ICS 27. 100

K 60

File No.: J1953-2015

DL

ELECTRIC POWER INDUSTRY STANDARD OF THE PEOPLES REPUBLIC OF CHINA

中华人民共和国电力行业标准

P

DL/T 5390-2014

Replace DL/T 5390-2007

Technical code for design of lighting of power plants and substations

发电厂和变电站照明设计技术规定

Issued on October 15, 2014 Implemented on March 01, 2015

Issued by National Energy Administration of China

ELECTRIC POWER INDUSTRY STANDARD OF THE PEOPLES REPUBLIC OF CHINA

Technical code for design of lighting of power plants and substations

DL/T 5390-2014

Replacing DL/T 5390-2007

Editorial department in chief: Electric Power Planning and Engineering Institute

Approval department: National Energy Administration of China

Enforcement date: March 01, 2015

China Planning Press

2014·Beijing

National Energy Administration

Announcement

2014 No.11

According to regulations in ”National Energy Administration on Announcement of Issuing <Standardization Management Methods for Energy Industry (Trial Implementation)> and Detailed Implementation Regulations” (NEA Technology[2009]No.52) and by examination, National Energy Administration approves such 330 industry standards as ”Part No. 17 of Carbon Steel and Low Alloy Steel for PWR Nuclear Power Plant: Pushed Elbow for Main Steam System”, etc., among which 71 are for energy standard(NB), 122 for electric standard and 137 for petroleum and natural gas, and they are all now issued thereupon.

Annex: Industry Standard Catalog

National Energy Administration of China

October 15, 2014

Annex:

Industry Standard Catalog

Number	Standard number	Standard Title	Replaced standard	Adopted standard number	Approval date	Enforcement date
...						
174	DL/T 5390-2014	Technical Code for Design of Lighting of Power Plants and Substations	DL/T 5390-2007		2014-10-15	2015-03-01
...						

Foreword

Based on the requirements of “NEA on Announcement of Establishing Plan for Nuclear Power”(NEA Technology[2011]No.48), compilation team of standard made a revision on the original DL/T 5390-2007 ”Technical Code for Design of Lighting of Fossil-fired Power Plants and Substations” by extensive investigations and researches, carefully concluding working experience in design of lighting of power plants and substations, referring to relevant international standards, and widely soliciting opinions.

This Standard is divided into 10 chapters and 6 annexes, main technical contents include: general, terms and symbols, lighting mode and type, light source, selection and layout of luminaire and its accessory, lighting standard value, illuminance calculation, lighting network power supply and control, lighting quality, lighting energy-conservation and annex, etc.

Main contents of this revision:

1. Adding regulations on lighting design for nuclear power plant conventional island and BOP(balance of plant auxiliary power house);

2. Adding regulations on lighting of convertor station valve room;

3. Revising selection of light source by adding regulations on selecting new light sources(light emitting diode and electrodeless fluorescent luminaire)

4. Revising regulations on selecting and layouting lighting luminaire;

5. Revising illuminance standard value by adding illuminance uniformity ratio U_0;

6. Revising regulations on power supply and grounding of lighting network；

7. Revising the chapter of lighting energy-conservation by revising lighting power density and adding regulations on necessary correction when room index of room or place is inconsistent with given value;

8. Adding in Annex A lighting device content of nuclear power plant conventional island and BOP, and revising lighting device in explosive and fire environment. Adding in Annex B illuminance point-by-point method and equiluminous curve method. Deleting in Annex C and D carrying current of aluminum conductor.

This Standard replaces DL/T 5309-2007 “Technical Code for Design of Lighting of Fossil-fired Power Plants and Substations” from the day of enforcement.

This Standard is under the general charge of National Energy Administration of China, proposed by Electric Planning and Engineering Institute, under the daily management of China National Technical Committee of Power Design Standardization in Energy Industry, and with North-east China Power Engineering Co.,Ltd of China Power Engineering Consulting (Group) Corporation responsible for the explanation of detailed technology contents. Any opinions or suggestions in the implementing process, please post them to Electric Planning and Engineering Institute(Address: No. 65 Ande Road, Xicheng District, Beijing, postal code:100120).

Compiler in chief, compilation participants, main drafter and main examiners:

Compiler in chief: North-east China Power Engineering Co.,Ltd of China Power Engineering Consulting (Group) Corporation

Compilation participants: China Nuclear Power Engineering Co., Ltd

Main drafters: Zhang Huanchang, Yang Xiaoping, Yang Dong, Cai Sanyan, Zhou Xiaobo, Xu Yuxiang, Sun Jin, Zhai Changchun, Zhu Ruili, Gao Zheng

Main examiners: Li Shufang, Yue Dangjiu, Wang Ning, Deng Changhong, Xue Huimin, Xu Junliang, Li Hanfeng, Zhang Xianwei, Zhou Wei, Yan Kewei, Xu Chunli, Cao Jinhong, Wei Huadong, Shen Yun, Xu Weimin, Yao Shaohong, Liu Shujun

Contents

1 General

1.0.1 This Standard is established to make the design of lighting in power plants and substations consistent with production function requirement so as to achieve both physical and mental health of staff, security and reliability, technology advancement, economic reasonability, energy-conservation and environmental friendliness.

1.0.2 This Standard is applicable to lighting design of new construction, extension and reconstruction engineering for power plant, substation and covertor staion. Power plants include coal-fired power plant, fuel-fired plant, gas-fired plant and biomass power plant, as well as renewable energy power plant, nuclear power plant conventional island and BOP.

1.0.3 Lighting design shall implement by the principle of security, advancement, economy, aesthetics to achieve green lighting while meeting the following requirements:

1. Illuminance on working surface shall conform with the specified value;
2. Limit glare;
3. Power supply shall be safe and reliable;
4. Maintenance and overhaul shall be safe and convenient;
5. Coordinate and unify lighting device and buildings.
6. Actively employ advanced technology and energy-conservation equipment.

1.0.4 Lighting design shall conform with relevant current national standards except for this Standard.

北京文心雕语翻译有限公司
Beijing Lancarver Translation Inc.

完整版本请在线下单/Order Checks Online for Full version

联系我们/or Contact:

TEL: 400-678-1309

QQ: 19315219 | Skype: Lancarver

Email：info@lancarver.com

http://www.lancarver.com

线下付款方式：

I. 对公账户：

单位名称：北京文心雕语翻译有限公司

开 户 行：中国工商银行北京学清路支行

账　　号：0200 1486 0900 0006 131

II. 支付宝账户：info@lancarver.com

III. Paypal: info@lancarver.com

注: 付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！

NOTE All documents on the store are in electronic Adobe Acrobat PDF format, there is not sell or ship documents in hard copy. Mail the order and payment information to info@lancarver.com , you will shortly receive an e-mail confirming your order.