

English version

## Pressure equipment - Part 6: Structure and content of operating instructions

Equipements sous pression - Partie 6 : Structure et contenu des instructions de service

Druckgeräte - Teil 6: Aufbau und Inhalt einer Betriebsanleitung

This Technical Specification (CEN/TS) was approved by CEN on 30 April 2004 for provisional application.

The period of validity of this CEN/TS 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 CEN/TS can be converted into a European Standard.

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## Foreword

This document (CEN/TS 764-6:2004) has been prepared by the Technical Committee CEN/TC 54 "Unfired pressure vessels", the secretariat of which is held by BSI.

This document EN 764 "Pressure equipment" consists of seven parts which are:

- Part 1: Terminology — Pressure, temperature, volume, nominal size
- Part 2: Terminology — Quantities, symbols and units
- Part 3: Terminology — Definition of parties involved
- Part 4: Establishment of technical delivery conditions for metallic materials
- Part 5: Inspection documentation of metallic materials and compliance with the material specification
- TS Part 6: Structure and content of operating instructions
- Part 7: Safety systems for unfired pressure equipment

It is intended that CEN/TC 54 amends this document as a Type 1 European Standard EN 764 Part 6 in a Joint Working Group together with CEN/TC 267 "Industrial piping and pipelines" and CEN/TC 269 "Shell and water tube boilers" (Resolution CEN/TC 54 no. 2003/427).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: 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.

## 1 Scope

This part six of this document identifies the requirements for operating instructions which accompany the pressure equipment when it is placed on the market. Operating instructions shall contain the necessary safety information covering installation including assembling, putting into service and maintenance.

## 2 General

The manufacturer shall identify and analyse all known and foreseeable hazards in the intended use and clearly foreseeable misuse which could occur in mounting, putting into service, use, maintenance and in service inspections by the user of the pressure equipment.

The possible hazards which could not be eliminated in the design of the product or by secondary safety devices are treated in Clause 3 of this document. These are residual hazards which can occur when a vessel is installed and used or operated under foreseeable conditions. Where appropriate, residual hazards shall be covered under the operating instructions given by the manufacturer.

Operating instructions shall cover information marked on the pressure equipment and where appropriate, be supported by technical documents, drawings and diagrams for a full understanding of these operating instructions.

## 3 Hazard analysis

### 3.1 General

The hazard analysis shall enable the manufacturer to identify and to determine the potential modes of failure due to loading of pressure equipment which could occur when this equipment is installed and used in reasonable foreseeable conditions.

Given below in 3.2 and 3.3 are hazards or combinations of hazards which need to be considered for operating instructions. This list is not intended to be fully comprehensive but illustrative of the scope of information which needs to be taken into account.

### 3.2 Possible hazards for all pressure equipment and assemblies

Hazardous situations during operations are:

- a) exceeding of internal or external maximum allowable pressure;
- b) exceeding of maximum or minimum allowable temperature or temperature gradients;
- c) exceeding of features of design relevant to the life of equipment covering creep, fatigue and corrosion;
- d) hazards by static pressure and mass contents in operating and test conditions;
- e) exceeding of traffic-, wind-, snow-, earthquake- and dynamic-loading;
- f) exceeding of reaction forces and moments which result from supports, attachments, piping etc.;
- g) decomposition of unstable fluids;
- h) instability aspects;
- i) incorrect handling of closures and openings;