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

GB/T 37752.6-2025

**Industrial furnaces and associated processing equipment -
Safety - Part 6: Direct fired thermal processing equipment**

工业炉及相关工艺设备 安全 第6部分：连续涂层焚烧炉及固化炉

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document is Part 6 of GB/T 37752 "Safety of Industrial Furnaces and Related Process Equipment". GB/T 37752 has been published in Lower part. --Part

1 Scope

Part 6 of China's national safety standard for industrial furnaces and associated processing equipment, covering direct fired thermal processing equipment. It specifies the safety assessment, the safety requirements and measures, and their verification. Direct fired means the flame and its products of combustion are in contact with the work, rather than heating it through a muffle or a radiant tube. It is the efficient arrangement - no wall between the heat and the load - and it is the one with the most ways to go wrong. The furnace chamber contains a fuel-air mixture and an ignition source by design, so the whole safety case rests on the burner management system: purging the chamber of any accumulated fuel before ignition, proving the flame within seconds of opening the fuel valve, closing that valve positively when the flame is lost, and interlocking every one of those steps so that no sequence can be started out of order or bypassed.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 567 (all parts) Bursting disc safety devices

GB/T 2624 (all parts) Measurement of full pipe flow rate using a differential pressure device

installed in a circular cross-section pipe

GB/T 2893 (all parts) Graphic symbols, safety colors and safety signs

GB 4053 (all parts) Safety requirements for fixed steel ladders and platforms

GB 5083 General principles for safety and sanitation design of production equipment

GB 6222 Gas Safety Regulations for Industrial Enterprises

GB 7691 Safety regulations for painting operations - General rules for safety management

GB/T 9124 (all parts) Steel pipe flanges

GB 12348 Environmental noise emission standard for industrial enterprises

GB/T 13869 Electricity Safety Guidelines

GB 14443 Safety regulations for coating operations Safety technical regulations for coating drying rooms

GB/T 15706 General principles for safety design of machinery - Risk assessment and risk reduction

GB/T 19672 Technical requirements for pipeline valves

GB 50016 Code for Fire Protection Design of Buildings

GB/T 50051 Chimney Engineering Technical Standard

GB 50057 Code for Lightning Protection Design of Buildings

GB 50058 Design specification for electrical installations in explosive atmospheres

GB/T 50087 Industrial enterprise noise control design specification

GB 50140 Design specification for fire extinguisher configuration in buildings

GB 50187 Specification for the general layout of industrial enterprises

5 Continuous annealing furnaces for steel strip; -- Part

6. Continuous coating incinerators and curing ovens. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China Electrical Equipment Industry Association. This document is under the jurisdiction of the National Technical Committee for Standardization of Industrial Electric Heating Equipment (SAC/TC 121). This document was drafted by: Xi'an Electric Furnace Research Institute Co., Ltd., Jiangsu Hongji Aluminum Technology Co., Ltd., Jinan Best Technology Development Co., Ltd. Exhibition Co., Ltd., Zhejiang Huapu New Materials Co., Ltd., Xi'an Huijin Technology Co., Ltd., Hai'an Tianyi Intelligent Control Equipment Co., Ltd., Fujian

Jianya Chemical Co., Ltd., Nanjing Nianda Furnace Technology Co., Ltd., Beijing Xinghe Zhonglian Technology Co., Ltd., Saigao Powder Technology (Bin Co., Ltd. and Chongqing CCID Thermal Engineering and Environmental Protection Engineering Technology Co., Ltd. The main drafters of this document are. Li Kun, Zhang Yongwu, Xu Xiufei, Zhang Bin, Wei Xijing, Cao Jiao, Shen Jiadan, Wu Yanmei, Bai Shihong, Liu Zhibo, Wu Baojun, He Weidong, Tao Wei, Song Chaoqun, Dou Xinpeng, Dou Xintao, Zhao Jianming, Feng Yongsheng, Dai Shuangye.

Industrial furnaces and related process equipment are thermal equipment that use the heat from fuel combustion or electrical energy conversion to heat materials or workpieces. To ensure the safety of industrial furnaces and related process equipment, it is necessary to formulate GB/T 37752 "Industrial Furnaces and Related Process Equipment Safety" series standards. GB/T 37752 is intended to specify the safety requirements for industrial furnaces and related process equipment and is intended to consist of the following 8 parts. --Part

1.General requirements. The purpose is to specify the general safety requirements for industrial furnaces and related process equipment. --Part

2.Combustion and fuel handling systems. The purpose is to specify the safety requirements for combustion and fuel handling systems. -- Part

3.Generation and use of protective and reactive atmosphere gases. The purpose is to specify the generation and use of protective and reactive atmosphere gases. Safety requirements for the production and use of --Part

4.Protection systems. The purpose is to specify the safety requirements for protection systems. -- Part

5.Continuous annealing furnaces for steel strip. The purpose is to specify the safety requirements for continuous annealing furnaces for steel strip. -- Part

6.Continuous coating incinerators and curing ovens. The purpose is to specify the safety requirements for continuous coating incinerators and curing ovens. -- Part

7.Steel belt hood annealing furnace. The purpose is to specify the safety requirements for steel belt hood annealing furnace. -- Part

8.Pressure sintering furnaces. The purpose is to specify the safety requirements for pressure sintering furnaces. Other parts are formulated according to GB/T 37752.1 and used in conjunction with GB/T 37752.1. Industrial furnace and related process equipment safety Part