

Australian/New Zealand Standard™

High pressure water jetting systems

Part 2: Construction and performance



AS/NZS 4233.2:2013

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-043, High Pressure Water Safety. It was approved on behalf of the Council of Standards Australia on 11 October 2013 and on behalf of the Council of Standards New Zealand on 17 October 2013.

This Standard was published on 12 December 2013.

The following are represented on Committee SF-043:

Australasian High Pressure Water Jetting Association, Australia
Australasian High Pressure Water Jetting Association, New Zealand
Australian Chamber of Commerce and Industry
Australian Industry Group
Bureau of Steel Manufacturers of Australia
New Zealand Council of Trade Unions
Royal Australian Chemical Institute
Safe Work Australia
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand website at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 4233.2.

Australian/New Zealand Standard™

High pressure water jetting systems

Part 2: Construction and performance

Originally as AS/NZS 4233.2:1999.
Second edition 2013.

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Standards Committee SF-043, High Pressure Water Safety, to supersede AS/NZS 4233.2:1999, *High pressure water (hydro) jetting systems, Part 2: Construction and performance*.

The objective of this revision is to reflect current industry best practice and the technological advances since the publication of the previous edition. The revision broadly aligns with, but is not equivalent to EN 1829-1:2010, *High pressure water jet machines—Safety requirements, Part 1: Machines* and EN 1829-2:2008, *High-pressure water jet machines—Safety requirements, Part 2: Hoses, hose lines and connectors*.

The principal differences between this and the previous edition are as follows:

- (a) Changes in technology including personal protective equipment, electronic control systems and hold-to-active devices.
- (b) Machinery including remote and automated.
- (c) Training including new units of competencies for high pressure water jetting.
- (d) Systems of work including maximum reaction force and mechanically held devices.

Additionally, much of the informative text has been made normative.

This Standard is the second of a series of standards applicable to high pressure water jetting.

This series comprises the following:

AS/NZS	
4233	High pressure jetting systems
4233.1	Part 1: Safe operation and maintenance
4233.2	Part 2: Construction and performance (this Standard)

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	4
1.2 OBJECTIVE.....	4
1.3 APPLICATION.....	4
1.4 NORMATIVE REFERENCES.....	4
1.5 DEFINITIONS.....	5
SECTION 2 DESIGN AND CONSTRUCTION	
2.1 GENERAL REQUIREMENTS.....	7
2.2 PUMP AND DRIVE UNIT.....	7
2.3 PIPE WORK.....	8
2.4 PRESSURE VESSELS.....	8
2.5 ELECTRICAL EQUIPMENT.....	8
2.6 SAFETY AND PRESSURE RELIEF DEVICES.....	8
2.7 HOT PARTS.....	9
2.8 GUARDS.....	9
SECTION 3 INSTALLATION REQUIREMENTS	
3.1 GENERAL.....	10
3.2 PIPE WORK, VESSELS AND FITTINGS.....	10
3.3 CONTROLS AND SHUTDOWN DEVICES.....	10
3.4 PUMP INSTALLATION.....	11
3.5 PRESSURE INDICATORS.....	12
SECTION 4 HOSES	
4.1 CLASS A JETTING SYSTEMS.....	13
4.2 CLASS B JETTING SYSTEMS.....	13
SECTION 5 MISCELLANEOUS COMPONENTRY	
5.1 FILTER OR STRAINER.....	15
5.2 HIGH PRESSURE WATER JETTING COMPONENTS.....	15
SECTION 6 MARKING	
6.1 GENERAL.....	16
6.2 PUMPS.....	16
6.3 HIGH PRESSURE WATER JETTING COMPONENTS.....	16
6.4 HOSE ASSEMBLY MARKING.....	16
BIBLIOGRAPHY.....	18

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
High pressure water jetting systems

Part 2: Construction and performance

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements for the design, construction, testing, inspection and safeguarding of high pressure water jetting systems.

This Standard applies to high pressure water jetting systems with an output capability greater than 800 bar litres per minute and less than 5600 bar litres per minute (identified as Class A) and systems with an output capability in excess of 5600 bar litres per minute (identified as Class B).

NOTE: Safe operation and maintenance of high pressure water jetting systems is not covered by this Standard but is given in AS/NZS 4233.1.

1.2 OBJECTIVE

The objective of this Standard is to provide manufacturers and suppliers with the minimum requirements for equipment and associated components for high pressure water jetting systems.

1.3 APPLICATION

This Standard shall be read in conjunction with AS/NZS 4233.1.

1.4 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS	
2845	Water supply—Backflow prevention devices
2845.2	Part 2: Registered air gaps and registered break tanks
2845.3	Part 3: Field testing and maintenance of testable devices
4024	Safeguarding of machinery (series)
60520	Degrees of protection provided by enclosures (IP Code)
AS/NZS	
1200	Pressure equipment
2845	Water supply—Backflow prevention devices
2845.1	Part 1: Materials, design and performance requirements
3000	Electrical installations (known as the Australian/New Zealand Wiring Rules)
3100	Approval and test specification—General requirements for electrical equipment
3350	Safety of household and similar electrical appliances
3350.1	Part 1: General requirements (IEC 60335-1:1991, MOD)