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中华人民共和国石油化工行业标准

SH/T 3103-2009

Replace SH/T 3103-2000

**Specification for design of central
laboratory in petrochemical industry**

石油化工中心化验室设计规范

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Foreword

This specification is revised for original SH/T 3103—2000 *Provisions of Design Technology of Oil Refinery Central Laboratory* by LPEC organized by SINOPEC Group jointly with SEI and other companies according to the original *Revising Project Plan of Petrochemical Industry Standard in 2002* by State Economic and Trade Commission (GJMTHY [2002] NO. 36).

This specification is divided into eleven chapters. The main contents include general requirements for the design of central laboratory, composition and layout of the laboratory, analytical instrument and equipment configuration, design requirements for pipeline, civil engineering, heating ventilation and air conditioning, water supply and drainage and electric control and the other things of the laboratory.

Compared with SH/T 3103-2000 *Provisions of Design Technology of Oil Refinery Central Laboratory*, the major changes of this Specification are as follows:

——On the basis of SH/T 3103-2000, it added design requirements for laboratories of petrochemical industry, chemical fertilizer and chemical fiber factories; The Standard is renamed *Specification for Design of Central Laboratory in Petrochemical industry*;

——Added three chapters of "Scope", "Normative References" and "Terms and Definitions"; and other chapters and clauses has been modified accordingly;

——According to the actual situation of the development of current analytical instrument and equipment and of the application of computer networks, the setting of the laboratory information management system is added.

This specification is administrated by Process System Design Technology Center Station of SINOPEC Group, and is interpreted by Luoyang Petrochemical Engineering Corporation, SINOPEC.

During the process of implementation of the specification, if any modification and replenishment are found, please provide comments and relevant information to administrative unit and chief editorial unit for reference during future revisions.

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This specification was first issued in 2000 and this is the first revision.

Specification for design of central laboratory in petrochemical industry

1 Scope

This specification defines general requirements for the design of central laboratory in petrochemical industry, composition and layout of the laboratory, analytical instrument and equipment configuration principles, laboratory pipeline design and design requirements for civil engineering, heating ventilation and air conditioning, water supply and drainage, electrical, telecommunication, information management system and instrument and the other things of central laboratory.

This Specification is applicable to the design of new central laboratory in petrochemical industry. The reconstruction and extension of the central laboratory and plant laboratory may use it as reference.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 50016 Code of Design on Building Fire Protection and Prevention

GB 50019 Code for design of heating ventilation and air conditioning

GB 50140 Code for design of extinguisher distribution in buildings

GB 50160 Fire prevention code of petrochemical enterprise design

SH 3004 Design code for heating ventilation and air conditioning in petrochemical industry

SH 3017 Architectural code of petrochemical production design

SH/T 3042 Design specification of heating ventilation and air conditioning for synthetic fiber

3 Terms and definitions

For the purpose of this standard, the following terms and definitions shall apply.

3.1

Central laboratory

Whole plant laboratory undertaking supervision of raw materials and auxiliary materials specification analysis of production units in petrochemical plant, quality control analysis and product quality analysis of production units intermediate product, medium index analysis of public work, quality surveillance and examination of ex-works products and other auxiliary tasks.

3.2

Plant laboratory

The small laboratory set inside the apparatus that is responsible for the quality control analysis of the intermediate products of the apparatus.

3.3

Analytical room

Rooms for laboratory analysis and the closely related rooms for sample handling and reagent preparation, etc..

3.4

Auxiliary room

The necessary room providing services for laboratory does not perform laboratory analysis.

3.5

Washing room

The special room for cleaning the oil or organic reagents contaminating laboratory appliances and utensils;

3.6

Laboratory furniture

The generic terms of complete set of laboratory table, equipment table, balance table, fume chambers and reagent cabinet (rack), etc. for laboratory.



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