

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

中华人民共和国国家标准

Design Code for Antiseismic of Special Structures

构筑物抗震设计规范

GB 50191-93

Chief Editorial Department: People's Republic of China ministry of metallurgical industry

Approving Department: Ministry of Construction of the People's Republic of China

Date of implementation: June. 1. 1994

Bei jing 1993

NOTICE

This code is written in Chinese and English. The Chinese text shall be taken as the ruling one in the event of any inconsistency between the Chinese text and the English text.

Notice on Issuance of National Standard

“Design Code for Antiseismic of Special Structures”

Jianbiao No. [1993] 858

As required by the document from the State Planning Commission Ji Zong No. [1985] 1, the “Design Code for Antiseismic of Special Structures” by the Ministry of Metallurgical Industry in conjunction with relevant departments concerned has been jointly reviewed by relevant departments. It is hereby approved that “Design Code for Antiseismic of Special Structures” GB50191-93 be implemented as of June 1, 1994 as a compulsory national standard.

This specification shall be governed by the Ministry of Metallurgical Industry, be interpreted in detailed by the General Architecture Research Institute of the Ministry of Metallurgical Industry, and its publication and distribution shall be organized by the Standard Quota Research Institute of the Ministry of Construction.

Ministry of Construction of the People’s Republic of China
November 16, 1993

Contents

1. General Provisions	1
2. Terminologies and Signs	3
2.1 Terminologies	3
2.2 Signs	4
3. Basic Requirements on Antiseismic Design	7
3.1 Site Influence and Subgrade and Foundation	7
3.2 Antiseismic Structure System	7
3.3 Materials	9
3.4 Non Structural Members	9
4. Site, Subgrade and Foundation	10
4.1 Site	10
4.2 Natural Subgrade and Foundation	11
4.3 Liquefied Soil Subgrade	12
4.4 Seismic Depression on Soft Soil Subgrade	15
4.5 Pile Foundation	16
5. Seismic Action and Structure Antiseismic Proof-calculation	19
5.1 General Provisions	19
5.2 Horizontal Seismic Action and Action Effect Calculation	21
5.3 Calculation of Vertical Seismic Action	24
5.4 Section Antiseismic Proof-calculation	25
5.5 Antiseismic Deforming Proof-calculation	26
6. Frame and Bent Frame Structures	28
6.1 General Provisions	28
6.2 Antiseismic Calculation	29
6.3 Structural Measures	33
7. Suspension Boiler Frame	43
7.1 General Provisions	43
7.2 Antiseismic Calculation	43
7.3 Structural Provisions	45
8. Bins	47
8.1 General Provisions	47
8.2 Antiseismic Calculation	47
8.3 Structural Measures	50
9. Headframe	54
9.1 General Provisions	54
9.2 Antiseismic Calculation	55
9.3 Structural Measures	56
10. Reinforced Concrete Derricks	58
10.1 General Provisions	58
10.2 Antiseismic Calculation	58
10.3 Structural Measures	59
11. Braced Steel Derricks	61

11.1	General Provisions	61
11.2	Antiseismic Calculation	61
11.3	Structural Measures.....	62
12.	Hyperbolic Cooling Tower.....	64
12.1	General Provisions.....	64
12.2	Body.....	64
12.3	Spray Devices	66
13.	Television Tower.....	68
13.1	General Provisions.....	68
13.2	Antiseismic Calculation	68
13.3	Structural Measures	70
14.	Tower Equipment Foundation in Petrochemical Plants	73
14.1	General Provisions.....	73
14.2	Antiseismic Calculation	73
14.3	Structural Measures	74
15.	Coke Oven Foundation.....	75
15.1	General Provisions.....	75
15.2	Antiseismic Calculation	75
15.3	Structural Measures	77
16.	Conveyor Vestibule.....	78
16.1	General Provisions.....	78
16.2	Antiseismic Calculation	79
16.3	Structural Measures	83
17.	Pipe Support.....	86
17.1	General Provisions.....	86
17.2	Antiseismic Calculation	86
17.3	Structural Measures	89
18.	Concentration Pool	90
18.1	General Provisions.....	90
18.2	Antiseismic Calculation	90
18.3	Structural Measures	92
19.	Atmospheric Pressure Vertical Cylindrical Storage Tanks.....	94
19.1	General Provisions.....	94
19.2	Antiseismic Calculation	94
20.	Spherical Storage Tanks	97
21.	Horizontal Cylindrical Storage Tank.....	99
22.	Blast Furnace System Structure	101
22.1	General Provisions.....	101
22.2	Blast Furnace	101
22.3	Hot Blast Stove	104
22.4	Dust Filters and Stripping Towers.....	106
22.5	Skew Bridges.....	107
23.	Tailing Dam.....	109
23.1	General Provisions.....	109

