

भारतीय मानक

क्रेन — वर्गीकरण

भाग 5 शिरोपरि चलने वाली तथा पोर्टल ब्रिज क्रेन

Indian Standard

CRANES — CLASSIFICATION

PART 5 OVERHEAD TRAVELLING AND PORTAL BRIDGE CRANES

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Price Group 1

NATIONAL FOREWORD

This Indian Standard which is identical with ISO 4301-5 : 1991 "Cranes — Classification — Part 5 : Overhead travelling and portal bridge cranes" issued by International Organization for Standardization (ISO), was adopted by Bureau of Indian Standards on the recommendations of Cranes, Lifting Chains and Its Related Equipment Sectional Committee and approval of the Heavy Mechanical Engineering Division Council.

This standard is being published in five parts. Other parts of this standard are as follows:

- Part 1 General principles
- Part 2 Mobile cranes
- Part 3 Tower cranes
- Part 4 Jib cranes

The text of ISO standard has been approved for publication as Indian Standard without deviations. Certain terminology and conventions are however not identical to those used in Indian Standards. Accordingly wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the editions indicated:

<i>International Standards</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 4301-1 : 1986	IS 13834 (Part 1) : 1993 Cranes — Classification : Part 1 General	Identical

Indian Standard
CRANES — CLASSIFICATION

PART 5 OVERHEAD TRAVELLING AND PORTAL BRIDGE CRANES

1 Scope

This part of ISO 4301 establishes the classification of overhead travelling cranes and portal bridge cranes based on the number of operating cycles to be carried out during the expected life of the appliance and its mechanisms, and a load spectrum factor which represents the nominal state of loading.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 4301. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4301 are encouraged to investigate the possibility of applying the most recent edi-

tion of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4301-1:1986, *Cranes and lifting appliances — Classification — Part 1: General.*

3 Classification

The crane as a whole and its mechanisms shall be classified in accordance with ISO 4301-1.

Guidance as to typical classifications for overhead travelling cranes and portal bridge cranes in relation to usage is given in table 1.

Where the class of utilization and state of loading are not known, the classification should be regarded as a minimum.

Table 1 — Guidance on classification of overhead travelling cranes and portal bridge cranes and their mechanisms in relation to crane usage

No.	Usage of crane	Service conditions	Group classification of the appliance as a whole	Group classification of the mechanism as a whole		
				Hoist	Trav-ersing	Travel-ling
1	Manually powered crane		A1	M1	M1	M1
2	Workshop crane for assembly purposes		A1	M2	M1	M2
3 a)	Power house crane		A1	M2	M1	M3
3 b)	Maintenance crane		A1	M3	M1	M2
4 a)	Workshop crane	Regular light use	A2	M3	M2	M3
4 b)	Workshop crane	Regular intermittent use	A3	M4	M3	M4
4 c)	Workshop crane	Intensive use	A4	M5	M3	M5
5 a)	Cranes in storage yards	Regular light use, hook duty	A3	M3	M2	M4
5 b)	Cranes in storage yards	Intensive use, grab or magnet duty	A6	M6	M6	M6
6 a)	Scrapyard crane	Regular light use, hook duty	A3	M4	M3	M4
6 b)	Scrapyard crane	Regular intermittent use, magnet or grab duty	A6	M6	M5	M6
7	Ship unloader		A7	M8	M6	M7
8 a)	Container handling crane		A5	M6	M6	M6
8 b)	Ship-to-shore container crane		A5	M6	M6	M4
9	Steelwork crane:					
9 a)	Roll changing crane		A2	M4	M3	M4
9 b)	Ladle crane		A7	M8	M6	M7
9 c)	Soaking pit crane		A7	M8	M7	M7
9 d)	Stripper crane		A8	M8	M8	M8
9 e)	Charging crane		A8	M8	M8	M8
10	Foundry crane		A5	M5	M4	M5

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BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices :

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	{ 331 01 31 331 13 75
Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola CALCUTTA 700054	{ 37 84 99, 37 85 61 37 86 26, 37 86 62
Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036	{ 53 38 43, 53 16 40 53 23 84
Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113	{ 235 02 16, 235 04 42 235 15 19, 235 23 15
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) BOMBAY 400093	{ 632 92 95, 632 78 58 632 78, 91, 632 78 92
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