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THE PEOPLE'S REPUBLIC OF CHINA**

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GB 50108-2008

Replace GB 50108-2001

**Technical Code for Waterproofing of
Underground Works**
地下工程防水技术规范

Issued on November 27, 2008

Implemented on April 1, 2009

**Issued by the Ministry of Housing and Urban-Rural Development of the
People's Republic of China**

**Ministry of Housing and Urban-Rural Development (MOHURD) of
the People's Republic of China**

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**Announcement of publishing the national standard Technical Code for
Waterproofing of Underground Works**

The Technical Code for Waterproofing of Underground Works has been approved as a national standard with a serial number of GB 50108-2008, which shall take effect as of April 1, 2009. Thereof, Article (Item) 3.1.4, 3.2.1, 3.2.2, 4.1.22, 4.1.26 (1 and 2) and 5.1.3 are compulsory provisions and must be enforced strictly. The Technical Code for Waterproofing of Underground Works (GB 50108- 2001) shall be abolished simultaneously.

Authorized by the Research Institute of Standards and Norms (RISN) of MOHURD, this code is published and distributed by China Planning Press.

**MOHURD of the People's Republic of China
November 27, 2008**

Foreword

According to the requirements of Document Jian Biao [2005] No. 84 issued by Ministry of Construction (MOC) -“Notice on Printing the Development and Revision Plan of National Engineering Construction Standards in 2005”, this code is completed by the Third Research Institute of Engineering Corps, PLA General Staff Headquarters jointly with relevant units based on the revision of Technical Code for Waterproofing of Underground Works (GB 50108-2001).

The standard (code) comprises 10 chapters with the main contents as follows: waterproofing design of underground works; concrete main structure waterproofing of underground works; concrete detail constitution waterproofing of underground works; drainage of underground works; waterproofing by grouting; structural waterproofing by special construction; leakage water treatment of underground works and other provisions.

The principal revised contents includes: raising the waterproofing standard of underground works with grade 2 waterproofing standard; increasing new waterproofing material and waterproofing construction technique; coordinating and integrating with the relevant domestic and overseas codes; valuing structural durability and environmental protection; eliminating backward waterproofing material and revising the articles which can't meet the development needs of China.

The provision(s) printed in bold type is (are) compulsory one (ones) and must be enforced strictly.

Ministry of Housing and Urban-Rural Development is in charge of the administration of this standard (code) and the explanation of the compulsory provisions while State Organ People Air Defence Office and the Third Research Institute of Engineering Corps, PLA General Staff Headquarters are responsible for the routine management and the explanation of specific technical contents respectively. All relevant organizations are kindly requested to sum up and accumulate your experiences in actual practices during the process of implementing this code. The relevant opinions and advice, whenever necessary, can be posted or passed on to the Third Research Institute of Engineering Corps, PLA General Staff Headquarters(Address: the Third Research Institute of Engineering Corps, PLA General Staff Headquarters, Luoyang, Henan; Post code: 471023) for future reference of revision.

The chief development organization, participating development organizations and chief drafting staff are as follows:

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Central Research Institute of Building and Construction, MCC Group

Shanghai Tunnel Engineering & Rail Transit Design and Research Institute

China Railway Engineering Consultants Group

China Academy of Building Research

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Contents

1 General provisions	1
2 Terms	1
3 Waterproofing design of underground works	3
3.1 General requirement	3
3.2 Waterproof grade	4
3.3 Design requirement for waterproofing	5
4 Concrete main structure waterproofing of underground works	6
4.1 Waterproof concrete	6
4.2 The waterproof layer of cement mortar	12
4.3 Sheet waterproof layer	14
4.4 Coating waterproof layer	21
4.5 Waterproof layer of waterproof plastic sheet	24
4.6 Waterproof metallic layer	26
4.7 Waterproof layer of waterproof bentonite material	27
4.8 Planting topplate waterproofing of underground works	29
5 Concrete detail constitution waterproofing of underground works	31
5.1 Movement joint	31
5.2 Later-cast band	36
5.3 Wall-through pipe (box)	39
5.4 Embedded parts	41
5.5 Reserved passage joint	41
5.6 Pile head	43
5.7 Aperture	43
5.8 Pit and pool	44
8 Special Construction Structure Waterproof	54
8.1 Shield Tunnel	54
8.2 Caisson	57
8.3 Continuous concrete wall	58
8.4 Reverse structure	60
8.5 Shot concrete and rock bolt support	61
9 Underground works leakage water treatment	61
9.1 General policy conditions	61
9.2 Project design	62
9.3 Treatment materials	63
9.4 Construction	63
10 Other provisions	63
Annex A Safety and environment protection	64
Explanation of Wording in this Specification	65
Annex: Article Instruction	64

1 General provisions

1.0.1 This code is formulated with a view to meet the requirement of high quality, advanced technology, economy and rationality as well as safety and usability in the waterproofing design and construction of underground works.

1.0.2 This code is applicable to the waterproofing design and construction of underground works, such as underground works of industrial and civil buildings, protection projects, municipal tunnel, mountain and underwater tunnel, underground railway, highway tunnel and so on.

1.0.3 The waterproofing design and construction of underground works shall follow the principle of "Combining waterproofing, drainage and blocking together, being flexible and rigid, adjusting measures to local conditions and administering comprehensively".

1.0.4 The waterproofing design and construction of underground works shall meet the requirement of environmental protection and take corresponding measures.

1.0.5 The waterproofing of underground works shall adopt new material, technology and technique with reliable quality, which have been tested, detected, identified and verified in practice.

1.0.6 The waterproofing design and construction of underground works shall comply with not only the requirements stipulated in this code, but also those in the current relevant ones of the nation.

2 Terms

2.0.1 Binder

It is the general name for such mineral admixtures as portland cement, fly ash, fine slag and silicon powder, which are used to prepare concrete.

2.0.2 Water to binder ratio

It refers to the ratio between water consumption and total binder content in preparing concrete.

2.0.3 Operational time

The period from the opening of mono-component material in vessel or the mixing of multi-component material to the time not suitable for construction.

2.0.4 Impermeability of film coating

The ability of the cured coating membrane to resist groundwater seepage.

2.0.5 Water resistance of film coating

The ability of the cured coating membrane to maintain different kinds of performance indexes under long-term immersion in water.

2.0.6 Polymer cement water proof coating

A kind of bi-component water proof coating with polymer emulsion and cement as raw



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