

DL

Electric Power Industry Profession Standard of the
People's Republic of China

Technical Code for Designing Fossil Fuel Power Plants

火力发电厂设计技术规程

DL 5000-2000

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Technical Code for Designing Fossil Fuel Power Plants

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Foreword

This code is a professional standard containing compulsory articles, and those underlined articles are compulsory. Compulsory content in tables is indicated by notes for the table.

Since the issuance and implementation, DL5000 - 1994 "Technical code for designing fossil fuel power plants" has played a positive role and achieved good effects in carrying out (he capital construction policies of the state, reflecting the economic and technical policies, unifying and defining construction standards, ensuring adoption of advanced technology in the newly built and expanded fossil fuel power plants, realizing safe, economic, full load and steady operation and satisfying the environmental protection requirements in the construction of electric power facilities;

With the deepening of reform and advance of technology, some aspects of DL5000 - 1994 can no longer meet the requirements in the development of construction of electric power facilities; According to the arrangement in Item 42 of the document No. [1999] 40 "Notice on confirming standard system and revision plan items in electric power industry in 1998"of the Department of Electric Power of the State Economic and Trade Commission, the Electric Power Planning and Design General Institute organized people to conduct the revision and compilation of DL5000 -1994.

In this revision and compilation, the basic policies on electric power construction have been carried out, the policy on "safe and reliable, economic and practical and complying with national conditions" and a series of measures to control project cost conscientiously implemented, and mature and reliable design technology adopting advanced techniques actively popularized, with due consideration given to saving coal, water, power and land and controlling the size and standard of non-production facilities. Attention has been paid to adapting to the socialist market economic system, to get well prepared in design and technology for the electric power construction in the 21st century.

In this revision and compilation, no major revision has been made to the framework of DL5000 -1994, only some revision, deletion and supplement have been made to the contents of relevant sections, and some sections have been adjusted as appropriate.

To spreading and application of gas - steam combined recycling power generation technology, flue gas desulfurization technology and clean coal power generation technology are the development orientation of the power industry in the 21st century, however, compared with the conventional coal-firing power generation technology, they are not so mature as there is not much practical experience in the country. Therefore, in this revision and compilation, only some fairly mature articles were prepared for perspectiveness.

This code was proposed by the State Electric Power Corporation.

This code shall be under the charge by China Electric Power Planning and Design Association.

This code was drafted by China Electric Power Construction Engineering Consultation Corporation.

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This code shall be interpreted by China Electric Power Planning and Design Association.

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1. Scope

This code has specified the principles that should be followed and the construction standards in the design of large sized fossil fuel power plants.

This code is applicable to the design of condensing type fossil fuel power plants with units of turbo-generator sets at capacity of 125MW-600MW, as well as fossil fuel power plants with heat supplying units at or above 50MW. It can be used as reference for units of and above 600MW.

This code is applicable to the design of newly built or extension of power plants, and can be used as reference for the design of modification projects.

2. Reference Standards

The articles contained in the following standards shall become articles of this standard by the reference hereof. The indicated versions are effective at the time of publication of this standard. All standards are subject to revision, therefore, the possibility of using the latest versions of the following standards shall be discussed by the users "of this standard.

GB150-1998	Steel pressure vessels
GB/T1596-1991	Fly ash used for cement and concrete
GB3095 -1996	Ambient air quality standard
GB3096-1993	Standard of environmental noise of urban area
GB3097-1997	Sea water quality standard
GB3838 -1998	Environmental quality standard for surface water
GB4053.1-1993	Safety requirements for fixed steel vertical ladders
GB4053.2-1993	Safety requirements for fixed steel oblique ladders
GB4053.3-1993	Safety requirements for fixed industrial protective railings
GB4053.4-1983	Fixed steel industrial platform
GB/T4064-1993	General guide for design of electrical equipment to satisfy safety requirements
GB4792-1984	Basic health standards for radiological protection
GB4830-1984	Pressure range and quality of air supply for the industrial process measurement and control instruments
GB5083-1985	General rules for designing the production facilities in accordance with safety and health requirements
GB5084-1992	Standards for irrigation water quality
GB5749-1985	Sanitary standard for drinking water
GB/T7064-1996	Requirements for turbine type synchronous machine
GB/T7409-1997	Excitation system for synchronous electrical machines
GB8173 -1987	Control standards of pollutants in fly ash for agricultural use
GB8196-1987	Safety requirement for guard on machinery
GB8702-1988	Regulations for electromagnetic radiation protection
GB8703 -1988	Regulations for radiation protection
GB8978-1996	Integrated wastewater discharge standard
GB9137-1988	Maximum allowable concentration of pollutants in atmosphere for protection of crops

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