SLOVENSKI STANDARD
SIST EN 18007-2:2024

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Elektromagnetno utripno varjenje - 2. del: Načrtovanje zvarnih spojev

Electromagnetic pulse welding - Part 2: Design of welded joints

Schweißen und verwandte Verfahren - Elektromagnetisches Pulsschweißen - Teil 2: Ausführung der Schweißverbindungen

Soudage par impulsion électromagnétique - Partie 2 : Conception des assemblages soudés

Ta slovenski standard je istoveten z: **EN 18007-2:2024**

ICS:

25.160.10	Varilni postopki in varjenje	Welding processes
25.160.40	Varjeni spoji in vari	Welded joints and welds

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Electromagnetic pulse welding - Part 2: Design of welded joints

Soudage par impulsion électromagnétique - Partie 2 : Conception des assemblages soudés

Elektromagnetisches Pulsschweißen - Teil 2: Ausführung der Schweißverbindungen

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Contents

Page

European foreword

This document (EN 18007-2:2024) has been prepared by Technical Committee CEN/TC 121 “Welding and allied processes”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by January 2025, and conflicting national standards shall be withdrawn at the latest by January 2025.

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

The EN 18007 series of standards, under the general title *Electromagnetic pulse welding*, consists of the following parts:

— *Part 1: Welding knowledge, terminology and vocabulary*,

— *Part 2: Design of welded joints*,

— *Part 3: Qualification of welding operators and weld setters*,

— *Part 4: Specification and qualification of welding procedures*,

— *Part 5: Quality and inspection requirements*.

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Introduction

Electromagnetic pulse welding is an innovative solid-state welding technology that belongs to the group of pressure welding processes and is based on the use of electromagnetic forces to deform, accelerate and weld workpieces. No external heat source is used, the connection is only created by a high-velocity impact.

The increasing use of the electromagnetic pulse welding process has created the need for a standard, to ensure that the welding operations are carried out in the most effective manner and that appropriate controls are performed on all aspects of the implementation.

To be effective, welded products should be free from problems in production and in service. To achieve this goal, it is recommended to provide controls from the design phase through material selection, choice of parameters, the fabrication itself, and inspection. For example, poor design can create serious and costly difficulties in the workshop or in service. Incorrect process parameters and/or material selection can result in welding defects. Welding procedures should be correctly formulated and approved to avoid weld discontinuities. To ensure the manufacture of a quality product, management should understand the causes of potential problems and implement appropriate inspection procedures and subsequent quality measures. Supervision should be implemented to ensure that the specified quality is achieved.