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**INDUSTRIAL THERMOPROCESSING  
EQUIPMENT - PART 5: PARTICULAR SAFETY  
REQUIREMENTS FOR SALT BATH  
THERMOPROCESSING EQUIPMENT**

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English version

## Industrial thermoprocessing equipment - Part 5: Particular safety requirements for salt bath thermoprocessing equipment

Equipements thermiques industriels - Partie 5:  
Prescriptions particulières de sécurité pour les  
équipements thermiques à bain de sel

Industrielle Thermoprozeßanlagen - Teil 5: Besondere  
Sicherheitsanforderungen an Salzbad-  
Wärmebehandlungseinrichtungen und -anlagen

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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of an identical text or by endorsement, at the latest by March 2001, and conflicting national standards shall be withdrawn at the latest by March 2001.

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 working group that drafted this Part of EN 746 comprised experts from the following countries: France, Germany, Italy, Sweden and United Kingdom.

This standard forms one part of a series safety standards covering Industrial Thermoprocessing Equipment.

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

An assessment of the foreseeable risks arising from the use of the equipment was carried out when this standard was prepared.

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 for the melting and use of molten salt that shall be provided by the manufacturer for Salt Bath Industrial Thermoprocessing Equipment, whether it is used as an independent unit or an integrated part of a plant. The limits of the equipment will include any transportation equipment which is located wholly or partially in the bath.

This part of EN 746 does not cover the handling, storage, transport, disposal, transfer or regeneration of the salts and 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 when foreseeable faults occur.

Examples of salt bath furnace set-ups are shown in Fig. 1, Fig. 2, Fig. 3 and Fig. 4.

**NOTE:** There are many variations in the design of salt bath equipment. Only three 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 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

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