Draft for Public Comment

Form 36

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Interested committees:

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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- All comments should be submitted online at **https://standardsdevelopment.bsigroup.com/**. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex **(e.g. 3.1)**	Paragraph/ Figure/Table/Note	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

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DRAFT International Standard

ISO/DIS 25116-3

Friction stir welding - Steel —

Part 3: Quality and inspection requirements

ICS: 25.160.10

IIW

Secretariat: **IIW**

Voting begins on:
2025-09-24

Voting terminates on:
2025-12-17

This document has not been edited by the ISO Central Secretariat.

This draft International Standard is submitted to all ISO member bodies for voting, as a standard prepared by an international standardizing body in accordance with Council Resolution 42/1999. The proposer, the International Institute of Welding (IIW), has been recognized by the ISO Council as an international standardizing body for the purpose of Council Resolution 42/1999.

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by IIW, *International Institute of Welding*, Commission III, *Resistance welding, solid state welding and allied joining processes*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Welding processes are widely used in the fabrication of engineered structures. During the second half of the twentieth century, fusion welding processes, wherein fusion is obtained by the melting of parent material and usually a filler metal, dominated the welding of large structures. Although such processes have experienced incremental developments, most of which consisting in various degrees of mechanisation and electrical waveform controls, they have fundamentally remained the same. In 1991, Wayne Thomas at TWI invented friction stir welding (FSW), which is carried out entirely in the solid phase (no melting).

This process was initially industrialised for the welding of aluminium as it is particularly well suited to this type of low fusion point materials. Examples of applications include railway carriages, consumer products, food processing equipment, aerospace structures, and marine vessels. Due to the potential advantages of the process, a significant development effort was dedicated worldwide to the adaptation of FSW to higher fusion point materials such as steels. This development included the commercial availability of tool materials capable of sustaining the high temperatures and forces required for welding.

Following such advancements, the increasing use of FSW for steel has created the need for this document in order to ensure that welding is carried out in a controlled manner to achieve repeatability.

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