SLOVENSKI PREDSTANDARD

SIST ENV 1090-5

prva izdaja
julij 2001

Izdelava in montaža jeklenih konstrukcij – 5. del: Dopolnilna pravila za mostove (prevzet ENV 1090-5:1998 z metodo platnice)

Execution of steel structures - Part 5: Supplementary rules for bridges

Exécution des structures en acier - Partie 5: Règles supplémentaires pour ponts

Ausführung von Tragwerken aus Stahl - Teil 5: Ergänzende Regeln für Brücken

Deskriptorji: konstrukcijska jekla, mostovi, pogoji izvajanja, stikovanje, varjenje, zaščita, pregledi, preskusi

ICS 91.080.10; 93.040

Referenčna številka
SIST ENV 1090-5:2001 ((sl),en)

Nadaljevanje na straneh od II do IV in od 1 do 17

NACIONALNI UVOD

Predstandard SIST ENV 1090-5 ((sl),en), Izdelava in montaža jeklenih konstrukcij - 5. del: Dopolnilna pravila za mostove, prva izdaja, 2001, ima status slovenskega predstandarda in je z metodo platnice prevzet evropski predstandard ENV 1090-5 (en), Execution of steel structures - Part 5: Supplementary rules for bridges, November 1998.

NACIONALNI PREDGOVOR

Evropski predstandard ENV 1090-5:1998 je pripravil tehnični odbor Evropskega komiteja za standardizacijo CEN/TC 135 Izdelava in montaža jeklenih konstrukcij.

Odločitev za prevzem tega predstandarda po metodi platnice je sprejela delovna skupina USM/TC KON/WG 3 Jeklene konstrukcije, ki je pripravila tudi nacionalni dokument za uporabo v Sloveniji, potrdil pa tehnični odbor USM/TC KON Konstrukcije.

Ta slovenski predstandard se lahko uporablja samo v skladu z nacionalnim dokumentom, ki je sestavni del SIST ENV 1090-5:2001.

Ta slovenski predstandard je dne 2000-12-04 odobril direktor USM.

Rok veljavnosti tega predstandarda je do izdaje evropskega standarda EN 1090-5.

ZVEZE S STANDARDI

S prevzemom tega evropskega predstandarda veljajo naslednje zveze:

SIST ENV 1090-1:1999	((sl),en)	Izdelava in montaža jeklenih konstrukcij – 1. del: Splošna pravila in pravila za stavbe
SIST ENV 1992-1-1:1999	((sl),en)	Eurocode 2: Projektiranje betonskih konstrukcij – Del 1-1: Splošna pravila in pravila za stavbe
SIST ENV 1993-1-1:1996	((sl),en)	Eurocode 3: Projektiranje jeklenih konstrukcij - Del 1-1: Splošna pravila in pravila za stavbe
SIST ENV 1993-2:2001	((sl)en)	Eurocode 3: Projektiranje jeklenih konstrukcij – 2. del: Jekleni mostovi
SIST ENV 1994-1-1:1998	((sl),en)	Eurocode 4: Projektiranje sovprežnih konstrukcij – Del 1-1: Splošna pravila in pravila za stavbe

OPOMBI

- Povsod, kjer se v besedilu predstandarda uporablja izraz “evropski predstandard”, v SIST ENV 1090-5:2001 to pomeni “slovenski predstandard”.

- Nacionalni uvod in nacionalni predgovor nista sestavni del predstandarda.

VSEBINA **Stran**

Nacionalni dokument za uporabo v Sloveniji

Pri referenčnih standardih za vijake je potrebno upoštevati določila Nacionalnega dokumenta za uporabo v Sloveniji za SIST ENV 1090-1:1999.

EUROPEAN PRESTANDARD

PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

ENV 1090-5

November 1998

ICS 91.080.10; 93.040

Descriptors: structural steels, bridges, building codes, setting-up conditions, joining, welding, protection, inspection, tests

English version

Execution of steel structures - Part 5: Supplementary rules for bridges

Exécution des structures en acier - Partie 5: Règles supplémentaires pour ponts

Ausführung von Tragwerken aus Stahl - Teil 5: Ergänzende Regeln für Brücken

This European Prestandard (ENV) was approved by CEN on 8 May 1998 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Ref. No. ENV 1090-5:1998 E

CONTENTS

FOREWORD

This European Prestandard has been prepared by Technical Committee CEN/TC 135 "Execution of steel structures and aluminium structures", the secretariat of which is held by NSF.

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

INTRODUCTION

Addition:

(104) This European Prestandard ENV 1090-5 is a supplement to:
ENV 1090-1: Execution of Steel structures – General rules and rules for buildings.

(105) This European Prestandard presupposes that the work is performed in accordance with the requirements of ENV 1090-1, as amended by this supplement.

(106) In this European Prestandard, the following terms are used:

Addition: means that the text applies in addition to the corresponding clause or subclause of ENV 1090-1 without any amendment to the existing text of ENV 1090-1;

Modification: means that the text modifies the corresponding text of ENV 1090-1 as appropriate.

(107) An addition is identified by the subsequent number to the last subclause respective paragraph number of ENV 1090-1 added to 100.

(108) Where a subclause of ENV 1090-1 is not mentioned in this ENV 1090-5 it applies as far as deemed appropriate in each case.

1 SCOPE

This clause of ENV 1090-1 is applicable except as follows:

Addition:

(106) This Part of ENV 1090 specifies particular requirements for the execution of structural steel bridge superstructures, comprising general rules independant of the type of bridge.

