



## Instructions to Authors



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## 1 Introduction

The purpose of this document is to provide guidance to authors for the drafting of documents to be published in Welding in the World.

This document can also be used for documents to be presented in IIW Congresses, Conferences, Colloquia, Seminars, unless other requirements are specified.

## 2 Requirements

### 2.1 General requirements

Documents shall be written in good English.

They should generally not exceed 15 pages (including diagrams and a possible Appendix).

Papers should be laid out as follows (see an example in Appendix 1):

- Page 1**
- Title**, indicating as clearly as possible the subject of the paper.
  - Author** names and affiliations.
  - Abstract**, giving a concise summary of the aims, content, and conclusions (not exceeding 200 words).
  - Keywords**, from the IIW-Thesaurus, to be used for indexing purposes.

- Page 2 onwards**
- Introduction
  - Main Text
  - Conclusions
  - Acknowledgements (if any)
  - References

### 2.2 Abbreviations, symbols, units

The full form of any abbreviation should be given in the text when the term is first used.

A symbol shall not represent more than one variable. A list of symbol should be provided, if necessary. Greek letters shall be legible. Similar characters, e.g. the letter "l" and the number one "1", and the letter "o" and the number zero "0" shall be clearly distinguished and used consistently.

S.I. units should be used.



## 2.3 Equations, formulae

Equations are numbered in sequence, and referred to in the text e.g. as "Eq. (1)".

## 2.4 Figures, illustrations

Figures can be included in the text, but their corresponding files shall also be provided separately under TIFF format (.tif) or JPEG format (.jpg), (a minimum 300 dpi resolution is recommended).

The titles of the figures shall be included in the same file as the text (and shall not be included in the figure itself).

## 2.5 References

References shall be numbered in sequence, with square brackets e.g. "[1]", "[2, 3]", [4-7]. References cited for the first time in a figure or table title should be numbered as if they appeared in the text where the figure or table is first mentioned.

References are listed at the end of the paper, numbered according to their appearance in the text.

References should include:

- the name of the author(s),
- the title of the paper in its original language and its translation into English,
- the name of the publication,
- the year,
- the number of the volume,
- the number and month of the journal,
- the numbers of the first and last pages of the text so that its length is indicated.

### Example:

[1] Jones W.D.: A hot water cylinder to survive earthquakes, New Zealand Journal of Science, 1993, 20, 3, pp. 181-183.

[2] Elms D.G., Buchanan A.H.: Fire spread analysis of buildings, Building Research Association of New Zealand, 1981, Research Report R35, Judgeford.

[3] AS/NZS 1554.6:1994, Structural steel welding, Part 6: Welding stainless steels for structural purposes, Standards Australia/Standards New Zealand.

## 2.6 Use of trade names

The use of trade names for processes, products or welding equipment shall be avoided as far as possible, and the generic name shall be given instead.



### 3 Required electronic files

- PDF file of the whole document (text, tables and figures, including the abstract and IIW-keywords).
- Word file (.doc) of the text (tables, and titles of figures included, if any);
- figures and illustrations, as separate files, (.jpg) or (.tif) files, if any (re 2.4);
- photograph(s) of the author(s) under electronic format;
- authorisation of publication from the author (RD021, and RD022 in case of a copyright holder different from the author), signed by the author.
- e-mail address and mail address of the author(s).

If a document presented to a Working Unit during an Annual Assembly meeting is recommended for publication as "Ready for publication", its author shall provide the Working Unit Chairman, **during this Working Unit meeting**, with the above-required electronic files.

If the document is recommended for publication as "to be revised", its author shall therefore revise it and then provide the Working Unit Chairman, with the above-required electronic files.

### 4 Documents of reference

- RD021 Author's authorisation for publication of a document by IIW  
RD022 Copyright holder's authorisation for publication of a document by IIW

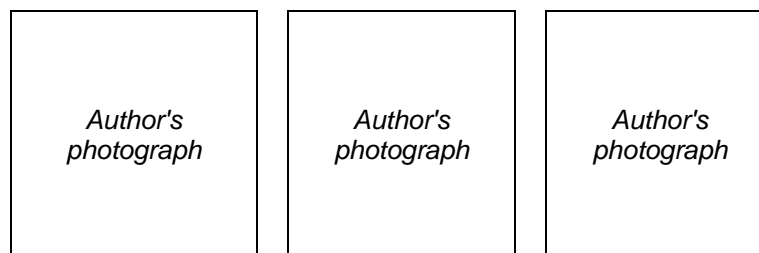


# APPENDIX 1

## PAPER LAYOUT EXAMPLE

### DEVELOPMENT OF FRICTION SPOT JOINING

*(Arial fonts, 14 pt, bold, centred, capitals)*



**Name**

**Name**

**Name**

**Name – Company - (Country) E-mail**

**Name – Company - (Country) E-mail**

**Name – Company - (Country) E-mail**

*(Arial font, 11 pt, bold, centred)*

### ABSTRACT

*(Arial font, 12 pt, bold, centred, capital letters)*

This paper describes the fundamental procedure and joint properties of Friction Spot Joining (FSJ), a new spot welding method for aluminium and other light metal alloys. The process uses frictional heat between a joining tool and work piece as the heat source, and produces a solid phase joining by causing plastic flow of the material. Technological essences of the process including the joining tool, a prototypic FSJ equipment, and process parameters were first fundamentally established. Consequently, based on those results, FSJ systems for practical use have been produced. Furthermore, various properties of the friction spot joint including metallurgical structure, hardness distribution, and tensile strength were investigated.

