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Steel structures —

Part 2: Fabrication and erection

Structures en acier —

Part 2: Fabrication et montage



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10721-2 was prepared by Technical Committee ISO/TC 167, *Steel and aluminium structures*, Subcommittee SC 2, *Steel: Fabrication and erection*.

ISO 10721 consists of the following parts, under the general title *Steel structures*:

- *Part 1: Materials and design*
- *Part 2: Fabrication and erection*

Annexes A to D are for information only.

Introduction

This part of ISO 10721 establishes a common basis for drafting national standards for the fabrication and erection of steel structures, in order to ensure an adequate and consistent treatment of safety and serviceability compatible with ISO 10721-1. The specific and numerate requirements for the achievement of structures which are optimal with respect to the state of the economy, development and general values of a nation are given in the appropriate national standard.

NOTE Those concerned with a construction project may need to take into account the safety and health of the construction workers in accordance with national laws, regulations and practice. Thus, fabricators, clients, designers, constructors, employers, self-employed persons and employees may be concerned with this matter.

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Steel structures —

Part 2: Fabrication and erection

1 Scope

This part of ISO 10721 specifies the requirements for the fabrication, erection and inspection of structural steelwork in buildings designed in accordance with ISO 10721-1, including steelwork in composite steel and concrete structures.

This part of ISO 10721 is also applicable to bridges, off-shore and other civil engineering and related structures, but for such structures it may be necessary to consider other requirements.

NOTE For welded connections and for structures subject to fatigue, special considerations regarding scope and field of application are presented in 8.9 and 10.1 respectively of ISO 10721-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 10721. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 10721 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO R615, *Methods for determining the mechanical properties of the weld metal deposited by electrodes 3,15 mm or more in diameter.*

ISO 630, *Structural steel — Plates, wide flats, bars, sections and profiles.*

ISO 657 (all parts), *Dimensions of hot rolled steel sections.*

ISO 700, *Power sources for manual metal arc welding with covered electrodes and for the TIG process.*

ISO 1461, *Metallic coatings — Hot dip galvanized coatings on fabricated ferrous products — Requirements.*

ISO 2063, *Metallic coatings — Protection of iron and steel structures against corrosion — Metal spraying of zinc and aluminium.*

ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel.*

ISO 2082, *Metallic coatings — Electroplated coatings of cadmium on iron or steel.*

ISO 2400, *Welds in steel — Reference block for the calibration of equipment for ultrasonic examination.*

ISO 2553, *Welded, brazed and soldered joints — Symbolic representation on drawings.*

ISO 3690, *Welding — Determination of hydrogen in deposited weld metal arising from the use of covered electrodes for welding mild and low alloy steels.*

ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers.*

ISO 7415, *Plain washers for high-strength and structural bolting, hardened and tempered.*

ISO 7963, *Welds in steel — Calibration block No. 2 for ultrasonic examination of welds.*

ISO 8501-1, *Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings.*

ISO 8501-2, *Preparation of steel substrates before the application of paints and related products — Visual assessment of surface cleanliness — Part 2: Preparation grades of previously coated steel substrates after localized removal of previous coatings.*

ISO 8503-1, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces.*

ISO 8503-2, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 2: Method for the grading of surface profile of abrasive blast-cleaned steel — Comparator procedure.*

ISO 9000 (all parts), *Quality management and quality assurance standards.*

ISO 9002, *Quality systems — Model for quality assurance in production and installation.*

ISO 9606-1, *Approval testing of welders — Fusion welding — Part 1: Steels.*

ISO 9692, *Metal-arc welding with covered electrode, gas-shielded metal-arc welding and gas welding — Joint preparations for steel.*

ISO 9956-1, *Specification and approval of welding procedures for metallic materials — Part 1: General rules for fusion welding.*

ISO 9956-2, *Specification and approval of welding procedures for metallic materials — Part 2: Welding procedure specification for arc welding.*

ISO 9956-3, *Specification and approval of welding procedures for metallic materials — Part 3: Welding procedure tests for the arc welding of steels.*

ISO 10721-1:1997, *Steel structures — Part 1: Materials and design.*

ISO 12944-4, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Part 4: Types of surface and surface preparation.*

ISO 14713, *Protection against corrosion of iron and steel in structures — Zinc and aluminium coatings guidelines.*

3 Materials

All materials should comply with the requirements of 6.3 of ISO 10721-1:1997.

For steels not complying with 6.3 of ISO 10721-1:1997, other requirements may be necessary.

Where no suitable International Standard exists, reference shall be made to appropriate national standards, certification schemes and agreements.

Unless stated otherwise, the national standards to be adopted are those of the country in which the structure is to be built.

Where no standards exist, the proprietary manufacturer's recommendations shall be adopted.