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NATIONAL STANDARD



OF THE PEOPLE'S REPUBLIC OF CHINA

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GB 50057-2010

**Code for Design Protection of Structures
Against Lightning**

建筑物防雷设计规范

Issued on: November 3, 2010

Implemented on: October 1, 2011

Jointly Issued by Ministry of Housing and Urban-Rural Construction of the People's
Republic of China

General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China

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Chief Development Department: China Machinery Industry Federation

Approval Department: Ministry of Housing and Urban-Rural Development of the People's Republic
of China

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

No. 824

Announcement on Publishing the National Standard of “Design Code for Protection of Structures against Lightning”

“Design Code for Protection of Structures Against Lightning” has been approved as a national standard with a serial number of GB 50057—2011 and will be implemented on October 1, 2011. Therein, Articles (Items) 3.0.2, 3.0.3, 3.0.4, 4.1.1, 4.1.2, 4.2.1 (2, 3), 4.2.3 (1, 2), 4.2.4 (8), 4.3.3, 4.3.5 (6), 4.3.8 (4, 5), 4.4.3, 4.5.8 and 6.1.2 are compulsory ones, and must be enforced strictly. The former “Design Code for Protection of Structures Against Lightning” GB 50057—94 (2000 edition) shall be abolished simultaneously.

Authorized 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 and distributed by China Planning Press.

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

November 3, 2010

Foreword

In accordance with the requirements of “Notice on Printing and Publishing ‘Development and Revision Plan on Engineering Construction Standards and Codes (Batch 1) in 2005’” (Jian Biao Han [2005] No. 84), this code is revised from “Design Code for Protection of Structures Against Lightning” GB 50057—94 (2000 edition) by China IPPR International Engineering Corporation jointly with the organizations concerned.

In the revision of this code, the code drafting group seek advices by internet and contacting with the organizations and individuals concerned after completing the exposure draft hereof; and finally finalize it upon review after completing the draft for examination on the base of the advice gained.

This code comprises 6 Ahapters and 9 Appendixes, and the main contents cover: general provisions, terms, classification of structures to be protected against lightning, protection measures for structures against lightning, lightning protection system, protection against LEMP, etc..

The following contents are revised in this code:

1. Chapter “Terms” is added;
2. Measures of contact voltage protection and pace voltage protection are changed;
3. The requirements for external lightning protection system adopting different metal objects are added;
4. The provisions for side stroke protection are modified;
5. The requirements for electrical system and electronic system selecting SPD are provided in detail;
6. The annual mean density calculation Formula of lightning stroke to ground is simplified, and the value of predicted lightning stroke times for judging lightning protection classification of structures is adjusted;
7. More specific requirements are made for partial Items.

The provisions printed in bold type are compulsory ones and must be enforced strictly. The Ministry of Housing and Urban-Rural Development is in charge of the administration of this code and the explanation of the compulsory provisions; China Machinery Industry Federation is responsible for routine management, and China IPPR International Engineering Corporation is responsible for the explanation of specific technical contents. 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 on modification or supplement, whenever necessary, can be posted or passed on to China IPPR International Engineering Corporation (Address: No.5, W. 3rd Ring Rd North, Haidian District, Beijing 100089, China) for futhure reference.

Organization Units, Chief Development Organizations, Participating Development Organizations, Chief Drafting Staffs and Chief Examiners of this code:

Organization Units: China Mechanical Industrial Exploration and Design Association

Chief Development Organization: China IPPR International Engineering Corporation

Participating Development Organization:

Wuzhou Engineering Design and Research Institute

Lightning Protection Institute of China Meteorological Committee

Beijing Lightning Protection System Safety Inspection Center

Sinopec Engineering Incorporation

China Architecture Design and Research Group

Chief Drafting Staffs: Lin Weiyong, Huang Yougen, Jiao Xingxue, Tao Zhanju, Wang Suying,
Yang Shaojie, Song Pingjian, Huang Xu, Zhang Wencai, Xu Hui

Chief Examiners: Zhang Lixin, Wang Houyu, Ding Jie, Fang Lei, Ou Qingli, Yin Junping,
Wang Yunfu, Guan Xiangshi, Yang Weilin

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1 General Provisions

1.0.1 This code is Formulated in order to adopt lightning protection measures by adjusting measures to local conditions for lightning protection design of structures (including construction), prevent or reduce personal injury, cultural relics and property loss arising from lightning stroke of structures, as well as damage or error operation of electrical and electronic systems triggered by lightning electromagnetic impulse, and thereby achieving safety and reliability, advanced technology, and economy and rationality.

1.0.2 This code is applicable to the lightning protection design of newly-built, extended and rebuilt structures.

1.0.3 For the purpose of the lightning protection design of structures, the type of lightning protection system and its layout shall be researched in detail and determined based on earnestly investigating geography, geology, soil, weather, environment conditions and lightning activity rules as well as characteristics of protected objects.

1.0.4 In addition to this code, the lightning protection design of structures shall also comply with those specified in the national current relevant standards of the state.



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