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P

DL 5068-2014

Replace DL/T 5068-2006

Code for Design of Chemistry of Power Plant

发电厂化学设计规范

Issued on October 15, 2014

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Code for design of chemistry of power plant

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Replace DL/T 5068- 2006

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According to relevant provisions of the *Notice of National Energy Administration on Issuing the Measures for Administration of Industry Standardization of Energy Field (Trial) and Implementing Rules* of (No. 52 [2009] of National Energy Technology), National Energy Administration approved such 330 items of industrial standards as *Carbon Steel and Low Alloy Steel for Pressurized Water Reactor Nuclear Power Plants. Part 17: Pushing Elbow for Main Steam System*, in which there are 71 energy standards (NB), 122 power standards (DL), and 137 oil and gas standards after examination. They are hereby issued.

Attachment: Contents of industry standards

National Energy Administration

October 15, 2014

Attachment:

Contents of industry standards

No.	Standard No.	Standard name:	Alternative Standards	Adopted Standard No.	Approved Date	Implementation Date:
169	DL5068—2014	Code for design of chemistry of power plant	DL/T5068—2006		October 15, 2014	March 1, 2015

Preface

In accordance with the requirements in *Notice of the National Energy Administration on Setting and Revising Plan of Nuclear Power Standards* (No. 48 [2010] of National Energy Technology), the standard preparation team via extensive investigation and research seriously summarizes the working experience in conventional island engineering design of thermal power plant and nuclear power plant, refers to related international standards and advanced foreign standards, and finally revises the original *Technical Code for Designing Chemistry of Fossil Fuel Power Plants* DL/T 5068-2006 on the basis of extensively seeking for advice.

This code includes totally 18 chapters and 16 appendixes, and its content mainly covers general provisions, terms, water pretreatment, water pre-desalination, water demineralization, condensate polishing of steam turbine, chemical dosing of thermal cycle system, water-steam sampling and monitoring for thermal cycle system, cooling water treatment, treatment of heating network makeup water and industrial return water, hydrogen generation and hydrogen supply, reductant storage and generation of flue gas denitration, purification of transformer oil, chemicals storage and metering, pipes and valves, anticorrosion design, instrument and control, laboratory and instrument, etc.

The main contents revised in this time include:

1. Application scope of this code is revised to: Chemistry design for conventional islands of fire coal, gas, biomass (including garbage power station) and other power plants and pressurized water reactor nuclear power plants;
2. Adding relevant requirements on chemistry design for conventional islands of nuclear power plants;
3. Adding relevant design requirements on seawater circulating cooling water treatment;
4. Adding relevant design requirements on thermal system chemical dosing, water-steam sampling and monitoring, of medium-high pressure unit and gas-steam combined cycle unit;
5. Adding relevant design requirements on reductant storage and preparation of flue gas denitration;
6. Newly adding 4 appendixes, including "carryover coefficient of salt in water for various pressure drum boilers", "selection of condensate polishing process", "on-line instrument of water treatment system" and "laboratory area, instrument and radiation zoning of nuclear power plant", listing design parameter of filter in the appendix, and replenishing or revising partial appendix contents.

Clauses 7.1.3, 14.4.7, 14.6.4 (5, 8) and 18.0.6 (4) in this code are mandatory provisions, marked in boldface, and must be strictly executed.

This code will substitute *Technical Code for Designing Chemistry of Fossil Fuel Power Plants* DL/T 5068-2006 since the date of implementation.

About this code, National Energy Administration will take charge of management and interpretation of the mandatory clauses, Electric Power Planning and Engineering Institute puts it forward, Standardization Technical Committee of Power Generation Design of Energy Industry is responsible for daily management, and Northwest Electric Power Design Institute Co., Ltd. of China Power Engineering Consulting Group is in charge of interpreting the specific technical contents. In case of any suggestions or opinions during implementation, please send it to Electric Power Planning & Engineering Institute (address: No. 65 Ande Road, Xicheng District, Beijing, zip code: 100120).

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1 General provisions

1.0.1 This code is prepared to make the chemistry design of conventional islands of thermal power plants and nuclear power plants safe and reliable, technically advanced and economically reasonable.

1.0.2 This code is applicable to the chemistry design for conventional islands of fire coal, gas, biomass (including garbage power station) and other power plants and pressurized water reactor nuclear power plants.

1.0.3 The process selection and equipment layout of different chemical systems shall give full consideration to the planned capacity of the power plant, and the facilities shall, on the basis of phased construction status of units and technical and economic comparison, be determined whether to be constructed one-off or in phases. The design of chemical water treatment processes shall adhere to the reasonable use of water sources, water conservation, low energy consumption and environmental protection, and also easy installation, operation and maintenance shall be ensured.

1.0.4 All the documents of water quality total analysis of available water sources shall be obtained prior to designing, and the required numbers of copies are as follows:

1. Total 12 copies of surface water and reclaimed water data per month in recent years;

2. Total 4 copies of groundwater, mine drain and seawater data per season in recent years;

3. Water quality total analysis documents gained shall be analyzed and verified, besides, design water quality and verification water quality shall be put forward when designing;

4. Water quality total analysis report shall conform to the provisions of Appendix A of this code.

1.0.5 Power plant chemistry system design shall be done on the basis of understanding the conditions and structure features of unit type, installed capacity, thermal system and related auxiliary engines as well as the cooling type and parameter of generators, mastering such data as requirements on power plant heating load, amount, quality and temperature of the return water, and amount and quality of externally supplied chemical treatment water, and knowing the request for water use and draining in environmental impact assessment and water resources argumentation.

1.0.6 For expanded and reconstructed projects, the layout and operation status of existing systems and equipment shall be understood.

1.0.7 In addition to comply with this code, the design of the power plant chemistry system design shall comply with the provisions of existing national standards.

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