

**GEOTEHNILISTE ERITÖÖDE TEGEMINE. SULUNDSEINAD**

**Execution of special geotechnical work - Sheet-pile walls**

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

See Eesti standard EVS-EN 12063:2001 sisaldab Euroopa standardi EN 12063:1999 ingliskeelset teksti.	This Estonian standard EVS-EN 12063:2001 consists of the English text of the European standard EN 12063:1999.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.02.1999.	Date of Availability of the European standard is 17.02.1999.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 93.020

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ICS 93.020

**English version**

Execution of special geotechnical work  
**Sheet pile walls**

Exécution de travaux géotechniques  
spéciaux – Rideaux de palplanches

Ausführung von besonderen geotech-  
nischen Arbeiten (Spezialtiefbau) –  
Spundwandkonstruktionen

This European Standard was approved by CEN on 1999-01-09.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## **Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 288 "Execution of special geotechnical works", 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of an identical text or by endorsement, at the latest by August 1999, and conflicting national standards shall be withdrawn at the latest by August 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The present standard expands on design only when necessary, but provides full coverage of the execution and supervision requirements for sheet pile wall structures.

It has been drafted on the basis of existing Codes of Practice and general available expertise which can be found in specialized literature.

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## 1 Scope

This Standard specifies requirements, recommendations and information concerning the execution of permanent or temporary sheet pile wall structures in accordance with 2.4 of ENV 1991-1:1994 and the handling of equipment and materials.

It does not give requirements and recommendations for the installation of specific parts of the structure such as ground anchorages and piles which are covered by other codes.

It applies only to steel sheet pile walls, combined walls and wooden sheet pile walls.

Composite structures such as Berliner walls and sheet pile walls in combination with shotcrete, are not the subject of this standard.

## 2 Normative references

This Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 287-1:1992 + A1:1997, *Approval testing of welders - Fusion welding - Part 1 : Steels.*

EN 288-2:1992 + A1:1997, *Specification and approval of welding procedures for metallic materials - Part 2 : Welding procedures specification for arc welding.*

EN 288-3:1992 + A1:1997, *Specification and approval of welding procedures for metallic materials - Part 3 : Welding procedure tests for the arc welding of steels.*

EN 499:1994, *Welding consumables - Covered electrodes for manual metal arc welding of non alloy and fine grain steels - Classification.*

EN 996:1995, *Piling equipment - Safety requirements.*

prEN 1537, *Execution of special geotechnical work - Ground anchors.*

ENV 1991-1:1994, *Eurocode 1 : Basis of design and actions on structures - Part 1 : Basis of design.*

ENV 1992-1-1:1994, *Eurocode 2 : Design of concrete structures - Part 1-1 : General rules and rules and rules for buildings.*

ENV 1993-1-1;1994, *Eurocode 3 : Design of steel structures - Part 1-1 : General rules and rules for buildings.*

ENV 1993-5:1998, *Eurocode 3 : Design of steel structures - Part 5 : Piling.*

ENV 1997-1:1994, *Eurocode 7 : Geotechnical design - Part 1 : General rules.*

EN 10020:1988, *Definitions and classification of grades of steel.*

EN 10079:1992, *Definition of steel products.*

EN 10219-1:1997, *Cold formed structural welded hollow sections of non-alloy and fine grain steels - Part 1 : Technical delivery requirements.*

EN 10219-2:1997, *Cold formed welded structural hollow sections of non-alloy and fine grain steels - Part 2 : Tolerances, dimensions and sectional properties.*

EN 10248-1:1995, *Hot rolled sheet piling of non alloy steels - Part 1 : Technical delivery conditions.*

EN 10248-2:1995, *Hot rolled sheet piling of non alloy steels - Part 2 : Tolerances on shape and dimensions.*

EN 10249-1:1995, *Cold formed sheet piling of non alloy steels - Part 1 : Technical delivery conditions.*

EN 10249-2:1995, *Cold formed sheet piling of non alloy steels - Part 2 : Tolerances on shape and dimensions.*

EN 24063:1992, *Welding, brazing, braze welding and soldering of metals – Nomenclature of processes and reference number for symbolic representation on drawings. (ISO 4063:1990)*

EN 25817:1992, *Arc-welded joints in steel - Guidance on quality levels for imperfections. (ISO 5817:1992)*

EN 29692:1994, *Metal-arc welding with covered electrode, gas-shielded metal-arc welding and gas welding - Joint preparations for steel. (ISO 9692:1992)*

ISO 1106-1:1984, *Recommended practice for radiographic examination of fusion welded joints - Part 1 : Fusion welded butt joints in steel plates up to 50 mm thick.*

### 3 Definitions

For the purposes of this standard, the following definitions apply :

#### 3.1

##### **anchorage**

anchoring system for the sheet pile wall, for example anchor plates or anchor walls including the connecting rods (tie rods), screw anchors, ground and rock anchors, driven ground anchors, anchoring piles and anchors with grouted or expanded bodies

#### 3.2

##### **auxiliary structures**

all structures necessary for the proper and safe execution of the sheet piling works

#### 3.3

##### **bracing**

a system of walings and struts to support the structure

#### 3.4

##### **combined wall**

retaining wall composed of primary and secondary elements. The primary elements can be steel tubes, beams, or box piles. The secondary elements are normally U or Z-shaped steel sheet piles. Figure 1 shows examples of combined walls

#### 3.5

##### **comparable experience**

documented, or other clearly established information related to the ground and installation conditions, involving similar types of soil and rock and for which similar behaviour is expected. Information gained locally is considered to be particularly relevant

#### 3.6

##### **cushion**

material, fitted into a recess in the driving cap, which smoothes the impact force of the falling hammer on the driving cap and on the head of the sheet pile (see figure 2)

#### 3.7

##### **de-clutching**

disconnection of the interlock during sheet pile driving