
British Standard Specification for
**Approval testing of welders working
to approved welding procedures**

Part 1. Fusion welding of steel

Spécification pour essai d'agrément des soudeurs qualifiés
pour les procédés de soudage agréés
Partie 1. Soudage par fusion de l'acier

Spezifikation für Schweißerprüfung mit Verfahrensprüfung
Teil 1. Schmelzschweißen von Stählen

Contents

	Page		Page
Foreword	Inside front cover	Appendix	
Cooperating organizations	Back cover	A. Record of approval test of welder	9
Specification		Tables	
1. Scope	1	1. Weld metal/parent metal combinations	2
2. Definitions	1	2. Positional approval for pipe	2
3. Information to be given to the welder	1	3. Acceptance levels	8
4. Items to be recorded	1	4. Number of test specimens required	9
5. Changes not affecting approval	1	Figures	
6. Extent of approval	2	1. Test piece for butt weld in plate	5
7. Test pieces	3	2. Test piece for butt weld in pipe	5
8. Submission of test weld	4	3. Test piece for fillet weld in plate	6
9. Examination and testing	4	4. Test piece for branch connection in pipe	7
10. Statement of results	9		
11. Reapproval of welder	9		

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Foreword

This revision of this Part of BS 4871 has been prepared under the direction of the Welding Standards Committee. It incorporates alterations necessary to align the standard with BS 4870 : Part 1 : 1981 and also embodies other technical changes developed from experience gained in the use of the standard since it was first published in 1974. This Part of BS 4871 supersedes BS 4871 : Part 1 : 1974 which is withdrawn.

This revision does not invalidate welder approvals previously accepted according to the requirements of the 1974 edition of the standard, provided the details of the procedures are still relevant to the production work on which the welders are to be employed. The extent of approval given by a previous test in accordance with the 1974 edition may now be related to those ranges indicated in this revised edition. All new approval testing of welders should be made in accordance with the requirements of this revised edition.

This British Standard is one of a series of standards on the approval testing of welders and welding procedures, the latter having a bearing on the former for certain applications. This link has been used as a means of arranging the series of standards into:

- (a) approval testing of welding procedures (see BS 4870 : Part 1);
- (b) welder approval when approval of the welding procedure is required;
- (c) welder approval when approval of the welding procedure is not required (for either technical or contract reasons) (see BS 4872 : Part 1).

For the purposes of this Part of this standard, a welder working to an approved procedure or a procedure being approved is considered to be sufficiently experienced in the appropriate welding process and hence already capable of passing training tests such as those given in BS 1295.

When non-destructive testing is used for the examination of test welds, it should be appreciated that the acceptance levels given in this standard are for the purposes of the approval testing of welders and as such are not necessarily the same as those which might be specified for work on which approved welders will be employed.

Depending upon the emphasis placed on quality control in the production of welded components, the approval of welding procedures covered in this series of standards may be administered in one of several ways which should be stipulated at the enquiry and/or order stage. The alternatives currently employed are the following:

- (1) each individual contractor (or sub-contractor) may have proved by actual test pieces every weld form he wishes to use, in every thickness and material; or
- (2) each individual contractor (or sub-contractor) may have proved by actual test pieces a set of welds representative on a group basis of all the various thicknesses and materials to be used in production; or
- (3) each individual contractor (or sub-contractor) need not make procedure test pieces provided he can prove by appropriate authentic documentation of an independent nature that he has previously satisfactorily welded the type of joint and material in question.

In respect of (1) and (2) it should be appreciated that once the welding procedure tests have been approved, they need never be repeated unless there is a change in certain variables. As an extension beyond (3), it may be possible by agreement between the contracting parties for fully documented welding procedures, developed independently of the particular contractor, to be employed without the need for further approval tests.

It has been assumed in the drafting of this British Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people, for whose guidance it has been prepared.