

ICS 25.220.10
CCS A 29



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

GB/T 31564-2015

**Thermal spraying -- Determination of the deposition efficiency
for thermal spraying**

热喷涂 热喷涂沉积效率的测定

(English Translation)

Issued on: May 15, 2015

Implemented on: January 1, 2016

Issued by: Standardization Administration of China

Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Specimens, equipment, operating and auxiliary equipment

5 Test Example

2 6 deposition efficiency is determined

7 Test reports

8 Mark

Appendix A (normative) Specimen --- tube (A)

Appendix B (normative) --- plate-shaped test piece (B)

Annex C (informative) Determination of the deposition efficiency record --- Example

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard is identical with ISO 17836:2004 "Thermal Spray thermal spray deposition efficiency measurement" (in English).

This standard and ISO 17836:2004 as compared to the main differences are as follows.

Correspondence between the consistency of the standards of international documents and normative references of the following documents.

--- GB/T 12608-2003 thermal spraying flame and arc spraying - Wires, rods and core classifications and technical supply conditions (ISO 14919:2001, MOD)

--- GB/T 18719-2002 thermal spraying terminology, classification (ISO 14917:1999, MOD)

--- GB/T 19356-2003 thermal spray powder composition and delivery conditions (ISO 14232:2000, MOD)

NOTE: ISO 17836:2004 normative references EN657, EN1247 and ENISO 14919, respectively, equivalent to the ISO 14917, ISO 14232 and ISO 14919.

For ease of use, this standard made the following editorial changes.

"," --- With a decimal point instead of a comma as the decimal point, "";

- Delete foreword international standards;
- Increased our standard preface;
- Equivalents ISO standard instead of the normative reference EN standards.

The standard proposed by the Machinery Industry Federation.

This standard layer Standardization Technical Committee (SAC/TC57) administered by the National Metal and non-metal cover.

This standard was drafted. Wuhan Institute of Material Protection, Beijing General Research Institute of Mining and Metallurgy North Mine New Material Technology Co., Ltd., Nanhai District of Foshan City Standardization Research and Promotion Center, Chongqing Institute of Metrology and Quality Inspection, Yee Dongguan Science and Technology Co., Ltd., Shenzhen City of Manchester precision Technology Co., Ltd.

Introduction

This standard defines the determination of thermal spray deposition efficiency. This standard describes the determination of thermal spray deposition efficiency require the use of the specimen; measurement Specific thermal spraying and thermal spray material deposition efficiency of the implementation process.

According to the deposition efficiency of the standard specimen calculations do not necessarily correspond with the actual efficiency of the deposition member.

Determination of thermal spraying thermal spray deposition efficiency

1 Scope

In determining the thermal spraying material needs, it is necessary to apply this standard data on spraying deposition efficiency.

This standard specifies thermal spray deposition efficiency measurement program, and the associated thermal spray materials, equipment and auxiliary materials.

This standard applies to all thermal spray processes (see ISO 14917) and all the wires, rods, and core material powder thermal spray materials.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 14232 thermal spray powder ingredient supply technical conditions
(Thermalspraying-Powders-Composition-Technicalsupplyconditions) ISO 14917 Thermal

spraying terminology, classification (Thermalspraying-Terminology, classification) ISO 14919 Thermal spraying flame and arc spraying Technical delivery conditions for classification Wires, rods and the core material (Thermalspra-ying-Wires, rodsandcordsforflameandarc spraying-Classification-Technicalsupplyconditions) Pretreatment EN13507 thermal spraying thermal spraying the surface of metal parts and components (Thermalspraying-Pre-treatmentof surfacesofmetalpartsandcomponentsforthermalspraying)

3 Terms and Definitions

The following terms and definitions apply to this document.

Deposition efficiency (DE) Under standard conditions, is deposited on the specimen than the quality of the thermal spray material into the required quality and thermal spray materials (%).

4 Specimens, equipment, operating and auxiliary means

It reads as follows.

a) alternative specimen.

- 1) tube size in accordance with Appendix A;
- 2) test plate size in accordance with Appendix B.

b) equipment/devices work.

- 1) spraying equipment;
- 2) holding working (mechanized spraying);
- 3) metering device (metered into the wire, rod, or core material powder);
- 4) the gas/fuel/energy;
- 5) the plasma gas;
- 6) Spray cabin;