

Guide for

Procurement of power station equipment

Part 1. Common clauses

The European Standard EN 45510-1 : 1997 has the status of a
British Standard

ICS 27.100

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National foreword

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 14, an inside back cover and a back cover.

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English version

Guide for procurement of power station equipment — Part 1: Common clauses

Guide pour l'acquisition d'équipements destinés aux
centrales de production d'électricité —
Partie 1: Clauses communes

Leitfaden für die Beschaffung von Ausrüstungen für
Kraftwerke — Teil 1: Allgemeingültige Festlegungen

This European Standard was approved by CEN/CENELEC on 1 October 1997.

CEN/CENELEC 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/CENELEC member.

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CEN/CENELEC

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Foreword

This standard takes the form of a recommendation and is therefore entitled a 'Guide'.

This Guide for procurement has been prepared by the CEN/CENELEC Joint Task Force Power Engineering (JTFPE) of which the secretariat is held by BSI.

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of an identical text or by endorsement, at the latest by April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.

This Guide for procurement has been prepared under mandates given to CEN and CENELEC by the European Commission and the European Free Trade Association.

This Guide for procurement is a part of a series of Guides mandated to cover the procurement of power station plant and equipment in conformity with European Procurement Directives. The Guides are:

EN 45510: Guide for procurement of power station equipment

Part 1: Common clauses

Part 2-1: Electrical equipment — Power transformers

Part 2-2: Electrical equipment — Uninterruptible power supplies

Part 2-3: Electrical equipment — Stationary batteries and chargers

Part 2-4: Electrical equipment — High power static convertors

Part 2-5: Electrical equipment — Motors

Part 2-6: Electrical equipment — Generators

Part 2-7: Electrical equipment — Switchgear and controlgear

Part 2-8: Electrical equipment — Power cables

Part 2-9: Electrical equipment — Cabling systems

Part 3-1: Boilers — Water tube boilers

Part 3-2: Boilers — Shell boilers

Part 3-3: Boilers — Boilers with fluidized bed firing

Part 4-1: Boiler auxiliaries — Equipment for reduction of dust emissions

Part 4-2: Boiler auxiliaries — Gas-air, steam-air and gas-gas heaters

Part 4-3: Boiler auxiliaries — Draught plant

Part 4-4: Boiler auxiliaries — Fuel preparation equipment

Part 4-5: Boiler auxiliaries — Coal handling and bulk storage plant

Part 4-6: Boiler auxiliaries — Flue gas desulfurization (De-SO_x) plant

Part 4-7: Boiler auxiliaries — Ash handling plant

Part 4-8: Boiler auxiliaries — Dust handling plant

Part 4-9: Boiler auxiliaries — Sootblowers

Part 4-10: Boiler auxiliaries — Flue gas denitrification (De-NO_x) plant

Part 5-1: Turbines — Steam turbines

Part 5-2: Turbines — Gas turbines

Part 5-3: Turbines — Wind turbines

Part 5-4: Turbines — Hydraulic turbines, storage pumps and pump-turbines

Part 6-1: Turbine auxiliaries — Deaerators

Part 6-2: Turbine auxiliaries — Feedwater heaters

Part 6-3: Turbine auxiliaries — Condenser plant

Part 6-4: Turbine auxiliaries — Pumps

Part 6-5: Turbine auxiliaries — Dry cooling systems

Part 6-6: Turbine auxiliaries — Wet and wet/dry cooling towers

Part 6-7: Turbine auxiliaries — Moisture separator reheaters

Part 6-8: Turbine auxiliaries — Cranes

Part 6-9: Turbine auxiliaries — Cooling water systems

Part 7-1: Pipework and valves — High pressure piping systems

Part 7-2: Pipework and valves — Boiler and high pressure piping valves

Part 8-1: Control and instrumentation

*EN 45510 Part 1 contains those clauses common to all the above Guides giving the provisions of a non-**equipment** specific nature for use in the procurement of power station plant. EN 45510 is the responsibility of JTFPE. The so called 'common clauses', as appropriate, also appear in italics in the documents specific to particular **equipment**.*

Where paragraphs of 'common clauses' are omitted, each paragraph omitted is indicated by the symbol *****.

In this Guide, words in bold type indicate that they have the meaning given in the definitions, clause 3.

In this Guide, sentences not in italics indicate the additional recommendations to be found in Guides specific to particular **equipment**.

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.



