
**Metal ball valves for petroleum,
petrochemical and allied industries**

*Robinets à tournant sphérique métalliques pour les industries du
pétrole, de la pétrochimie et les industries connexes*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, 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	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	3
4 Pressure/temperature ratings	4
4.1 Valve rating.....	4
4.2 Shell rating.....	4
4.3 Seat and seal rating.....	4
5 Design	5
5.1 Flow passageway.....	5
5.2 Body.....	5
5.2.1 Body wall thickness.....	5
5.2.2 Flanged ends.....	7
5.2.3 Butt-welding ends.....	7
5.2.4 Socket welding ends.....	8
5.2.5 Threaded ends.....	10
5.2.6 Body openings.....	10
5.2.7 Anti-static design.....	11
5.2.8 Anti-blow-out stem.....	11
5.2.9 Ball-stem construction.....	11
5.2.10 Ball construction.....	11
5.2.11 Operating means.....	11
5.2.12 Glands.....	12
5.2.13 End flange facing interruptions.....	12
5.2.14 Shell joints.....	13
5.2.15 Packing gland bolting.....	14
5.2.16 Fluid thermal expansion.....	14
6 Materials	15
6.1 Shell.....	15
6.2 Shell material repair.....	15
6.3 Trim.....	15
6.4 Identification plate.....	15
6.5 Bolting.....	15
6.6 Seals.....	15
6.7 Threaded plugs.....	15
6.8 Low temperature service.....	15
6.9 Hydrogen sulfide environment.....	15
7 Marking	16
7.1 Legibility.....	16
7.2 Body marking.....	16
7.3 Ring joint marking.....	16
7.4 Identification plate.....	16
7.5 Special marking for unidirectional valves.....	17
8 Testing and inspection	17
8.1 Pressure tests.....	17
8.1.1 General.....	17
8.1.2 Shell test.....	17
8.1.3 Closure tightness test.....	18
8.2 Inspection.....	19
8.2.1 Extent of inspection.....	19