
**Petroleum and natural gas
industries — Glass-reinforced plastics
(GRP) piping —**

Part 4:
Fabrication, installation and operation

*Industries du pétrole et du gaz naturel — Canalisations en plastique
renforcé de verre (PRV) —*

Partie 4: Construction, installation et mise en œuvre





COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions, symbols and abbreviated terms	1
4 Fabrication and installation	2
4.1 Delivery, inspection and documentation of GRP piping.....	2
4.2 Handling and storage.....	2
4.3 System design documentation.....	2
4.4 Installer requirements.....	3
4.4.1 Personnel qualification.....	3
4.4.2 Health and safety.....	3
4.5 Installation.....	3
4.5.1 General requirements.....	3
4.5.2 Components fabricated on-site.....	4
4.5.3 Cutting.....	4
4.5.4 Above ground application — Supports.....	4
4.5.5 Buried piping.....	5
4.5.6 Tolerances.....	5
4.5.7 Jointing.....	7
4.5.8 Application of fire-protective coating.....	8
4.5.9 Electrical conductivity and electrostatic dissipative properties.....	9
4.5.10 Earthing.....	9
4.5.11 Quality programme for installation.....	9
4.6 System testing.....	10
4.6.1 Flushing.....	10
4.6.2 Pressure testing.....	10
4.7 Certification and documentation.....	13
4.7.1 Flushing certificate.....	13
4.7.2 Pressure test certificate.....	13
4.8 Inspection.....	13
4.9 Repair after installation.....	13
4.9.1 General.....	13
4.9.2 Repair methods.....	13
5 Maintenance and repair	14
5.1 Maintenance.....	14
5.1.1 General.....	14
5.1.2 Removal of scale and blockages.....	14
5.1.3 Earthing requirements.....	14
5.1.4 Surface and mechanical damage.....	14
5.1.5 Fitter and inspector qualification.....	14
5.2 Repair.....	14
5.2.1 General.....	14
5.2.2 Replacement.....	15
5.2.3 Minor repairs.....	15
5.2.4 Temporary repair.....	15
5.2.5 Quality programme for repair and maintenance.....	15
5.3 Modifications and tie-ins.....	15
5.4 Requirements for testing and re-certification.....	15
Annex A (normative) Defect types — Acceptance criteria and corrective actions	16
Annex B (normative) Handling and storage	26