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I.S. EN 1708-1:2010

Welding - Basic welded joint details in steel - Part 1: Pressurized components

I.S. EN 1708-1:2010

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English Version

Welding - Basic welded joint details in steel - Part 1: Pressurized components

Soudage - Descriptif de base des assemblages soudés en acier - Partie 1: Composants soumis à la pression

Schweißen - Verbindungselemente beim Schweißen von Stahl - Teil 1: Druckbeanspruchte Bauteile

This European Standard was approved by CEN on 28 November 2009.

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Foreword

This document (EN 1708-1:2010) 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of an identical text or by endorsement, at the latest by July 2010, and conflicting national standards shall be withdrawn at the latest by July 2010.

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.

This document supersedes EN 1708-1:1999.

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

- *Part 1: Pressurized components*
- *Part 2: Non internal 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 and the United Kingdom.

1 Scope

The purpose of this European Standard is to exemplify commonly accepted welded connections in pressure systems. It does not promote the standardization of connections that may be regarded as mandatory or restrict development in any way. Stress analysis rules should be considered if necessary.

This standard contains examples of connections welded by:

- Manual metal-arc welding with covered electrode (111);
- Submerged arc welding (12);
- Gas shielded metal arc welding (13);
- Tungsten inert gas arc welding; TIG-welding (14);
- Plasma arc welding (15)

processes (process numbers according to EN ISO 4063) in steel pressure systems. Other processes by agreement.

This standard covers welded joint details in steel, but can be applied to other metallic materials. In such cases the shape and dimensions of the weld should be checked.

The estimation of the suitability of welded connections for special service conditions, for example corrosion and fatigue are not specially considered.

2 Normative references

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

EN ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers (ISO 4063:2009)*

EN ISO 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (ISO 5817:2003, corrected version:2005, including Technical Corrigendum 1:2006)*

EN ISO 9692-1:2003, *Welding and allied processes — Recommendations for joint preparation — Part 1: Manual metal-arc welding, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1:2003)*

EN ISO 9692-2:1998, *Welding and allied processes — Joint preparation — Part 2: Submerged arc welding of steels (ISO 9692-2:1998)*

3 Requirements

3.1 Selection of detail

Connections are not considered to be equally suitable for all service conditions, nor is the order in which they are shown indicative of their relative characteristics. In selecting the appropriate detail to use from the several

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