

Ergonomie - Evaluatie van statische werkhoudingen (ISO 11226:2000,IDT)

Ergonomics - Evaluation of static working postures (ISO 11226:2000,IDT)

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Ergonomics — Evaluation of static working postures

Ergonomie — Évaluation des postures de travail statiques



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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.

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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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11226 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 3, *Anthropometry and biomechanics*.

Annexes A and B of this International Standard are for information only.

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Introduction

Pain, fatigue and disorders of the musculoskeletal system may result from sustained inadequate working postures that may be caused by poor work situations. Musculoskeletal pain and fatigue may themselves influence posture control which can increase the risk of errors and may result in reduced quality of work or production, and in hazardous situations. Good ergonomic design is a basic requirement to avoid these adverse effects.

This International Standard contains an approach to determine the acceptability of static working postures. The content of the standard is based on current ergonomic knowledge, and is subject to changes according to future research.

It is connected with ISO 11228-1, ISO 11228-2 and ISO 11228-3 (see [1], [2] and [3] in the Bibliography).

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Ergonomics — Evaluation of static working postures

1 Scope

This International Standard establishes ergonomic recommendations for different work tasks. This standard provides information to those involved in design, or redesign, of work, jobs and products who are familiar with the basic concepts of ergonomics in general, and working postures in particular.

It specifies recommended limits for static working postures without any or only with minimal external force exertion, while taking into account body angles and time aspects.

It is designed to provide guidance on the assessment of several task variables, allowing the health risks for the working population to be evaluated.

It applies to the adult working population. The recommendations will give reasonable protection for nearly all healthy adults. The recommendations concerning health risks and protection are mainly based on experimental studies regarding the musculoskeletal load, discomfort/pain, and endurance/fatigue related to static working postures.

2 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

2.1

extreme body-joint position

towards the end of the range of motion where there is a substantial mechanical load on the passive structures such as ligaments

2.2

Frankfurt plane

standard horizontal plane at the level of the upper edge of the opening of the external auditory meatus (external ear opening) and the lower border of the orbital margin (lower edge of the eye socket); the median plane of the head is held vertically

NOTE The Frankfurt plane is associated with the normal line of sight (relaxed extraocular muscles).

2.3

full arm support

support of the upper arm segment weight by the workplace (e.g. by the elbow/forearm on a table desk)

2.4

full head support

support of the head segment weight by the workplace (e.g. by a headrest)

2.5

full trunk support

support of the trunk segment weight directly by the workplace (e.g. by a high chair backrest in the case of trunk inclination backwards) or indirectly (e.g. through arm support at the workplace in the case of trunk inclination forwards)

2.6

holding time

duration that a static working posture is maintained

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