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Denitration equipment for chemical industrial furnaces

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Petroleum and Chemical Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Chemical Machinery and Equipment (SAC/TC429). This document was drafted by: China Special Equipment Inspection and Research Institute, Sichuan University, and Tianhua Chemical Machinery and Automation Research and Design Institute Co., Ltd. Company, Jiangsu Yanxin Technology Co., Ltd., Sinopec Guangzhou Engineering Co., Ltd., China Petroleum Engineering & Construction Co., Ltd., Tsinghua University Shanxi Clean Energy Research Institute, Institute of Process Engineering, Chinese Academy of Sciences, Sinopec (Dalian) Petrochemical Research Institute Co., Ltd., Sichuan Light Chemical Industry Universities, East China University of Science and Technology, Shanxi Xintang Engineering Design Co., Ltd., Guoneng Longyuan Environmental Protection Co., Ltd., and Meiston (Tianjin) Catalysts Limited Liability Company. The main drafters of this document are: Liu Cenfan, Zhang Chongchong, Shu Song, Li Jianjun, Yang Zhenhua, Zhou Yuanbo, Li Wei, Li Tao, Du Juntao, Hu Min, and Yuan Chengzhi. Zhang Yangxin, Li Changli, Zhang Yang, Guo Yangyang, Wang Kuanling, Liu Yanpeng, Dou Zuwang, Liu Shaobei, Jia Lijuan, Wang Bangda, Luo Lei, Zhang Zhiqiang, Zhu Tingyu Chen Xunqiang, Wang Xuehai, Fu Pengbo, Qu Yunxiang, Hai Jiao, Yan Dongsheng, Yuan Jun.

The impact of nitrogen oxide emissions from chemical industrial furnaces on air pollution

and other aspects cannot be ignored. This necessitates consideration of denitrification technology and equipment for chemical industrial furnaces. Due to its special nature, in accordance with GB 31570 "Emission Standard of Pollutants for Petroleum Refining Industry" and GB 31571 "Emission Standard of Pollutants for Petrochemical Industry" This document is compiled in accordance with the provisions of the "Standards". Chemical industrial furnace denitrification equipment

1 Scope

GB/T 47183-2026 is the Chinese national standard covering the deNO_x plant on a chemical process furnace - the SCR or SNCR reactor, the reagent storage and injection, the catalyst layers and their management, and the ammonia slip that has to be kept down because it becomes a pollutant of its own. First edition, 19,000 words, and it belongs with the catalyst regeneration and analysis standards of this batch. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the China Petroleum and Chemical Industry Federation. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the classification and selection principles, performance requirements, low-NO_x combustion denitrification equipment, and SNCR denitrification equipment for chemical industrial furnaces. Equipment, SCR denitrification equipment, manufacturing, and system acceptance and testing methods. This document applies to industrial furnaces used in chemical industrial production, such as heating furnaces, conversion furnaces, pyrolysis furnaces, gasification furnaces, incinerators, and calcining furnaces. Denitrification equipment (hereinafter referred to as "denitrification equipment"). Denitrification equipment for chemical industrial furnaces using coal as the heating method is specified in GB/T 21509. This document does not apply to denitrification equipment for chemical industrial furnaces such as incinerators and calciners located outside the plant boundary.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 150.4 Pressure Vessels - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Industrial furnaces used in chemical production processes.

Note. Based on their technological applications, furnaces are classified as heating furnaces, conversion furnaces, pyrolysis furnaces, gasification furnaces, incinerators, and calcining furnaces, etc.

4 Fabrication and Installation

GB 31570 Emission Standard of Pollutants for Petroleum Refining Industry

GB 31571 Emission Standard for Pollutants from Petrochemical Industry

GB/T 41664-2022 Evaluation Methods and Test Rules for Low NO_x Oil and Gas Burners

HG/T 5353 Industrial Ammonia

JB/T 12534 Selective Catalytic Reduction (SCR) Flue Gas Denitrification Gaseous Ammonia Injection Device NB/T 47003.1 Atmospheric Pressure Vessels - Part

1. Welded Steel Atmospheric Pressure Vessels SH/T 3010 Design Specification for Thermal Insulation Engineering of Petrochemical Equipment and Pipelines SH/T 3070 Design Specification for Steel Structures of Tubular Furnaces in Petrochemical Industry SH/T 3602 Standard for Flame Heating Furnace Burners in Oil Refining Units