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

GB/T 9797-2022

Replacing GB/T 9797-2005, GB/T 9798-2005

**Metallic and other inorganic coatings - Electrodeposited
coatings of nickel, nickel plus chromium, copper plus nickel
and of copper plus nickel plus chromium**

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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 of Standardization Documents"

drafted.

This document replaces GB/T 9797-2005 "Nickel-chromium and copper-nickel-chromium electroplating coatings for metal coverings" and GB/T 9798-2005 "Golden

Belonging to Overlay Nickel Plating". This document is mainly based on GB/T 9797-2005 and integrates the contents of GB/T 9798-2005.

Compared with GB/T 9797-2005, in addition to structural adjustment and editorial changes, the main technical changes are as follows.

--- Added "necessary information" type of nickel coating, type of chromium coating [see 4.1d) and 4.1e)];

--- Combined "Service Condition Number" and "Service Environment Examples Corresponding to Various Service Condition Numbers", and included them in the "Identification" chapter

(see 5.3, Chapter 5 and Appendix A of the 2005 edition);

--- Added identification rules for heat treatment of coatings (see 5.2);

--- Increase the type i of nickel plating without mechanical polishing containing high sulfur bright, semi-bright or dark nickel (see 5.5);

--- Increased the requirements for the potential difference of double-layer or triple-layer nickel plating (see Table 5);

--- Changed the requirements for the percentage of thickness of each coating in the double-layer or triple-layer nickel coating (see Table 5, Table 7 of the 2005 edition);

--- Increased type b black chrome for chrome plating (see 5.6);

--- Added constant pressure test for pore density measurement of chromium coating (see Appendix C.3.2.2);

--- Added STEP test method (see Appendix E).

This document is modified to adopt ISO 1456:2009 "Nickel, nickel-chromium, copper-nickel and copper-nickel-chromium electroplating of metallic and other inorganic coatings Floor".

The technical differences between this document and ISO 1456:2009 and their reasons are as follows.

--- Regarding normative reference documents, this document has made adjustments with technical differences to adapt to our country's technical documents, the adjustment situation.

The situation is reflected in Chapter 2 "Normative References", and the specific adjustments are as follows.

* Replace ISO 2080 with GB/T 3138 which is equivalent to adopting international standards (see Chapter 3);

* Replace ISO 2177 with GB/T 4955 which is equivalent to adopting international standards (see Appendix D and Appendix E);

* Replace ISO 2819 with GB/T 5270 which is equivalent to adopting international standards (see 6.4);

* Replace ISO 10289 with GB/T 6461 which is equivalent to adopting international standards (see 6.5);

* Replace ISO 1463 with GB/T 6462 which is equivalent to adopting international standards (see 5.5, Appendix D);

* Replace ISO 3882 with GB/T 6463 which is equivalent to adopting international standards (see Appendix D);

* Replace ISO 4541 with GB/T 6465 which is equivalent to adopting international standards (see 6.5);

* Replace ISO 9227 with GB/T 10125 which is equivalent to adopting international standards (see 6.5);

* Replace ISO 2064 with GB/T 12334 which is equivalent to adopting international standards (see Chapter 3);

* Replace ISO 4519 with GB/T 12609 which is equivalent to adopting international standards (see 6.10);

- * Replace ISO 2361 with GB/T 13744 which is equivalent to adopting international standards (see Appendix D);
- * Replace ISO 3497 with GB/T 16921 which is equivalent to adopting international standards (see Appendix D);
- * Replace ISO 9587 with GB/T 19349 which is equivalent to adopting international standards (see Chapter 3, 6.8);
- * Replace ISO 9588 with GB/T 19350 which is equivalent to adopting international standards (see Chapter 3, 6.9);
- * Replace ISO 3543 with GB/T 20018 which is equivalent to adopting international standards (see Appendix D);
- * Replace ISO 10587 with GB/T 26107 which is equivalent to adopting international standards (see 6.9);
- * Replace ISO 9220 with GB/T 31563 modified to adopt international standards (see Appendix D);
- * Replace ISO 27831-2 with GB/T 34626.2 modified to adopt international standards (see 5.4, Appendix C);
- * Replace ISO 16348 with GB/T 34627 which is equivalent to adopting international standards (see Chapter 3);

--- Changed "salt spray test" to "AASS test" (see 6.5 and Table 6), and clarified the salt spray test method;

--- Changed the standard documents cited in the CASS test and AASS test to the normative reference document GB/T 10125 "Artificial Gas

Atmospheric Corrosion Test Salt Spray Test" replaces informative references.

The following editorial changes have been made to this document.

--- Correct the coating identification "Zn/Cu15a/Ni15/Crr" to "Zn/Cu15a/Ni15b/Crr", "Zn/Cu20s/Ni30s/Crr"

It is "Zn/Cu20a/Ni30s/Crr" (see Table 2);

--- According to the order mentioned in the text, the numbers of Appendix A, Appendix B, Appendix C and Appendix D have been adjusted;

--- The 6.10 sampling, adjusted to Chapter 7 sampling.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

This document merges GB/T 9797-2005 "Metal Overlay Nickel-Chromium and Copper Nickel-Chromium Electroplating Coatings" and GB/T 9798-2005

"Nickel Electroplating Coatings for Metallic Coatings", revised.

Decorative nickel, copper-nickel plating (with or without copper underlayer and chrome-free finish), suitable for use to avoid friction or touch, or with chrome

It is also suitable for workpieces that do not require high discoloration. Corrosion resistance depends on the thickness and type of coating.

Decorative nickel-chromium and copper-nickel-chromium coatings are used to enhance product appearance and corrosion resistance. Corrosion resistance depends on the thickness of the coating and

type. Generally speaking, multi-layer nickel has better corrosion resistance than single-layer nickel of the same thickness.

Have better protection performance.

Metal and other inorganic coatings

Nickel, NiCr, CuNi and CuNiCr plating

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1 Scope

This document specifies the requirements for decorative nickel, nickel-chromium, copper-nickel and copper on steel, zinc and zinc alloys, copper and copper alloys, and aluminium and aluminium alloys.

Requirements for nickel-chromium electroplating, which is used to provide a beautiful appearance and enhanced protection. This document also specifies different thicknesses and types of coatings