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**NATIONAL OCCUPATIONAL HEALTH STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GBZ 1-2010

Replacing GBZ 1-2002

Hygienic Standards for the Design of Industrial Enterprises

工业企业设计卫生标准

(English Translation)

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Foreword

This standard is formulated in accordance with the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases.

This standard is revised on the basis of GBZ 1-2002 "Hygienic standards for the design of industrial enterprises". Except for individual statements expressly indicated as reference clauses, all clauses of this standard are mandatory. From the date of implementation of this standard, GBZ 1-2002 is abolished.

Compared with GBZ 1-2002, the main modifications of this standard are as follows:

- a) the scope of application of the standard has been adjusted, and provisions have been added on the hygienic design and occupational disease hazard assessment of construction projects of public institutions and other economic organizations, on the design of temporary industrial enterprises needed for special reasons where the construction period of a project lasts several years or the construction scale is relatively large, and on the general layout of industrial parks, etc.;
- b) the normative references have been supplemented and updated;
- c) common terms and definitions for the hygienic design of industrial enterprises have been added;
- d) the arrangement order and logical relationship of some chapters and sections have been adjusted;

e) contents have been added such as the occupational health requirements at the feasibility study stage, the preliminary design stage and the completion acceptance stage of construction projects, and the requirements for the preparation of the special chapter on occupational health and for the occupational health management organization and staffing;

f) occupational health requirements have been added for siting industrial enterprises where natural infectious foci cannot be avoided, or adjacent to gas transmission pipelines, or in industrially polluted areas;

g) hygienic design principles for the prevention and control of occupational hazards in workplaces have been added;

h) specific hygienic design requirements for protection against dust and toxic substances in workplaces have been added:

- hygienic requirements for the design of dust removal, toxic exhaust and air conditioning have been added;

- the hygienic design of emergency ventilation has been refined;

- design requirements for automatic toxicant alarm devices and detection alarm devices have been added;

- provisions on the temperature and average air velocity at work sites with systematic local air supply have been added;

i) the hygienic design requirements for protection against heat and cold have been appropriately adjusted:

- temperature requirements at different humidities in air-conditioned workshops;

- heating temperature at work sites in winter and heating temperature of work-related welfare facilities;

j) the hygienic design requirements for protection against non-ionizing radiation have been adjusted:

- hygienic requirements have been added for the siting of large extremely low frequency electromagnetic field emission sources, for the selection of extremely low frequency electromagnetic field emission sources and electric power equipment, and for new electric power facilities;

- hygienic requirements for the distance between the installation sites of power frequency electromagnetic field equipment and residential areas and other areas have been adjusted;

- the maximum permissible exposure level of magnetic flux density in residential areas and other areas has been added;

- hygienic requirements for the design of staffing for work with high electromagnetic

radiation have been added;

k) specific requirements for daylighting and lighting design have been added;

l) specific requirements for emergency rescue design have been added:

- number of first-aid personnel of emergency rescue organizations;
- reference equipment configuration of gas protection stations;
- reference list of first-aid kit contents;

m) the occupational exposure limits already contained in GBZ 2.2-2007 have been deleted:

- provisions on summer air temperature at work sites inside workshops;
- hygienic limits for noise level at work sites;
- hygienic limits for local vibration intensity;
- hygienic limits for microwave radiation intensity at work sites;
- hygienic limits for high-frequency radiation intensity;
- limits for electric field intensity at workplaces with power frequency high-voltage electrical work;
- hygienic limits for impulse noise level at work sites;
- classification of work intensity;

n) the normative annex of the former GBZ 1-2002, Annex B: Classification method of physical work intensity, has been deleted;

o) the standard of hygienic buffer zones for industrial enterprises has been added, see normative Annex B;

p) special industries such as pharmaceuticals, biology and food processing shall, on the basis of complying with this standard, also formulate supporting standards conforming to this standard according to the characteristics of the industry;

Annexes A and B of this standard are normative.

This standard was proposed by the Occupational Health Standards Committee of the Ministry of Health.

This standard was approved by the Ministry of Health of the People's Republic of China.

Main drafting organizations of this standard: National Institute of Occupational Health and Poison Control, Chinese Center for Disease Control and Prevention; National Institute of Environmental Health and Related Product Safety, Chinese Center for Disease Control and Prevention; School of Public Health, Fudan University; School of Public Health, Peking University; Capital University of Economics and Business; Beijing Center for Disease

Control and Prevention; Shanghai Center for Disease Control and Prevention; Liaoning Provincial Center for Disease Control and Prevention; All-China Federation of Trade Unions; Shandong Academy of Occupational Health and Occupational Medicine; Henan Provincial Institute of Occupational Disease Prevention and Treatment; Liaoning Provincial Institute of Occupational Disease Prevention and Treatment; Institute of Labour Hygiene of Anshan Iron and Steel Group Corporation; China Textile Survey and Design Association; China Chemical Industry Association; China Petroleum and Chemical Engineering Survey and Design Association; National Electric Power Industry Labour Environment Monitoring and Supervision General Station.

The previous editions of the standards replaced by this standard are:

- Standard-101-56, GBJ 1-62, TJ 36-79, GBZ 1-2002.

1 Scope

This standard specifies the basic hygienic requirements for the site selection and general layout, workplaces, work-related welfare facilities and emergency rescue of industrial enterprises.

This standard is applicable to the hygienic design and occupational disease hazard assessment of new construction, reconstruction, expansion, technical renovation and technology introduction projects of industrial enterprises (hereinafter collectively referred to as construction projects).

The hygienic design and occupational disease hazard assessment of construction projects of public institutions and other economic organizations, the design of temporary industrial enterprises needed for various special reasons where the construction period of a project lasts several years or the construction scale is relatively large, and the general layout of industrial parks, etc. may be implemented with reference to this standard.

2 Normative references

The clauses in the following documents become clauses of this standard through reference in this standard. For dated references, all subsequent amendments (excluding corrections) or revisions do not apply to this standard; however, parties to agreements based on this standard are encouraged to study whether the latest versions of these documents can be used. For undated references, the latest versions apply to this standard.

GBZ 2.1 Occupational exposure limits for hazardous agents in the workplace - Part 1: Chemical hazardous agents

GBZ 2.2 Occupational exposure limits for hazardous agents in the workplace - Part 2: Physical agents

GBZ 158 Warning signs for occupational hazards in the workplace