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Specification for

Approval testing of welders working to approved welding procedures

Part 2. TIG or MIG welding of aluminium and its alloys

Spécification pour essai d'agrément des soudeurs qualifiés pour les procédés de soudage agréés
Partie 2. Soudage à l'arc en atmosphère inerte avec électrode fusible ou de tungstène de l'aluminium et des alliages d'aluminium

Spezifikation für Schweißerprüfung mit Verfahrensprüfung
Teil 2. WIG- und MIG-Schweißen von Aluminium und seinen Legierungen

British Standards Institution

BS 4871 : Part 2 : 1982

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Foreword

This British Standard, which has been prepared under the direction of the Welding Standards Committee, 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 2);

(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 2).

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 for aluminium and its alloys and hence already capable of passing tests such as those given in BS 4872 : Part 2.

To indicate the philosophy behind this series of standards, it is considered useful to give details of the practices relating to welding procedure approval. 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.