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Cranes — Monitoring for crane design working period

*Appareils de levage à charge suspendue — Surveillance continue de la
période d'activité de conception*



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 96, *Cranes*, SC 5, *Use, operation and maintenance*.

ISO 12482 cancels and replaces ISO 12482-1:1995, which has been technically revised.

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Introduction

Cranes are designed for a finite lifetime duty, which is specified in load cycles and load spectrum and is not principally related to calendar working time. Classification of crane duty provides the crane owner a means to specify the intended duty in order to achieve the intended useful operational lifetime of the crane.

Typically the operational period for industrial cranes is from 10 to 20 years. However, a specified crane classification may be related to any calendar time depending on the application, e.g. 5 to 10 years for a special limited use or 40 years for a long-term investment.

Monitoring of crane use does not in any way change requirements for periodic inspections of the cranes, independent of whatever type of instruments are used for the monitoring. Neither does it remove the requirement for regular maintenance of cranes. Inspections and monitoring of use are methods, which complete each other, giving different information of the condition.

The design working period (DWP) introduced in this standard is derived from the design classification of cranes and is not to be considered as a guaranteed operational period in any respect. Due to the probabilistic nature of metal fatigue and other influencing factors, premature failures during the DWP cannot be ruled out. However, the DWP represents a reliable estimate of a safe operational period of the crane, with due consideration to specified design regulations and standardized design safety factors.