

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

JT/T 1297-2019

Safety code for the harbour derrick crane

港口桅杆起重机安全规程 清晰版

(English Translation)

Issued on: December 24, 2019

Implemented on: March 1, 2020

Issued by: Ministry of Transport

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Foreword

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

This standard was proposed by the National Crane Standardization Technical Committee Boom Crane Technical Committee Centralize.

Responsible for drafting this standard. Water Transport Research Institute of Ministry of Transport, Wuqiao Heavy Industry Group Co., Ltd., Yichang Weite Electronics Equipment Co., Ltd., Wuhan University of Technology, Shanghai International Port (Group) Co., Ltd., Dalian University of Technology, Dalian Borui Heavy Industry Limited company.

1 Scope

This standard specifies the safety technology of port mast cranes in the aspects of design, manufacture, installation, test, use and maintenance, inspection and maintenance, etc.

Technical requirements.

This standard applies to port mast cranes for loading and unloading operations of general cargo and bulk cargo.

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/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 3098. 1 Mechanical properties of fasteners Bolts, screws and studs GB/T 3098. 2 Fastener Mechanical Properties GB/T 3811 crane design code GB/T 5226. 32 Mechanical and electrical safety-Mechanical and electrical equipment-Part 32. Technical requirements for lifting appliances GB/T 5972 Crane wire rope maintenance,, inspection and scrap GB/T 6067. 1 Safety regulations for lifting appliances-Part 1. General GB 8918 wire rope for important uses GB/T 10051. 1 Lifting hooks Part 1. Mechanical properties, lifting capacity, stress and materials GB/T 10051. 2 Lifting hooks Part 2. Technical requirements for forging hooks GB/T 10051. 3 Lifting hooks Part 3. Use inspection of forged hooks GB 12602 Overload protection device for lifting machinery GB/T.2018 General Specifications for Wire Rope GB/T 20303. 1 Crane cabs and control stations Part 1. General GB/T 26558-2011 mast crane GB/T 28264 Lifting Machinery Safety Monitoring Management System GB/T 31052. 7 Lifting Machinery Inspection and Maintenance Regulations Part 7. Mast Cranes GB 50150 Electrical equipment installation engineering electrical equipment handover test standard GB 50256 Code for construction and acceptance of electrical installations of cranes for electrical installations JGJ 82 Technical Specification for High Strength Bolt Connections of Steel Structures

3 Machine requirements

3.1

The working environment conditions of port mast cranes (hereinafter referred to as cranes) shall meet the requirements of GB/T 26558.

3.2

The safety design of the crane shall comply with the provisions of GB/T 3811 and GB/T 26558.

3.3

The crane shall be constructed in accordance with the drawings, technical documents approved by the prescribed procedures and the requirements of GB/T 26558.

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3.4

Product labels should be set up at obvious positions of the crane, and the label should indicate the crane name, model, rated lifting capacity, manufacturer name, manufacturing system Year of manufacture, etc.

3.5

Crane noise should meet the requirements of GB/T 26558.

4 Ground anchors, foundations and foundations

4. 1. The bases and cables of crane booms, masts, braces, ground beams and hoists shall be reliably anchored. All anchor points of the crane when designing and installing, it should be guaranteed in GB/T 26558-2011 5. 2 The horizontal and vertical forces generated by the specified calculated load at each anchor point in the most unfavorable combination of conditions, there should be no loosening, slippage and subsidence at each anchor point.

4.2

For cranes with fixed installations, the manufacturer shall provide data on the anchor load of all anchor points; for cranes without fixed installations, the anchor the solid load data should be calculated and determined by relevant professionals according to the actual situation.

4.3

The form of ground anchors and foundations shall be adapted to the site conditions and foundation conditions of the crane installation location.

4.4

The design and construction of the foundation of the crane installation location shall meet the requirements of GB/T 26558.

4.5

The foundation on which the ground anchor is installed and the foundation on which the boom, mast, diagonal brace, ground beam and hoist base are installed should be flat and solid, without standing water, and the base Good contact with the foundation.

4.6

The design and construction of the buried ground anchor shall comply with the requirements of GB/T 26558.

4.7

When selecting the corner pillar of the building as the ground anchor, the strength of the corner pillar should be checked according to the provisions of GB/T 26558, and a building design sheet should be obtained.

Agree in writing, and the corner posts of buildings used as anchors must be properly

protected.

4.8

All types of ground anchors should have sufficient tensile safety margin. The structural form and calculation of commonly used ground anchors should meet the requirements of GB/T 26558.

5 Metal structure

5.1 The material of the crane metal structure shall meet the requirements of GB/T 3811 and GB/T 26558.

5.2 The welding seam quality of crane metal structure parts shall meet the design requirements and GB/T 6067. 1 and the provisions of GB/T 26558.

5.3 The bolt connection parts of the main force-bearing structural parts of the crane should be in accordance with the provisions of GB/T 1228, GB/T 1229 and GB/T 1230.

Technical requirements for high-strength bolts. High-strength bolted connections shall meet the requirements of JGJ 82, and shall be marked in the corresponding drawings and installation instructions Pre-tightening force or pre-torque and allowable deviation.

5.4 Ordinary bolt pairs shall comply with GB/T 3098. 1 and GB/T 3098. 2 provisions. Ordinary bolt connection should adopt reliable anti-loosing Measures.

5.5 The setting of maintenance work passages consisting of ladders, platforms and railings of cranes shall be in accordance with GB/T 3811 and GB/T 6067.1 provisions.

6 Mechanism and main parts

6.1

General requirements

6.1.1

When the connection between the transmission parts of the working mechanism bearing the potential load fails, there should be safety to prevent the load from falling suddenly Measures.

6.1.2

When the crane adopts a walking-type running mechanism driven by a hydraulic cylinder, the running mechanism shall be provided with a locking device. The crane stopped running at this time, the crane should be able to be locked on the track by the locking device.

6.1.3

The moving (rotating) parts that may cause danger to the human body shall be protected by safety measures and protective covers or warning signs shall be provided.