

# ISO 2063-1:2019 (E)

## Thermal spraying — Zinc, aluminium and their alloys — Part 1: Design considerations and quality requirements for corrosion protection systems

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Criteria for corrosion and corrosion protection by thermal-sprayed coatings
4.1	General
4.2	Corrosivity categories and environment conditions
4.3	Corrosion rate
4.4	Coating materials and corrosion behaviour
4.4.1	General
4.4.2	Zinc and zinc alloys
4.4.3	Aluminium and aluminium alloys
5	Requirements for the corrosion protection systems and their planning
5.1	General rules — Technical requirements
5.2	Used spray materials and coating thickness
5.2.1	Spray materials
5.2.2	Coating thickness
5.3	Construction design requirements for iron and steel components for thermal spraying
5.3.1	General
5.3.2	Recommendations for the design of the part — Avoidance of corrosion creating areas
5.3.3	Requirements for welding in combination with thermal-sprayed protective coatings
5.3.4	Thermal spraying of corrosion protected fastenings
6	Pre-conditions and requirements for the manufacturing process
6.1	General — Requirements
6.2	Reference areas
6.3	Preparation of the surface to be coated
6.4	Thermal spraying
6.5	Sealing of thermal-sprayed coatings
6.6	Metallic coatings and additional organic top coatings
6.7	Requirements for the tests — Test procedures
6.7.1	General
6.7.2	Visual inspection — Appearance
6.7.3	Coating thickness
6.7.4	Adhesion strength
6.7.5	Metallographic investigation
7	Requirements for the manufacturer
7.1	General
7.2	Coating specification — Requirements for the spray coating
8	Documentation
Annex A	(informative) Corrosivity categories — Environment conditions — Exposure

- Annex B** (informative) Summary of the corrosion behaviour of thermal-sprayed coatings of zinc, aluminium and their alloys
- Annex C** (informative) Recommended values for the thickness of the metallic coating
- