

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JT/T 1298-2019

Port pedestal crane

港口台架式起重机 清晰版

(English Translation)

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Foreword

This standard is in accordance with GB/T Draft the rules given in 1-2009.

This standard was proposed and managed by the National Port Standardization Technical Committee (SAC/TC 530).

This standard was drafted. Water Transport Research Institute of Ministry of Transport, Wuhan University of Technology, Hunan China Railway Wuxin Heavy Industry Co., Ltd., Yichang City Weite Electronic Equipment Co., Ltd., Wuqiao Heavy Industry Group Co., Ltd., Taiyuan University of Science and Technology.

1 Scope

This standard specifies the basic parameters, technical requirements, test methods, inspection rules, as well as marking, packaging, transportation and Storage requirements.

This standard is applicable to the production, inspection and use of various gantry cranes for loading and unloading operations of port cargo, bulk cargo, and containers.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB 755 quota and performance of rotating electrical machines GB/T 985. 1 Recommended grooves for gas welding, electrode arc welding, gas shielded welding and high energy

beam welding GB/T 985. 2 Recommended grooves for submerged arc welding GB/T 1184 Shape and position tolerances without tolerance values GB/T 1228 High Strength Large Hex Head Bolts for Steel Structures GB/T 1229 High Strength Large Hex Nuts for Steel Structures GB/T 1230 High-strength washer for steel structure GB/T 1231 Technical Specifications for High Strength Large Hex Head Bolts, Large Hex Nuts and Washers for Steel Structures GB/T 1413 Series 1 Container classification, size and rated quality GB/T 1801 Product Geometric Technical Specification (GPS) Limit and fit tolerance bands and fit selection GB/T 1804 Tolerances for linear and angular dimensions without general tolerances GB 2893 safety color GB 2894 safety signs and guidelines for their use GB/T 3220 container spreader GB/T 3323-2005 Radiographs of metal fusion welded joints GB/T 3766 General rules and safety requirements for hydraulic drive systems and their components GB/T 3811-2008 Design Code for Cranes GB/T 4026 Basic and safety rules for human-machine interface markings Identification of equipment terminals and conductor terminals GB/T 4208-2017 Housing Protection Level (IP Code) GB/T 4323 elastic sleeve pin coupling GB/T 4942. 1-2006 Degree of protection (IP code) for the overall structure of rotating electric machines GB/T 5117 Electrode for non-alloy steel and fine grain steel GB/T 5118 heat-resistant steel electrode GB/T 5226. 32-2017 Mechanical and electrical safety Machinery and electrical equipment Part 32. Technical requirements for lifting appliances GB/T 5293 Classification requirements for solid alloy wire, flux-cored wire, and welding wire flux for non-alloy steel and fine-grain steel for submerged arc welding GB/T 5905-2011 crane test specifications and procedures GB/T 5972 Crane wire rope maintenance,, inspection and scrap GB/T 5975 pressure plate for wire rope JT/T 1298-2019 GB 6067. 1-2010 Safety regulations for lifting appliances Part 1. General GB 7251. 1 Low-voltage complete switchgear and control equipment Part 1. General GB/T 7935 General specifications for hydraulic components GB/T 8110 Carbon steel and low alloy steel welding wire for gas shielded arc welding GB 8918 wire rope for important uses GB/T 8923. 1-2011 Visual assessment of surface cleanliness of steel surfaces before application of coatings-Part 1. Uncoated Rust level and treatment level on the steel surface and the steel surface after the original coating is completely removed GB/T 9286-1998 Crosshatch test for paints and varnishes GB/T 10051. 1 to 10051. 12 lifting hook GB/T 10095. 1-2008 Cylindrical gear precision system Part 1. Definition and allowable value of deviation of tooth surface on the same side of gear GB/T 10095. 2-2008 Cylindrical gear precision system Part 2. Definition and allowable value of radial comprehensive deviation and radial runout GB/T 12470 Classification requirements for the combination of solid steel wire, flux-cored wire, and flux-cored flux GB/T 13306 plate GB/T 13384 General technical requirements for packaging of mechanical and electrical products GB/T 1497 Wire for fusion welding GB/T 1798 Technical Performance and Acceptance Documents for Cranes and Lifting Machinery GB/T.2018 General Specifications for Wire Rope GB 20237 Safety requirements for lifting metallurgy and shielded motors GB/T 20303. 1 Crane cabs and control stations Part 1. General GB/T 20303. 4 Crane cabs Part 4. Jib cranes GB/T 2147 Requirements for measurement accuracy of parameters in crane and related equipment tests Technical

specifications of GB/T 21971 YD series multi-speed three-phase asynchronous motors for lifting GB/T 2192. 1 Technical requirements for variable frequency and three-phase asynchronous motors for lifting and metallurgical applications Part 1. QP series lifting and metallurgy Frequency conversion speed regulating three-phase asynchronous motor for metal GB/T 2214 Measurement of crane speed and time parameters GB/T 22415 Requirements for crane test load GB/T 26101. 1 GIICL Drum Gear Coupling GB/T 26101. 3 CGLD Drum Gear Coupling GB/T 27456 Lifting pulley GB/T 2960-2013 portal crane GB 50171-2012 Electrical equipment installation engineering panel, cabinet and secondary circuit wiring construction and acceptance specifications Technical specifications of JB/T 5870 ZR series high-voltage winding rotor three-phase asynchronous motors for crane and metallurgical use (frame number 560 to 710) JB/T 5901 Cross pin universal joint JB/T 6392 Crane Wheel JB/T 6406 electro-hydraulic drum brake JB/T 7017 crane hydraulic buffer JB/T 7019 brake wheels and discs for industrial brakes JB/T 7020 electro-hydraulic disc brake Technical conditions of JB/T 7076 YES series three-phase asynchronous motor brake with two-speed tapered rotor brake JB/T 7077 ZRE series lifting and metallurgical electromagnetic brake winding rotor three-phase asynchronous motor technical conditions JB/T 7078 Technical specifications of ZRF, ZRG series forced ventilated wound rotor three-phase asynchronous motors for lifting and metallurgy JB/T 7685 electromagnetic drum brake Technical conditions of JB/T 7842 ZRZ series three-phase asynchronous motors JT/T 1298-2019 JB/T 8854. 2 GIICLY type, GIICLY type drum gear coupling JB/T 8905 Three-pivot reducer for crane JB/T 1247 Crane base reducer JB/T 12478 Vertical reducer for crane JB/T 12479 Set gear reducer for crane JB/T 8955 ZR2 series crane and metallurgical winding rotor three-phase asynchronous motor technical specifications JB/T 9003 crane three-in-one reducer JB/T 9006 crane drum Technical conditions of JB/T 10104 Y series hoisting and metallurgical three-phase asynchronous motor JB/T 10105 ZR series lifting and metallurgical winding rotor three-phase asynchronous motor technical specifications JB/T 10559-2018 Nondestructive testing of crane machinery Ultrasonic testing of steel welds JB/T 10730 DC lifting solenoid JB/T 10816 Crane type hard tooth surface reducer for crane JB/T 10817 Three-point hardened gear reducer for crane JB/T 10833 Polyurethane buffer for crane JB/T 12987 crane spring buffer JB/T 12988 crane rubber buffer JGJ 82 Technical Specification for High Strength Bolt Connections of Steel Structures JT S 257 Quality Inspection Standard for Water Transport Engineering JT/T 846 Port crane slewing bearing

3 Terms and definitions

The following terms and definitions apply to this document.

Port gantry crane port pedestal crane the lower part is a platform that can run along the track, and a rotatable boom-type crane that cannot pass rail or road vehicles below the platform.

4 Basic parameters

4.1

According to Table A in GB/T 3811-2008. 3 and Table B. 3. Working level of port gantry crane (hereinafter referred to as "crane") See Table 1 for the working level with the agency.

Table 1 Crane working level and mechanism working level

No.	Crane type	Working conditions	Machine working level	Working level of each agency
	Hoisting	luffing	rotation	

1 Hook cranes use A6 M6 M4 M5 M3 more frequently for medium loads

2 Hook cranes use A7 M7 M5 M6 M4 more frequently

3 Grab buckets, electromagnetic chucks and container cranes use A7 M7 M6 M6 M4 more frequently

4 Grab buckets, electromagnetic chucks, container cranes frequently use A8, M8, M7, M7, M4

4.2

See Table 2 for the basic parameter series of the crane.

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Table 2 Basic parameter series

No.	Parameter Name	Unit	Parameter Series
1	Rated lifting capacity	t	5,10,16,25,40,45,50,60
2	Working range	m	12. 5,16,20,22,25,30
3	lifting height	m	8,10,12,15,20 (4)
	Descent depth	m	5 ~ 20
5	Lifting speed	m/min	10 ~ 60
6	Luffing speed	m/min	15 ~ 40
7	Rotation speed	r/min	0. 5 to 2
8	Running speed	m/min	15 to 25

9 Gauge m 6,7. 5,10. Five

5 Technical requirements

5.1 Machine requirements

5.1.1 The design, manufacture and installation of cranes shall comply with GB/T 3811 and GB 6067. 1 provisions.