TECHNICAL REPORT

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Ergonomic design of control centres —

Part 10: Introduction to the control room design series of standards

Conception ergonomique des centres de commande —

Partie 10: Introduction aux séries de normes relatives à la conception des centres de commande

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction*.

A list of all parts in the ISO 11064 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Ergonomics is the scientific discipline and systematic study concerned with the understanding of the interactions among human and other elements of a system. The term also describes the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.

The ISO 11064 series provides general guidance, principles and recommendations. The requirements focus on the interaction between human and system and also the processes and methods required to achieve usable and accessible interactive systems.

The ISO 11064 series covers a wide range of topics including architectural requirements, computer interface design and furniture design. This document provides guidance on the overall structure of the series and offers advice on where specific requirements are discussed. This document is designed to help the potential users identify which of these is relevant to their needs.

The principles, recommendations and requirements given in the ISO 11064 series can help users with:

— user consultation;

— matching functional design with purpose;

— avoiding abortive design and unnecessary iterations;

— contributing to multi-disciplinary team coordination;

— minimizing the mistiming of critical inputs from stakeholders.

The ISO 11064 series enables users to:

— apply a systematic process to the design of control rooms;

— lay out the group of rooms closely associated with the control room;

— arrange furniture and major displays in a control room;

— design and specify ergonomic layouts of workstations;

— specify the design of the user interfaces including computer systems, communications equipment and CCTV systems;

— identify and specify the environmental requirements for lighting, acoustics and thermal environments;

— evaluate existing control rooms.

The ISO 11064 series covers all types of control centres typically employed in the process industries, transportation and command, communications and control. Although the ISO 11064 series is primarily intended for non-mobile control centres, many of the principles specified in this document can be applicable to mobile control centres, such as those found on ships and aircraft.

The ISO 11064 series provides information which is relevant to the following stakeholder groups:

— ergonomists;

— usability professionals;

— control room designers;

— architects;

— interior designers;

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— heating and ventilation engineers;

— project managers;

— control room staff;

— certification bodies;

— procurers.

The terms "human factors" and "ergonomics" are used interchangeably in this document and are considered as synonyms.

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Ergonomic design of control centres —

Part 10:
Introduction to the control room design series of standards

1 Scope

This document describes the different parts of the ISO 11064 series. The overall content of each of the parts is presented, the most likely users of that part and the relevance of each part to different stages in the control room design process.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Selecting the appropriate standard to use

The control room requirements presented in the ISO 11064 series are likely to be addressed by a range of professions. Certain parts of the ISO 11064 series can be of particular relevance to specific individuals in the design team (for example, those requirements relating to control suite layout are likely to be of particular concern to architects). Figure 1 shows how various members of the control room design team can use the different parts of the ISO 11064 series. The figure is illustrative, not prescriptive, and in practice which professions require to address which parts can depend on the composition of the team and the nature of the project. Familiarity with all parts of the ISO 11064 series, and the requirements and recommendations they contain, can be helpful to the human factors engineer. The model is not based on any specific industry and draws together some commonality to be found in many control room projects.

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