

Australian/New Zealand Standard™

**Qualification of welders for fusion
welding of steels**



AS/NZS 2980:2007

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WD-003, Welding of Structures. It was approved on behalf of the Council of Standards Australia on 19 February 2007 and on behalf of the Council of Standards New Zealand on 16 February 2007.
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The following are represented on Committee WD-003:

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Australian/New Zealand Standard™

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PREFACE

This Standard was prepared by the Australia/New Zealand Committee WD-003, Welding of Structures, to supersede AS 2980—2004.

Consistent with the 2004 edition of AS 2980, this edition continues to give cognizance to the ISO welder qualifications Standard for steels ISO 9606-1:1994, *Approval testing of Welders—Fusion Welding, Part 1: Steels*, by adopting largely its principles and methodologies; however, due to incompatibilities between the European-based approach of the ISO Standard and the North American basis for many of the Australian and New Zealand welding Standards, it could not be adopted in its entirety with the methods of testing and criteria of acceptance continuing to be based on current Australian and New Zealand Standards.

Changes made to this edition were primarily to accommodate New Zealand specific requirements to enable jointing to take place, and at the same time opportunity was taken to clarify acceptance criteria and correct a number of typographic errors. The differences with the 2004 edition of AS 2980 are as follows:

- (a) Clarification of the Scope: Clauses 1.1.
- (b) Jointing requirements: Clauses 1.4.2, 1.6, 3.3, 3.4, and Appendix F.
- (c) Clarification of requirements for multi-process joints: Clause 2.2 and Table 2.2.
- (d) Amendments to Clause 2.6 and Tables 2.6(A) and 2.6(B) to include recent changes to welding consumable classification Standards.
- (e) Clarifying requirements for welders qualifying for multiple welding positions (Clause 2.8) and test requirements (Clause 3.3).
- (f) Clarification of acceptance criteria: Clauses 4.1, 4.2, 4.3, and Table 4.3.5.3.
- (g) Correction of typographical errors: Clauses 3.5.2, 4.3.5.2, and Table 4.3.1.
- (h) Minor amendments to Clauses 5.1.2, 5.2, Paragraph E2.10, and Tables 2.6A and B2.

Readers should note that whilst this Standard provides the welder with a broad range of approvals, application Standards may offer the welder a limited approval option, which in some cases may be of some economic benefit to the fabricator.

As drawings in this Standard are complete only to the extent necessary for illustration, reference is to be made to the requirements specified in the text.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

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FOREWORD

The ability of a welder to follow verbal or written instructions and verification of a person's skills are important factors in ensuring the quality of the welded product.

The testing of a welder's skill in accordance with this Standard depends on welding techniques and conditions used in which uniform rules are complied with, and standard test pieces are used.

The principle of this Standard is that a qualification test qualifies the welder not only for the conditions used in the test, but also for all joints that are considered easier to weld provided the welder has received appropriate training and/or has industrial practice within the range of qualification.

The qualification test may be used to qualify a welding procedure and a welder provided all the relevant requirements, e.g., test piece dimensions, are satisfied. Where a test is intended as both a procedure qualification and a welder qualification, the welder qualification is not achieved unless the requirements for procedure qualification are also met.

Qualifications in accordance with AS 2980 existing at the date of publication of this Standard are to be interpreted in accordance with the requirements of the Standard.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard **Qualification of welders for fusion welding of steels**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard defines the qualification test of welders for the welding of steels to the requirements of a welding procedure specification. It provides a set of technical rules for a systematic qualification test of the welder, and enables such qualifications to be uniformly accepted independently of the type of product, location and examiner/examining body.

When qualifying manual welders, the emphasis is placed on the welder's ability to manually manipulate the electrode/welding torch and thereby to produce a weld of acceptable quality.

The principle of this Standard is that a qualification test that qualifies the welder not only for the conditions used in the test, but also for all joints that are considered to weld easily, on the presumption that the welder has received particular training and/or has industrial practice within the range of qualification.

This Standard is intended to complement existing Standards such as AS 1796 and AS/NZS 3992 whilst enhancing the requirements for the qualification of welders from the previous edition of AS 2980 in accordance with international expectations. It does not deal with the certification of welders.

NOTES:

- 1 Certification of welders is covered by AS 1796.
- 2 Qualification of welders for pressure applications is addressed by AS/NZS 3992.
- 3 Appendix E provides a comparison between this Standard and ISO 9606-1.

1.2 APPLICATION

The qualification tests prescribed in this Standard are intended to provide a method to qualify welders for the welding of steel structures; however, they may also be suitable for the qualification of welders for other applications, by agreement between the principal and the fabricator. These tests are not intended to be used as a guide for welding during actual construction. The latter should be performed in accordance with the requirements of a welding procedure specification (WPS) produced for the purpose.

This Standard deals specifically with qualifications for welders using manual or semi-automatic welding equipment and includes requirements for welders using mechanized or fully automatic equipment.

NOTE: Where a welder fails the specified tests, the performance may be used as a basis for measuring the value of further training.

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix A.