

JTS

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

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JTS 146-2012

**Code for Seismic Design of Water
Transport Engineering**
水运工程抗震设计规范

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Contents

1	General	1
2	Terms	2
3	Fundamental requirements	3
	3.1 General requirements	3
	3.2 Seismic precautionary classification and criterion	4
	3.3 Combination of action and action effect	4
4	Site evaluation	6
	4.1 Site	6
	4.2 Liquefiable soil foundation	8
5	Earthquake action and structural seismic checking calculation	12
	5.1 General requirements	12
	5.2 Earthquake action	13
	5.3 Seism soil pressure	19
	5.4 Seism dynamic water pressure	23
	5.5 Bearing capacity of foundation and stability of bank slope	24
	5.6 Structure checking	26
6	Seismic construction	33
	6.1 The foundation and bank slope	33
	6.2 Gravity wharf and gravity abutment	34
	6.3 High pile wharf	34
	6.4 Sheet pile wharf	36
	6.5 Sloped wharf and floating wharf	36
	6.6 The mole	36
	6.7 Ship lock	37
	6.8 Wharf equipment and ancillary facilities	37
	Annex A The calculation of building natural vibration period	38
	Annex B The basic contents of the high-pile wharf earthquake action specialized research	41
	Annex C The calculation of earthquake inertia force and internal force of height greater than 30m of empty container type and rigid frame, truss type high-pile pier wharf	42
	Annex D Earthquake soil pressure parameters table	43
	Annex E Explanation of Wording in This Code	57

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Code for Seismic Design of Water Transport Engineering

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Notice of issuing *Code for Seismic Design of Water Transport Engineering*
(JTS 146-2012)

No. 1 in 2012

Now issue *Code for Seismic Design of Water Transport Engineering* (hereinafter referred to as *Code*). This *Code* is mandatory industry standard, with number of JTS 146-2012, and it shall come into effect on March 1, 2012. *Code for Seismic Design of Water Transport Engineering* (JTJ 225-98) is repealed simultaneously.

The bold part of Article 3.1.5, Article 3.1.6, Article 4.2.1, Article 4.2.6, Article 5.1.8, Article 6.1.5, Article 6.2.1, Article 6.3.12, Article 6.7.2 and Article 6.8.3 in this *Code* are mandatory and must be strictly enforced.

This *Code* is prepared by China Communication Planning and Design Institute for Water Transportation Co., Ltd. and other units, and managed and interpreted by Water Transportation Bureau of Ministry of Transport and published by China Communication Press.

Hereby Inform

Ministry of Transport of the People's Republic of China

January 4, 2012

Revision Description

This Code is based on *Code for Seismic Design of Water Transport Engineering* (JTJ 225-98). Via a series of in-depth investigation and study, combining the practical experience of our country in recent years in seismic design of water transport engineering, extensively soliciting the opinions from relevant units and experts, it is prepared according to the current situation as well as the development needs of water transport engineering construction in our country. This Code mainly includes site assessment, earthquake action, structural seismic checking, seismic measures and other technical contents.

The chief editorial unit of this Code is China Communication Planning and Design Institute for Water Transportation Co., Ltd., and the participating units are Dalian University of Technology and Tsinghua University.

Since the issuance and implementation of *Code for Seismic Design of Water Transport Engineering* (JTJ 225-98), it has played an important role in promoting the technological progress of China's port construction and ensuring the seismic safety of water transport engineering. With the progress of water transportation engineering construction seismic technology in China, in order to absorb new technology, new experience in a timely manner, to better guide the seismic design of water transport engineering, the Water Transportation Bureau of the Ministry of Transport organizes China Communication Planning and Design Institute for Water Transportation Co., Ltd. and other units to amend the Code.

The bold part of Article 3.1.5, Article 3.1.6, Article 4.2.1, Article 4.2.6, Article 5.1.8, Article 6.1.5, Article 6.2.1, Article 6.3.12, Article 6.7.2 and Article 6.8.3 in this Code are mandatory and must be strictly enforced.

This Code is divided into six chapters and five annexes, together with the description of the articles. Editorial staff divisions of labor of this Code are as follows:

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Annex E: Wu Peng

This Code was passed the ministry verification on June 8, 2011, issued on January 4, 2012, and implemented since March 1, 2012.

Water Transportation Bureau of Ministry of Transport is responsible for the management and interpretation of this Code. In the implementation process, each unit shall inform the questions and suggestions timely to Water Transportation Bureau of Ministry of Transport

(Address: Water Transportation Bureau of Ministry of Transport Technology Management Office, No. 11, Jianguo Mennei Avenue, Beijing. Postal code: 100736) and this Code Management Group (Address: China Communication Planning and Design Institute for Water Transportation Co., Ltd. No. 28, Guozijian Street, Beijing, Postal code: 100007), for the re-amendment reference.

1 General

1.0.1 This Code is prepared in order to unify technical requirements of seismic design of water transport engineering, to implement prevention-oriented approach to prevent or reduce the damage of the earthquake on the water transport engineering structures and reduce economic losses.

1.0.2 This Code applies to the seismic design of port hydraulic structures lock hydraulic structures whose seismic precautionary intensity is degree 6, degree 7, degree 8 and degree 9. Ship lift and shipyards and other hydraulic structures can be implemented by reference.

1.0.3 When seismic precautionary intensity is degree 6, seismic calculation can not be conducted, but the structures shall adopt appropriate seismic structure measures according to this Code. For the water transport engineering structures whose seismic precautionary intensity is higher than degree 9, its seismic design shall undergo a special argument. Under normal circumstances, seismic design may not be made for temporary structures.

1.0.4 If the seismic designs of the water transport engineering structures are made according to this Code, its seismic precautionary goal shall be: when the building is affected by an earthquake with intensity equal to the local seismic precautionary intensity, it may be damaged, but it can be used after general repair or without repair.

1.0.5 Under normal circumstances, water transport engineering structures' seismic precautionary intensity shall adopt the basic seismic intensity of seismic ground motion parameter zonation map of China. As for the water transport engineering structures or the high intensity area with serious secondary disasters or of great importance, a seismic hazard analysis shall be carried out. Except for the liquefied natural gas terminal and the storage tank zone revetment, if seismic precautionary intensity which is higher or lower than the basic intensity is necessary, it shall be submitted for approval after an argument.

1.0.6 In addition to complying with this Code, seismic design of water transport engineering shall also comply with the requirements of existing national standards.

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