(107) This Part of European Prestandard refers to ENV 1993-2, ENV 1993-1-5 and the steel components of composite bridges designed according to ENV 1994-2.

(108) ENV 1090-3 and ENV 1090-4 are applicable under the conditions given in the project specification.

NOTE: In certain cases also other parts of ENV 1090 may be applicable, subject to conditions given in the project specification.

2 NORMATIVE REFERENCES

This clause of ENV 1090-1 is applicable except as follows:

Addition:

ENV 1090-1:1996	Execution of steel structures - Part 1: General rules and rules for buildings
ENV 1090-3:1997	Execution of steel structures - Part 3: Supplementary rules for high yield strength steels
ENV 1090-4:1997	Execution of steel structures - Part 4: Supplementary rules for hollow section structures
prEN 1337-1	Structural bearings - Part 1: General design rules
ENV-1993-2:1997	Eurocode 3: Design of steel structures - Part 2: Steel bridges
ENV-1993-1-5:1997	Eurocode 3: Design of steel structures - Part 1-5: General rules - Supplementary rules for planar plated structures without transverse loading
EN 10163-1	Delivery requirments for surface condition of hot rolled steel plates, wide flats and sections - Part 1: General requirements
EN 10204	Metallic products - Types of inspection documents (includes Amendment A1:1995)
ISO 8503-1:1988	Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steels substrates - Part 1: Specifications and definitions for ISO-surface profile comparators for the assessment of abrasive blast-cleaned surfaces.
prEN 10 264	Steel wire and wire products-steel wire for ropes
ISO/DIS 4063:1990	Welding, brazing, soldering and braze welding of metals-Nomenclature of processes and reference numbers for symbolic representation on drawings
ISO/DIS 14555	Welding - Arc stud welding of metallic materials
ISO/DIS 13918:1995	Welding - Studs and ceramic ferrules for arc stud welding

3 DEFINITION

This clause of ENV 1090-1 is applicable.

4 DOCUMENTATION

This clause of ENV 1090-1 is applicable except as follows:

Addition:

4.1 Project specification

(105) The relevant information and conditions for achieving specific fatigue classes shall be stated in the project specification.

5 MATERIALS

This clause of ENV 1090-1 is applicable except as follows:

Modification:

5.1 General

Addition:

(106) For metallic products, inspection documents in accordance with 3.1 B of EN 10204 shall be requested as material test certificates for this purpose, unless otherwise stated in the project specification.

(107) Any surface condition requirements and any delivery requirements in accordance with EN 10163-1 shall be stated in the project specification.

5.2.3 Steel for welded components

Addition:

NOTE 2: For steels according to EN 10025 the options 5, 6, 7, 9, 13, 14, 17, 20, 22, 27 should be selected in the project specification.

5.7 Shear connectors

Modification:

(1) Replace the text in Note: See ISO/DIS 13918.

Additions:

5.108 Expansion joints for road bridges

(1) The material to be used for expansion joints and transition joints shall be as given in the project specification.

(2) A distinction should be made between expansion joints that are:
- specially fabricated;
- standard products.

5.109 High strength cables

(1) The cables shall be delivered according to the project specification.

NOTE 1: The wire for strands should be cold drawn or colled rolled steel wire complying with the relevant part of prEN 10264.

NOTE 2: The filling material for the sockets should be selected taking into account service temperature and actions such that continued creeping of the loaded strand through the socket is prevented.

NOTE 3: Further information and requirements for high strength cables are given in ENV 1993-2, Annex A.

5.110 Bearings

See relevant clauses of the various parts of prEN 1337.

6 FABRICATION

This clause of ENV 1090-1 is applicable except as follows:

6.1 General

Modification:

(1) This subclause specifies the general requirements for workmanship for the fabrication part of execution of steel bridges and steel components of composite bridges.

6.2 Identification

Modification:

(2) Hard stamping and punching for marking shall not be used, unless otherwise stated in the project specification.

6.4 Cutting

Modification:

(5) Free edges shall not have a hardness in excess of 380 HV 10, unless otherwise stated in the project specification.

Addition:

(106) If hand thermal cutting or shearing is used, the surface shall be ground or machined to a smooth finish.

6.6 Holing

Modification:

(2) Holes shall not be made by punching without reaming unless permitted by the project specification.

(3) This paragraph is not applicable.

(4) This paragraph is not applicable.

(5) Punching is not allowed.

(7) Punching is not allowed.

6.7 Cut outs

Modification:

(1) Re-entrant angles (angles in which the open angle between the cut faces is less than 180°) and notches shall be rounded off. The minimum radius shall be 10 mm. Examples are given in figure 1 of ENV 1090-1.

(2) This paragraph is not applicable.

Addition:

(103) Any openings for erection purposes shall be submitted to acceptance and shall be made and documented according to the project specification.

6.9 Assembly

Modification:

(3) All connections for temporary components provided for construction purposes shall be made in accordance with this European Prestandard. All special requirements including any related to fatigue shall be in accordance with the project specification.

7 WELDING

This clause of ENV 1090-1 is applicable except as follows:

7.3 Welding processes

Modification:

The welding process named 701 is renamed 783 according to ISO 4063.

7.4.1 Welding procedures

Modification:

(2) The approval of welding procedures shall be carried out only according to EN 288-3 or EN 288-8, as appropriate, unless otherwise stated in the project specification.