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**NATIONAL STANDARD**

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

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**P**

**GB 50496-2009**

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**Code for Construction of Mass Concrete**

**大体积混凝土施工规范**

**Issued on: May 13, 2009**

**Implemented on: October 1, 2009**

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**Jointly issued by** the Ministry of Housing and Urban-Rural Development (MOHURD) and the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) of the People's Republic of China

National Standard of the People's Republic of China

中华人民共和国国家标准

Code for Construction of Mass Concrete

大体积混凝土施工规范

**GB 50496-2009**

**Chief Development Department:**

China Metallurgical Construction Association

**Approval Department:**

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# **Announcement of the Ministry of Housing and Urban-Rural Development of the People's Republic of China**

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## **Announcement on Publishing the National Standard "Code for Construction of Mass Concrete"**

"Code for Construction of Mass Concrete" has been approved as a national standard with a serial number of GB 50496-2009 and shall be implemented from October 1, 2009. Articles 4.2.2 and 5.3.2 in this standard are compulsory provision and must be enforced strictly.

Organized by the Standard Rating Research Institute of the Ministry of Housing and Urban-Rural Development of the People's Republic of China, this code is published by China Planning Press.

**Ministry of Housing and Urban-Rural Development of the People's Republic of China**  
**May 13, 2009**

## Foreword

This code was formulated by Central Research Institute of Building and Construction of MCC Group Co., Ltd. jointly with relevant scientific research, design, construction and inspection organizations according to the requirements of Documents Jian Biao [2006] No. 136 issued by the former Ministry of Construction (MOC) - "Notice on Printing and Publishing the Development and Revision Plan of National Engineering Construction Standards in 2006 (the second batch).

During the process of formulating this code, the code drafting group conducted a great deal of experimental study, carried out extensive investigations and analysis, convened workshops for many times, summarized the construction experiences on construction technique of mass concrete in China over the years, made coordinated with relevant standards and codes, and carried out comparison of and referred to the foreign advanced standards, based on which, it extensively asked for the opinions of organizations concerned in various ways, conducted experimental engineering application, carried out repeated discussion and study on key issues and finalized this code through review.

This code comprises 6 chapters and 3 appendixes and mainly covers general provisions, terms, symbols, basis requirements, materials, mix proportion, preparation and transportation, concrete construction and site monitoring for temperature control construction.

Provisions printed in bold type in this code are compulsory and must be enforced strictly.

Ministry of Housing and Urban-Rural Development is in charge of the administration of this code and the explanation of the compulsory provisions, China Metallurgical Construction Association is responsible for routine management, and Central Research Institute of Building and Construction of MCC Group Co., Ltd. is responsible for the explanation of specific technical contents. All relevant organizations are kindly requested to earnestly sum up your experience in combination with engineering practice and send your opinion and suggestion to the Drafting Group of the national standard "Code for Construction of Mass Concrete" of Central Research Institute of Building and Construction of MCC Group Co., Ltd. (Address: No.33, Xitucheng Road, Haidian District, Beijing, 100088, China; E-mail: yi-zhong@sohu.com).

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China State Construction Engineering Corporation Limited

Beijing Tangent Engineering Software Co., Ltd.

Shanghai Baoye Group Construction Co., Ltd.

CMTCC Construction Co., Ltd.

China MCC20 Group Corp., Ltd.

MCC Jingtang Construction Corp., Ltd.

Luoyang Petrochemical Engineering Corporation/Sinopec

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Beijing Shougang Construction Group Co., Ltd.  
Beijing Urban Construction Group 5th Construction Engineering Co., Ltd  
Shanghai Power Construction Engineering Co., Ltd.  
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# Code for Construction of Mass Concrete

## 大体积混凝土施工规范

### 1 General Provisions

**1.0.1** This code was formulated with a view to making construction of mass concrete in accordance with advanced technology, economy and rationality, safety and usability principles and guaranteeing engineering quality.

**1.0.2** This code is applicable to construction of mass concrete engineering in concrete structure engineering of industrial and civil buildings and not applicable to construction of roller compacted concrete and hydraulic mass concrete engineering.

**1.0.3** Mass concrete construction shall meet not only those specified in this code and but also those specified in current relevant national standards.

### 2 Terms and Symbols

#### 2.1 Terms

##### 2.1.1 Mass concrete

It refers to large size of concrete with minimum geometric dimension of the physical concrete structure no less than 1m or concrete that harmful crack will be expected to be produced due to temperature variation and shrinkage caused by hydration of cementing material in concrete.

##### 2.1.2 Cementing material

It is a generic term for Portland cement and active mineral admixture for preparation of concrete.

##### 2.1.3 Alternative bay construction method

It refers to a kind of construction method that overlong concrete block is divided into several small blocks for interval construction during the construction of mass concrete engineering and the several small blocks are connected into an integral after short-term stress release to resist thermal shrinkage stress in the next section by concrete tensile strength.

##### 2.1.4 Deformation seam

It refers to the permanently reserved seam separated vertically in building (structure), including expansion seam and settlement seam.

##### 2.1.5 Vertical construction seam

It refers to reserved seam in vertical direction of proper places because pause time of concrete pouring is possibly greater than initial setting time of concrete where the concrete can't be poured continuously.

##### 2.1.6 Horizontal construction seam

It refers to reserved seam in horizontal direction of proper places because pause time of concrete pouring is possibly greater than initial setting time of concrete where the concrete

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