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ISO 10075-2

Ergonomic principles related to mental workload —

Part 2: Design principles

Principes ergonomiques relatifs à la charge de travail mental — Partie 2: Principes de conception

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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 document 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).

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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 1, *General ergonomics principles*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 122, *Ergonomics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 10075-2:1996), which has been technically revised.

The main change is as follows:

— The structure is now based on working conditions and no longer on strain consequences. All design principles are formulated positively and are divided into three parts, namely justification, guidelines and examples.

A list of all parts in the ISO 10075 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

This document represents an extension of ISO 6385, providing design principles for work systems with special reference to mental workload as defined in ISO 10075-1.

Mental workload is the effect of a complex interaction of individual, technical, organisational and social factors. Thus, personnel, technical, organisational and social factors and the effects of their interactions are relevant for the design of work systems.

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Ergonomic principles related to mental workload —

Part 2:
Design principles

1 Scope

This document gives guidance on design principles and on design of work systems, including task and equipment design (comprising robotics and intelligent autonomous systems) and design of the workplace, as well as working conditions with the inclusion of social and organisational factors, emphasising mental workload and its effects as specified in ISO 10075-1.

It applies to the design of work and use of human capacities, with the intention of providing optimal working conditions with respect to health and safety, well-being, performance and effectiveness, preventing overload as well as underload, in order to avoid impairing effects and fostering the facilitating effects described in ISO 10075-1.

This document includes the design of technical, organisational and social factors only and does not apply to problems of selection or training.

This document does not address problems of measurement of mental workload or its effects.

This document refers to all kinds of human work activities (see ISO 10075-1), not only to those which can be described as cognitive or mental tasks in a restricted sense but also to those with a primarily physical workload.

This document is applicable to all those engaged in the design and use of work systems, for example system and equipment designers, employers and workers and their representatives, where they exist.

This document is applicable to the design of new work systems as well as to the redesign of existing ones undergoing substantial revision.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6385, *Ergonomics principles in the design of work systems*

ISO 10075-1, *Ergonomic principles related to mental workload — Part 1: General issues and concepts, terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6385 and ISO 10075-1 apply.

ISO and IEC maintain terminology databases for use in standardisation at the following addresses:

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

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

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