23.2 Antiseismic Calculation	109
23.3 Structural and Engineering Measures	116
Appendix A Conditions for Frame and Bent Structures to Be Calculated as Planes and Adjusting Coefficient of Seismic Action Effect	117
Appendix B Sectional Antiseismic Proof-calculation for Core Zone of Frame Joints.....	121
Appendix C Lateral Displacement Rigidity of Supporting Structures with Cross Beams for Column-Supported Square Bins.....	123
Appendix D Displacement of Coke Oven Body Under Unit Horizontal Action	124
Appendix E Rigidity of Frame Type Fixing Supports.....	126
Appendix F Antiseismic Grade of Tailing Dams.....	127
Appendix G Notes on Some Expressions Used in This Specification	128
Additional Notes	129

1. General Provisions

1.0.1 This specification has been formulated for the purpose to implement the working policy of taking prevention as the primary measure in antiseismic work, lessen the damaged to the structures caused by earthquakes, avoid casualties to people and reduce economic loss.

1.0.2 Structures for which antiseismic design has been made in accordance with this specification, shall normally not be damaged or can continue to be used without repair after being impacted by an earthquake with an intensity lower than the protection level in the area; they might be damaged when subject to an earthquake at the guarding intensity, but may continue to be used after ordinary repair or without repair; and they will not collapse or be seriously damaged to the extent of endangering life or leading to major economic losses when the area is subject to an earthquake at an intensity one degree higher than the guarding intensity.

1.0.3 This specification is applicable to the antiseismic design for structures in areas with a guarding intensity of 6 to 9 degrees.

For the antiseismic design of structures in areas with a guarding intensity of 10 degrees or industries with special requirements, special study shall be conducted and the relevant regulations shall be implemented.

1.0.4 The antiseismic guarding intensity can be the basic seismic intensity specified in the current "Map of seismic intensity zoning of China"; for areas or factories and mines for which antiseismic protection classification has been made, antiseismic design can be made on the basis of the guarding intensity or seismic dynamic parameters for antiseismic design as confirmed in the antiseismic protection classification.

1.0.5 Structures shall be classified into the following four categories by their importance:

Class A ---- structures of special importance or with special requirements, and extremely serious consequences will be resulted if damaged in an earthquake;

Class B ---- important structures, which, if damaged in an earthquake, may lead to serious consequences such as massive casualty, serious secondary disaster, long term shutdown of important factories and mines;

Class C ---- structures other than those in Classes A, B and D;

Class D ---- secondary structures which are unlikely to cause personnel injury or death or sizable economic loss when damaged by an earthquake.

1.0.6 The antiseismic design for structures of all classes shall meet the following requirements:

1.0.6.1 The seismic action of Class A structures shall be calculated according to the specifically studied seismic dynamic parameters for antiseismic design; the seismic action of other classes of structures shall be calculated according to the guarding intensity in the area, and it is not necessary to perform calculation on seismic action for those with a guarding intensity of degree 6, unless otherwise specified in this specification.

1.0.6.2 For structures of Class A, special antiseismic measures shall be adopted; for structures of Class B, antiseismic measures can be adopted at one degree higher than the guarding intensity, provided that it should be made higher as appropriate for a guarding intensity of degree 9; for structures of Class C, antiseismic measures can be taken according to the guarding intensity; and for structures of Class D, antiseismic measures can be taken at one degree lower than the guarding intensity, but it should not be lowered when the guarding intensity is degree 6.

Note: (1) In this specification, "guarding intensity" is referred to as "intensity"; and intensity degree 6, degree 7,

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