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

GB/T 29037-2012

**Thermal spraying -- Coatings for protection against corrosion
and oxidation at elevated temperatures**

热喷涂 抗高温腐蚀和氧化的保护涂层

(English Translation)

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Foreword

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

This standard uses the translation method identical with ISO 17834:2003 "Thermal Spray resistance to high temperature corrosion and oxidation protective coating." Correspondence between the consistency of the standards of international documents and normative references of our document Appendix NA.

This standard made the following editorial changes.

--- Canceled international standards foreword, preface increased our national standards;

--- Increase the informative appendix NA, international documents and normative references in this standard are consistent correspondence between our files.

The standard proposed by China 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, Jiangxi Hengda High-Tech Co., Limited Beijing Bo welding materials the company.

1 Scope

This standard applies to a temperature of 1000 °C (1273K) or less as an anti-corrosion protection of the metal thermal spray coatings.

Atmospheric corrosion resistant steel to protect thermally sprayed aluminum or zinc coated

reference to GB/T 9793.

This standard does not include a non-metallic coating materials prepared by spraying.

2 Normative references

The following documents for the application of this standard is essential. For dated references, only the dated version applies to this standard quasi. For undated references, the latest edition (including any amendments) applies to this standard.

ISO 2063 Metallic and other inorganic coatings - Thermal spraying - Zinc, aluminum and its alloys (Thermalspraying-Metalicand otherinorganiccoatings-Zinc, aluminumandtheiralloys)

ISO 14232 Thermal spraying powder composition and technical supply conditions

(Thermalspraying-Powders-Composition-Technicalsupplyconditions) 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) Surface preparation EN13507 thermal spraying thermal spraying metal parts

(Thermalspraying-Pre-treatmentofsur-facesofmetalicpartsandcomponentsforthermalspraying)

3 Coating materials and processes

The selection of coating materials and processes, should take into account different operating temperature and working environment.

For example, at any temperature range, the coating may be subjected to the following effects.

--- Oxidation;

--- Other chemical attack;

Interaction --- oxidation and other chemical attack.

Typical coating materials include.

--- Nickel-chromium alloy;

--- Fe-Cr alloy;

--- M chromium aluminum yttrium alloy.

NOTE: M may be nickel, cobalt, iron, or alloys thereof.

These wear-resistant alloys and other inert materials such as chromium carbide mixed comprehensive performance can be obtained.

When selecting a coating material, consider the following components and their individual

or common effects.

---oxygen;

---sulfur;

---chlorine;

---vanadium;