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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Cranes and lifting appliances — Selection of wire ropes —

Part 2:
Mobile cranes — Coefficient of utilization

Grues et appareils de levage — Choix des câbles — Partie 2: Grues mobiles — Coefficient d'utilisation

Reference number
ISO 4308-2: 1988 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4308-2 was prepared by Technical Committee ISO/TC 96, *Cranes, lifting appliances and related equipment.*

This first edition of ISO 4308-2 cancels and replaces annex C of ISO 4308-1981, an International Standard which was itself cancelled and replaced (with its annexes A and B) by ISO 4308-1 : 1986.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Cranes and lifting appliances — Selection of wire ropes —

Part 2 :
Mobile cranes — Coefficient of utilization

0 Introduction

This part of ISO 4308 is one of a series covering selection of wire ropes for cranes and lifting appliances. The series will consist of the following parts:

Part 1: General.

Part 2: Mobile cranes — Coefficient of utilization.

Part 3: Tower cranes.

Part 4: Portal and pedestal cranes.

Part 5: Overhead travelling and portal bridge cranes.

1 Scope and field of application

This part of ISO 4308 establishes the values of the minimum practical coefficient of utilization, Z_p, as defined in ISO 4308-1, for ropes and rotation-resistant ropes used on mobile cranes.

It applies to all mobile cranes as defined in ISO 4306-2.

2 References

ISO 4301-2, *Lifting appliances — Classification — Part 2: Mobile cranes.*

ISO 4306-2, *Lifting appliances — Vocabulary — Part 2: Mobile cranes.*

ISO 4308-1, *Cranes and lifting appliances — Selection of wire ropes — Part 1: General.*

3 Coefficient of utilization, Z_p

3.1 General purpose ropes

The minimum coefficient of utilization, Z_p, in accordance with the crane and mechanism classification given in ISO 4301-2 is presented in table 1, for general purpose ropes.

Table 1 — General purpose ropes[1)]

Crane operating conditions	Crane classification	Running ropes					Stationary ropes	
		Hoisting		Luffing and telescoping			Working Z_p	Erection Z_p
		Mechanism classification	Z_p	Mechanism classification	Working Z_p	Erection Z_p		
General	A1	M3	3,55	M2	3,35	3,05	3	2,73
Constant	A3	M4	4	M3	3,55	3,05	3	2,73
Heavy	A4	M5	4,5	M3	3,55	3,05	3	2,73

1) It is understood that safety of ropes in use relies on the application of criteria for rope examination and discard.

3.2 Rotation-resistant ropes

A rotation-resistant rope is one having eight or more strands in an outer layer which is spun helically in the opposite direction to the layer beneath.

The minimum coefficient of utilization, Z_p, for rotation-resistant ropes as classified in ISO 4301-2 is presented in table 2.

Table 2 — Rotation-resistant ropes[1)]

Crane operating conditions	Crane classification	Running ropes for hoisting Z_p
General	A1	4,5
Constant	A3	5,6
Heavy	A4	5,6

1) Table 2 relates to "conventional" types of rotation-resistant ropes. With the advent of newer types of rotation-resistant ropes, future study may allow different coefficients of utilization.

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Descriptors : handling equipment, lifting equipment, mobile equipment, cranes (hoists), wire rope, selection, coefficients, utilization.

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