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Manually operated hydraulic shoring systems for groundwork support

Part 1: Product specifications

English version of DIN EN 14653-1

Manuell gesteuerte hydraulische Grabenverbaugeräte – Teil 1: Produktfestlegungen

National foreword

This standard has been prepared by CEN/TC 53 'Temporary works equipment' (Secretariat: Germany).
The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Technical Committee 11.05.09 *Grabenverbaugeräte*.

Document comprises 58 pages.

English version

**Manually operated hydraulic shoring systems for
groundwork support**

Part 1: Product specifications

Composants des blindages de tran-
chées– Partie 1: Spécifications du
produit

Manuell gesteuerte hydraulische Gra-
benverbaugeräte – Teil 1: Produktfest-
legungen

This European Standard was approved by CEN on 2005-02-28.

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Foreword

This document (EN 14653-1:2005) has been prepared by Technical Committee CEN/TC 53 "Temporary works equipment", 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of an identical text or by endorsement, at the latest by October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

This European Standard with the general title *Manually operated hydraulically shoring systems for groundwork support* consists of the following parts:

Part 1: Product specifications

Part 2: Assessment by calculation or test

These standards are to be read in conjunction with EN 12811-2 and EN 12811-3.

This document includes a Bibliography.

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

Introduction

Hydraulically operated shoring systems comprise prefabricated equipment that supports sheeting to the sides of excavations. This document covers two types of equipment whose adjustment in length is by hydraulic or by a combination of hydraulic and mechanical means:

- a) hydraulic bracing frames;
- b) hydraulic waler frames.

A variety of components which when assembled form a full system. The prefabricated components are used to make frame assemblies of different dimensions and structural capacities.

Hydraulic bracing frames and waler frames have two strength classification classes - Class A and Class B.

Class B hydraulic bracing frame legs have a further restriction limiting the length of a single leg to 20 m.

The instruction manual is intended to provide all the necessary information on the safe use of the systems.

This document gives specific requirements on the main characteristics of manually operated hydraulic pumps, hoses and associated equipment, but does not provide requirements for their specification or assessment in EN 14653-2.

This equipment is frequently used in conjunction with supplementary equipment, e.g. knee braces and intermediate hydraulic bracing struts.

The characteristic resistance values specified in this document form various reference levels.

Annex A gives information about the values of Partial safety factor for materials γ_M and Partial safety factor for actions γ_F . Annex B gives information on their use under site conditions.