3 Single high-pressure fusion jointing procedure	8
6 Quality control	9
6.1 General	9
6.2 Joint integrity testing	9
6.3 Non-destructive quality control procedures.....	9
Annex A (informative) Examples of single low-pressure, dual low-pressure and single high-pressure procedures.....	10

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 21307 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transports of fluids*, Subcommittee SC 4, *Plastics pipes and fittings for the supply of gaseous fuels*.

This second edition cancels and replaces the first edition (ISO 21307:2009), which has been technically revised.

This corrected version of ISO 21307:2011 incorporates the following corrections:

- 5.1: The first sentence has been modified.
- 5.2: The first sentence has been modified.
- Table A.1: The title has been modified.
- A.3: The subclause heading has been modified.
- Table A.3: The title has been modified.

This is a preview of "ISO 21307:2011". [Click here to purchase the full version from the ANSI store.](#)

Introduction

With the increasing use of bimodal polyethylene (PE) materials such as PE 80 and PE 100, more and more PE compounds are appearing on the pipe market accompanied by proposals for butt fusion procedures that often differ for the same materials. The aim of standardization is to encourage the use of similar procedures for similar materials. There is a need to examine current practice on a global scale and establish the best procedure(s) for the highest-quality, most reliable and efficient construction of PE butt fusion systems for gas and water distribution.