

**Tööstuslikud termotöötlusseadmed. Osa 4:
Eriohutusnõuded kuumsukelgalvaanimise
termotöötlusseadmetestikule**

Industrial thermoprocessing equipment - Part 4:
Particular safety requirements for hot dip galvanising
thermoprocessing equipment

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 746-4:2000 sisaldab Euroopa standardi EN 746-4:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 17.07.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 746-4:2000 consists of the English text of the European standard EN 746-4:2000.</p> <p>This document is endorsed on 17.07.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This part of EN 746 gives the specific hazards and safety requirements that shall be provided by the manufacturer for Liquid Phase Treatment Thermoprocessing Equipment, whether it is used as an independent unit or as an integrated part of a plant.</p>	<p>Scope: This part of EN 746 gives the specific hazards and safety requirements that shall be provided by the manufacturer for Liquid Phase Treatment Thermoprocessing Equipment, whether it is used as an independent unit or as an integrated part of a plant.</p>
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Võtmesõnad:

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English version

Industrial thermoprocessing equipment

**Part 4: Particular safety requirements for
hot dip galvanising thermoprocessing equipment**

Equipements thermiques industriels –
Partie 4: Prescriptions particulières
de sécurité pour les équipements
thermiques de galvanisation à chaud

Industrielle Thermoprocessinganlagen –
Teil 4: Besondere Sicherheitsanfor-
derungen an Feuerverzinkungs-
anlagen

This European Standard was approved by CEN on 1999-11-22.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

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

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

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FOREWORD

This European Standard has been prepared by Technical Committee CEN/TC 186 "Industrial thermoprocessing - Safety", 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 2000, and conflicting national standards shall be withdrawn at the latest by July 2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

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 full list of parts of EN 746 is given below:

EN 746 Industrial thermoprocessing equipment

- Part 1 Common safety requirements for industrial thermoprocessing equipment
- Part 2 Safety requirements for combustion and fuel handling systems
- Part 3 Safety requirements for the generation and use of atmosphere gases
- Part 4 Particular safety requirements for hot dip galvanising thermoprocessing equipment
- Part 5 Particular safety requirements for salt bath thermoprocessing equipment
- Part 6 Particular safety requirements for material melting, remelting and liquid phase maintaining thermoprocessing equipment
- Part 7 Particular safety requirements for vacuum thermoprocessing equipment
- Part 8 Particular safety requirements for quenching equipment

The Annexes A and ZA are informative.

0 Introduction

The EN 746-1 “General Safety Requirements” contains the common safety provisions and devices for all types of industrial thermoprocessing equipment. This part of the standard details in addition those extra safety requirements which need special attention against the equipment listed in the scope.

This European Standard is a type C standard as defined in EN 292:1991.

The extent to which hazards are covered is indicated in the scope of this standard.

1 Scope

This part of EN 746 gives the specific hazards and safety requirements that shall be provided by the manufacturer for Hot Dip Industrial Batch and the Bath of Continuous Galvanising Thermoprocessing Equipment, whether it is used as an independent unit or an integrated part of a plant.

This part of EN 746 does not deal with the risks arising from any component handling equipment for the dip process or for the associated protective measures.

This part of EN 746 does not cover the handling, storage, transport, disposal, transfer or regeneration of the zinc and the processed material outside the limits of the equipment.

This part of EN 746 applies not only to the normal operation of the equipment but also to the safety of personnel and property in the event of abnormal operation and when foreseeable faults occur.

Examples of hot dip galvanising equipment are shown in Fig. 1 and Fig. 2.

NOTE: There are many variations in the design of galvanising equipment. Only two examples of the various types are given in this text.

2 Normative references

This European Standard incorporates by dated or undated references, 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 European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus. Requirements, testing, marking.
- EN 166 Personal eye-protection - Specifications
- EN 292-1:1991 Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology
- EN 292-2:1991 Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications
- EN 345 Specification for safety footwear for professional use
- EN 346 Specification for protective footwear for professional use
- EN 469 Protective clothing for firefighters - Requirements and test methods for protective clothing for firefighting
- EN 531 Protective clothing for industrial workers exposed to heat (excluding fire fighters' and welders' clothing)
- EN 614-1 Safety of machinery - Ergonomic design principles - Part 1: Terminology and general principles
- EN 746-1:1997 Industrial Thermoprocessing Equipment - Part 1: Common Safety Requirements for Industrial Thermoprocessing Equipment
- EN 746-2 Industrial Thermoprocessing Equipment - Part 2: Safety Requirements for Combustion and Fuel Handling Systems
- prEN 1005-2:1998 Safety of machinery - Human physical performance Part 2: Manual handling of machinery and component parts of machinery
- prEN 1005-3:1998 Safety of machinery - Human physical performance - Part 3: Recommended force limits for machinery operation
- EN 1070 Safety of machinery - Terminology
- EN 1093-4 Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 4: Capture efficiency of an exhaust system - Tracer method
- prEN 1248:1998 Foundry machinery - Safety requirements for abrasive blasting equipment
- EN 60204-1 Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:1997)
- EN 61310-1 Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, auditory and tactile signals (IEC 61310-1:1995)