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

GB/T 10123-2022

Corrosion of metals and alloys - Vocabulary

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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 10123-2001 "Basic Terms and Definitions of Corrosion of Metals and Alloys", which is in line with GB/T 10123-2001

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

--- Adjusted the scope of application of this document, and added Note 1 and Note 2 to Chapter 1 (see Chapter 1, Chapter 1 of the.2001 edition);

--- Delete some terms and definitions in the.2001 edition (see 2.11, 2.14, 2.22~2.25, 2.29~2.31, 3.7,

3.13, 3.24, 3.28, 3.36, 3.37, 3.39, 3.40, 3.42~3.44, 3.47, 6.1.19, 6.1.20, 6.1.25~6.1.28, 6.2.3,

6.2.6, 6.28, 6.29, 6.2.13, 6.2.15~6.2.23, 6.4.12);

--- Added some terms and definitions (see 3.20~3.24, 4.36~4.53, 5.10~5.14, 6.6~6.9, 7.1.19, 7.1.24~

7.1.45, 7.2.17~7.2.18);

--- Modified some terms and definitions (see 3.4, 3.16, 3.25, 3.26, 7.1.17, 7.3.4, 7.3.5, 2.4, 2.18,.2001 edition

2.27, 2.28, 6.1.17, 6.3.4, 6.3.5);

--- Modified some terms (see 3.9, 3.17, 4.25, 4.27, 4.28, 4.31, 5.1, 6.2, 7.1.21, 7.2.4, 2.9,.2001 edition

2.19, 3.29, 3.31, 3.32, 3.35, 4.1, 5.2, 6.1.22, 6.2.5);

--- Modified some definitions (see 3.2, 4.5, 4.6, 5.7, 7.1.18, 2.2, 3.5, 3.6, 4.7, 6.1.18 of the.2001 edition);

--- Adjusted the order of some terms (see 4.9, 4.10, 7.1.7, 7.1.8, 7.1.9, 3.10, 3.11, 6.1.7, 6.1.8, 6.1.9);

--- Revised the title of the original Chapter 4 (see Chapter 5, Chapter 4 of the.2001 edition);

--- Added Appendix A, and adjusted the original Figure 1 and Figure 2 to Figure A.1 and Figure A.2 respectively (see Appendix A).

This document is equivalent to ISO 8044:2020 "Corrosion Terminology for Metals and Alloys".

The following minimal editorial changes have been made to this document.

a) Added references;

b) Added Chinese Pinyin index.

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

Introduction

The definitions in this document strike an appropriate balance between precision and brevity. The main purpose of this document is to provide information that can be used by all interested parties

understood as definitions with the same meaning. Some of the corrosive terms in use today are conventional, but not always logical.

Therefore, it is not possible to define certain terms in the form used in certain countries. Because of the occasional conflict between tradition and logic, some fixed

Righteousness inevitably compromised.

For example, the term "corrosion" is used to refer to the process, the result of the process and the damage caused by the process. In this document, corrosion is understood as excessive

Procedure. Any detectable result of corrosion in any part of a corrosion system is referred to as a "corrosion effect". The term "corrosion damage" covers damage as

Any damage to the function of the system composed of metal and the environment.

Therefore, the term "corrosion protection" means that it is important to avoid corrosion

damage without

is to prevent corrosion. Because preventing corrosion is impossible in many cases, and sometimes unnecessary.

Corrosion Terms for Metals and Alloys

1 Scope

This document defines corrosion-related terms widely used in modern science and technology. In addition, for some definitions also given

concise notes.

Note 1. The electrode potentials in this document apply to IUPAC (International Union of Theoretical and Applied Chemistry) rules. The term "metal" also includes alloys and other gold

material.

Note 2. Terms and definitions related to inorganic surface treatment of metals are given in GB/T 3138.

2 Normative references

There are no normative references in this document.

3 General terms for corrosion

3.1

corrosion

Changes in the properties of metals and may often lead to impairment of the functionality of metals, the environment or the technical systems of which they are a part

Physico-chemical interactions between the damaged metal and the environment.

NOTE. This interaction is usually electrochemical in nature.

3.2

Corrosive medium corrosive agent

Substance that causes or promotes corrosion (3.1) when in contact with a given metal

3.3

corrosive environment

An environment containing one or more corrosive media (3.2).

3.4

corrosion system

A system consisting of one or more metals and environmental elements that affect corrosion (3.1).

NOTE. Certain elements of the environment may include coatings, surface layers or other electrodes (7.1.2).

3.5

corrosion effect

Changes in any part of a corrosion system (3.4) due to corrosion (3.1).

3.6

corrosion damage

Corrosive effects (3.5) that impair the functioning of metals, the environment or the technical systems of which they are a part.

3.7

corrosion failure

Corrosion damage (3.6) leading to a complete loss of function of a technical system.