Contents

	Page		Page
Foreword	2	10.2 Design justification	9
Introduction	4	10.3 Material selection	9
1 Scope	4	10.4 Safety	9
2 Normative references	4	10.5 Interchangeability	9
3 Definitions	4	10.6 Fabrication methods	9
3.1 Organizational terms	4	11 Maintenance requirements	9
3.2 Technical terms	5	11.1 Planned maintenance	9
3.3 General terms	5	11.2 Personnel safety	9
4 Brief overall project description	5	11.3 Requirements for access	10
4.1 Role and organization of purchaser	5	11.4 Lifting requirements	10
4.2 Site location	5	11.5 Special tools	10
4.3 Equipment task	6	11.6 Test equipment	10
4.4 Equipment to be purchased	6	11.7 Spare parts strategy	10
4.5 Control and instrumentation	6	11.8 Special precautions	10
4.6 Electrical supplies and other services	6	12 Technical documentation requirements	10
4.7 Other interfaces	6	12.1 Tender documentation	10
4.8 Project programme	6	12.2 Contract documentation	10
4.9 Equipment identification systems	6	13 Applicable legislation, regulations, standards and further requirements	11
5 Extent of supply	6	13.1 Legislation and regulations	11
6 Terminal points	7	13.2 Standards	11
7 Operational requirements	7	13.3 Further requirements	11
7.1 Operating environment	7	14 Evaluation criteria	11
7.2 Manning levels	7	14.1 General	11
7.3 Normal operation	7	14.2 Technical criteria	11
7.4 Operating hours	7	15 Quality measures	11
7.5 Start-up and shut-down	7	15.1 General	11
7.6 Abnormal conditions	7	15.2 Approvals procedure	12
7.7 Further operational requirements	7	15.3 Inspection requirements	12
8 Life expectancy	8	15.4 Non-conformity	12
8.1 Design life	8	16 Site factors	12
8.2 Components requiring periodic maintenance	8	16.1 Access	12
9 Performance requirements	8	16.2 Facilities	12
9.1 Duty	8	16.3 Site specific requirements	12
9.2 Performance	8	17 Verification of specified performance	12
9.3 Equipment margins	8	17.1 General	12
9.4 Availability	8	17.2 Works tests	12
9.5 Levels of component redundancy	8	17.3 Tests during installation and commissioning	13
9.6 Further performance requirements	8	17.4 Technical conditions for trial run	13
10 Design and fabrication	9	17.5 Functional and performance tests	13
10.1 Specific equipment features	9	Annex	
		A (informative) Bibliography	14

Introduction

This document is the first Part of a standard comprising a series of Guides for procurement (Guides) covering plant items, systems and equipment (**equipment**) that comprise a power station. The Guides were prepared to support the implementation of European Directives covering procurement in the utilities sector. Each Guide is complete in itself, but this Part 1 is designed to give an indication of the content of all of the Guides and to present those clauses which are independent of the **equipment** being purchased (the so called common clauses) as a single document. As such, this Part gives a general indication of how to prepare technical specifications for power station **equipment**. The particular issues referring to specific **equipment** items are not covered in this Part and the user can obtain these from the Parts covering the specific **equipment**. This Part 1 has the same structure and clause numbering as the Parts covering specific **equipment**. This Part also identifies where in the Guides the specific technical matters are covered. In some Guides, technical matters are included in additional positions and small changes have been made to the wording of the common clauses to make them relevant to the particular **equipment**. The printing of common clauses in italics and specific technical matters in upright type allows these differences to be identified. All the Guides are listed in the foreword.

1 Scope

*This standard gives guidance on writing the technical **specification** for the procurement of **equipment** for use in electricity generating stations (power stations). This Guide for procurement is not applicable to **equipment** for use in the nuclear reactor plant area of nuclear power stations. Other possible applications of such **equipment** have not been considered in the preparation of this Guide.*

This Guide covers those matters that are common to all **equipment** (the common clauses). In specific Guides, the **equipment** covered by the Guide is defined here.

*The **equipment** covered by this Guide is defined by its function rather than design type. Therefore, the guidance to the **specification** is stated in **performance** terms rather than being specified by a detailed description of the **equipment** to be supplied.*

*This Guide indicates to potential **purchasers** how their **specification** should be prepared so that:*

- the **equipment** type and capacity interfaces correctly with other elements of the systems;
- predicted **performance** is achieved;
- ancillary **equipment** is properly sized;
- **reliability, availability** and safety requirements are achieved;
- proper consideration is given to the evaluation process and the quality measures to be applied.

*This Guide does not determine the type of **specification** (e.g. detailed, **performance**, functional) or the extent of supply for any given contract which is normally decided on the basis of the **purchaser's** project strategy. It does not cover:*

- any commercial, contractual or legal issues which are normally in separate parts of an **enquiry**;
- any allocation of responsibilities which are determined by the contract.

*This Guide does not prescribe the arrangement of the documents in the **enquiry**.*

*NOTE. As a comprehensive European environmental policy is still under preparation, this Guide does not address the environmental implications of the **equipment**.*

2 Normative references

This Guide for Procurement incorporates by dated or undated reference, provisions from other publications. These normative references are cited in 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 Guide only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- | | |
|--------------|--|
| EN ISO 9001 | Quality systems — Model for quality assurance in design, development, production and servicing (ISO 9001 : 1994) |
| EN ISO 9002 | Quality systems — Model for quality assurance in production, installation and servicing (ISO 9002 : 1994) |
| IEC 50 (191) | International electrotechnical vocabulary
Chapter 191: Dependability and quality of services |

The specific guides give other relevant normative references here, if appropriate.

3 Definitions

For the purposes of this Guide, the following definitions apply:

3.1 Organizational terms

3.1.1 purchaser

Recipient of a product and/or a service provided by a **supplier**.

3.1.2 supplier

Person or **organization** that provides a product and/or a service to the **purchaser**.

3.1.3 specification

Document stating technical requirements of the **purchaser**. It may form part of an **enquiry** issued by a **purchaser**.