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

GB 17750-2012

Replacing GB 17750-2012

**Safety specification for dipping coating
(English Translation)**

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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.

This document replaces GB 17750-2012 "Safety Regulations for Coating Operations - Safety of Dip Coating Process". Compared with GB 17750-2012, except for the following.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope of application has been changed; the scope of reference has been removed, and the scope of inapplicability has been added (see Chapter 1,.2012 edition).

Chapter 1);

b) The term "electromagnetic wire impregnation" and its definition have been added (see 3.4);

c) The definition of the term "immersion vapor source" has been changed (see 3.6, 3.5 in the.2012 edition);

d) The extent of the dip coating area has been changed (see 4.1,.2012 version 4.1);

e) The requirements for the dip coating tank body, inlet, overflow pipe, and bottom discharge device have been changed (see 5.1.2, 5.1.3, 5.1.5,.2012).

Versions 5.1.2, 5.1.3, and 5.1.4);

f) The minimum size requirement for exhaust pipes has been removed (see 5.1.4.3 in the.2012 edition);

g) The requirement for setting up drainage ditches around the bottom of the tank has been added (see 5.1.6);

h) The requirements for bath solution management have been changed (see 5.1.7, 5.1.5 in the.2012 version);

i) The requirements for paint tank volume have been changed (see 5.2.1,.2012 version 5.2.1);

j) The requirements for daily and periodic cleaning of vacuum impregnation equipment have been removed (see 5.4.5, 5.4.6, and 5.4.7 in the.2012 edition);

k) Added requirements for the enclosure, pressure, and ventilation of the electromagnetic wire dipping equipment (see 5.4.5);

l) Requirements for auxiliary equipment such as conveying equipment and tank liquid working pumps have been added (see 5.5);

m) The requirements for classifying hazardous areas of explosive gas atmospheres have been revised (see 6.1, Appendix A, and 6.3, 6.4, 6.5, and Appendix A of the.2012 edition);

(n) Requirements for interlocking control of audible and visual alarms, fire alarm systems, and automatic fire extinguishing systems have been added (see 6.5, 6.6, 6.7, and 6.8);

o) Increased requirements for corrosion resistance of exhaust ducts and waste gas treatment (see 7.2, 7.3);

p) The requirements for exhaust ducts and supports, and fans have been removed (see 7.6, 7.7, and 7.8 of the.2012 edition);

q) The requirement for air exchange rate in the paint storage room has been changed (see 8.1,.2012 version 8.1);

r) The requirement for paint storage capacity in paint storage rooms has been removed (see 8.2 in the.2012 edition);

s) The requirements for selecting fire-fighting equipment have been removed (see 9.1 and 9.3 in the.2012 edition);

t) The requirements for the provision of personal protective equipment have been increased

(see 9.8);

u) Added relevant content on verification methods (see Chapter 10).

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 and is under the jurisdiction of the Ministry of Emergency Management of the People's Republic of China.

The release history of this document and the document it replaces is as follows.

---First published as GB 17750-1999 in 1999, and revised for the first time in 2012;

---This is the second revision.

Safety Specifications for Dipping Coating

1 Scope

This document specifies the general requirements for safe production in dip coating, including dip coating equipment, electrical and automatic control systems, ventilation systems and exhaust gas treatment, and coating...

Safety technical requirements for material storage and transportation, operation and maintenance, etc., are described, and verification methods are presented.

This document applies to the design, manufacture, installation, acceptance, and use of equipment for dip coating processes using flammable or combustible liquid coatings.

This document does not apply to electrophoretic coatings using liquid paints.

2 Normative references

The contents of the following documents, through normative references herein, constitute essential provisions of this document. (Note. Date-based references are not included.)

For this document, only the version corresponding to the specified date applies; for undated references, the latest version (including all amendments) applies.

In this document.

GB 5083 General Principles for Safety and Health Design of Production Equipment

GB 6514 Safety Regulations for Painting Operations. Safety of Painting Processes and Ventilation

GB 11341 Safety Regulations for Overhead Conveyors

GB 12158 General requirements for the prevention of electrostatic discharge accidents

GB/T 14441 Safety Terminology for Painting Operations

GB 14443 Safety Technical Requirements for Coating Drying Chambers

GB 16297 Integrated Emission Standard for Air Pollutants

GB.20101 Safety Technical Requirements for Organic Waste Gas Purification Devices in Coating Industry

GB 37822 Standard for the Control of Fugitive Emissions of Volatile Organic Compounds

GB 39800.1 Specifications for the Configuration of Personal Protective Equipment Part 1.General Provisions

GB 50016 Code for Fire Protection Design of Buildings

GB 50019 Code for Design of Heating, Ventilation and Air Conditioning of Industrial Buildings

GB 50058 Design Code for Electrical Installations in Explosive Atmospheres

GB 50140 Code for Design of Fire Extinguisher Configuration in Buildings

GB 55037 General Code for Fire Protection of Buildings

GBZ 2.1 Occupational Exposure Limits for Hazardous Factors in the Workplace - Part 1.Chemical Hazardous Factors

3 Terms and Definitions

The terms and definitions defined in GB/T 14441 and the following terms and definitions apply to this document.

3.1

Dipping coating

Dip coating

The process of immersing a workpiece in a coating, covering the surface of the workpiece with the coating, removing it, and removing excess coating.

3.2

diptank

A tank containing coatings that can be used for dip coating of workpieces and has safety protection functions.

END: Draft Version (GB 17750-2025)