*(Arial font, 10 pt)*

**Keywords:** *Friction welding; Aluminium alloys; Light metals; Lap joints; Strength; Mechanical properties; Recrystallisation; Automobile engineering.*



## 1 INTRODUCTION

*(Arial font, 12 pt, bold, centred, capital letters)*

In the automotive, rolling stock, and other transportation equipment industries, the use of aluminium alloys is rapidly increasing from the requirement of producing lighter weight structures. For making lap joints of thin aluminium plates, conventionally in above industries, resistance spot welding (RSW), riveting and spot clinching have been mainly applied.

*(Arial font, 10 pt)*

...../.....

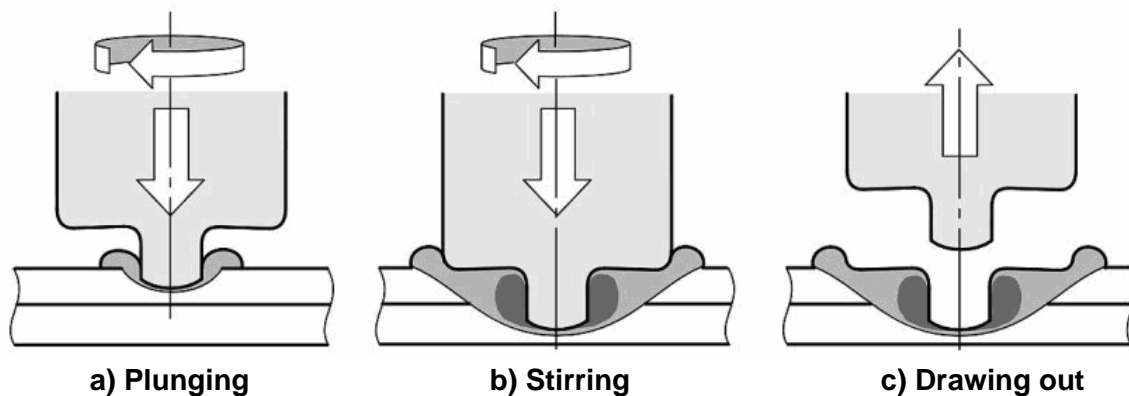
To overcome above difficulties in spot joining of aluminium alloys, authors proposed Friction Spot Joining (FSJ) process in 2001 [1] *(Hypertext links shall be avoided)* by introducing a prototypic equipment, fundamental joining procedure, and some basic performances of joints.

...../.....

## 2 FUNDAMENTAL PROCEDURE OF FSJ

FSJ process is basically applied to the lap joint of double plates. The fundamental procedure of FSJ is schematically illustrated in Figure 1. *(This numbering shall be independent of the numbering of the paragraphs. Hypertext links shall be avoided)*.

...../.....



**Figure 1 — Schematic illustration of FSJ**

*(Arial font, 11 pt, bold, capital letter for the first word)*

...../.....

### 2.1 Plunging

*(Arial font, 11 pt, bold, left aligned, first letter only of the first word in capitals)*

#### 2.1.1 General

*(Arial font, 10 pt, bold and in italics, left aligned, first letter only of first word in capitals)*

...../.....

### 2.2 Stirring

...../.....



### 3 FSJ SYSTEM

...../.....

### 4 METALLURGICAL PROPERTIES OF FSJ JOINT

For metallurgical observation of FSJ joint, a 6000 series aluminium alloy plate of 1 mm in thickness was used. Chemical compositions and mechanical properties of the material used are shown in Table 1. *(This numbering shall be independent of the numbering of the paragraphs. Hypertext links shall be avoided).* . . . .

**Table 1 — Chemical compositions of material used**  
*(Arial font, 11 pt, bold, capital letter for the first word)*

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
1.01	0.13	0.00	0.07	0.57	0.01	0.01	0.01	Re

*(Word table mode to be used. Image file shall not be included.)*

...../.....

### 5 TENSILE STRENGTH OF FSJ JOINT

...../.....

### 6 CONCLUSIONS

This paper described developments of FSJ process, joining system for practical use, and various joint properties. Topics mentioned in this paper are summarised as follows.

- 1) . . . .
- 2) . . . .
- 3) . . . .
- 4) . . . .

### ACKNOWLEDGEMENTS

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### REFERENCES

[1] Sakano *et al.*: Development of Spot FSW robot system for automobile body members, Proceeding of the 3rd International Symposium of Friction Stir Welding, September 2001, Kobe.

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