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British Standard Specification for
**Approval testing of
welding procedures**

Part 3. Arc welding of tube to tube-plate
joints in metallic materials

Essais de qualification des modes opératoires de soudage — Spécifications
Partie 3. Soudage à l'arc de joints tubes-plaques tubulaires en matériaux métalliques

Zulassungsprüfung von Schweißverfahren
Teil 3. Lichtbogenschweißen von Rohren an Rohr-Blech-Verbindungen
aus metallischen Werkstoffen

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Foreword

This Part of BS 4870 has been prepared under the direction of the Welding Standards Committee to cover the particular requirements for the approval testing of welding procedures for tube to tube-plate joints. While there is no limitation on the metallic materials to be used, extra considerations not covered in this standard may need to be taken into account for some materials.

This Part of BS 4870 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 Parts of the standards for tube to tube-plate joints into:

- (a) approval testing of welding procedures;
- (b) welder approval when approval of the welding procedure is required (see BS 4871 : Part 3).

It should be appreciated that the non-destructive testing acceptance levels given in this standard are for the purposes of approval testing of welding procedures and as such are not necessarily the same as those which might be specified for work on which approved welding procedures 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.

The need for a welding procedure to be approved in accordance with this standard should be specified in the application standard or be agreed between the contracting parties. Although a welding procedure may already have been approved, each manufacturer should accept responsibility for the procedure used on a contract and for the ability of the welders to apply the procedure.

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.

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