Irish Standard
I.S. EN 1708-3:2012

Welding - Basic weld joint details in steel - Part 3: Clad, buttered and lined pressurized components

I.S. EN 1708-3:2012

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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English Version

Welding - Basic weld joint details in steel - Part 3: Clad, buttered and lined pressurized components

Soudage - Descriptif de base des assemblages soudés en acier - Partie 3: Composants plaqués, beurrés et doublés soumis à la pression

Schweißen - Verbindungselemente beim Schweißen von Stahl - Teil 3: Plattierungen, Pufferungen, Auskleidungen druckbeanspruchter Bauteile

This European Standard was approved by CEN on 28 January 2012.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 1708-3:2012) has been prepared by Technical Committee CEN/TC 121 “Welding”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

EN 1708, 'Welding - Basic weld joint details in steel' consists of the following parts :

Part 1: Pressurized components

Part 2: Non internal pressurized components

Part 3: Clad, buttered and lined pressurized components

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard complements EN 1708-1 with regard to applications in industrial, chemical and pharmaceutical sectors. It specifies established examples on how to construct claddings, linings and dissimilar joints and complex connections relevant to the welding technology and with regard to pressurized components (e.g. vessels, boilers and piping). In the following text therefore the term pressurized components will be used.

These examples can also be used for other applications provided the relevant requirements are taken into account. For exceptional cases such as specific problems concerning corrosion or materials in need of special processes, other solutions can be necessary which are to be agreed upon between purchaser and manufacturer.

Appropriate national regulations and corresponding design specifications are to be followed when selecting design examples as well as, if applicable, different or further requirements.

This European Standard does not override conditions on dimensioning of welded joints regarding strength (e.g. according to EN 12952, EN 12953, EN 13445 and EN 13480). It is to be applied in accordance with the specified application limits for pressurized components subject to compression stress with bearing wall thicknesses ≤ 30 mm. This limit is chosen for structural reasons and not for the heat treatment that may be required. The wall thickness limit applies to butt welds in the bearing vessel wall only and does not apply to flanges, torispherical heads, flat ends or other similar parts.

This European Standard applies to the following types of steel:

— non alloyed steels with a minimum tensile strength of $R_m \leq 450$ MPa;

— P295GH and 16Mo3 according to EN 10028-2;

— fine-grain steels according to EN 10028-3 with a minimum yield point $R_{eL} \leq 355$ MPa;

— austenitic steels according to EN 10028-7.

This European Standard can also be applied to other steels and/or larger wall thicknesses, provided that an agreement has been made between the manufacturer and the purchaser/operating authority.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1011-5, *Welding — Recommendations for welding of metallic materials — Part 5: Welding of clad steel*

EN 1708-1:2010, *Welding — Basic welded joint details in steel — Part 1: Pressurized components*

EN 10028-2*, Flat products made of steels for pressure purposes — Part 2: Non-alloy and alloy steels with specified elevated temperature properties*

EN 10028-3, *Flat products made of steels for pressure purposes — Part 3: Weldable fine grain steels, normalized*

EN 10028-7, *Flat products made of steels for pressure purposes — Part 7: Stainless steels*

ISO/TR 25901:2007, *Welding and related processes — Vocabulary*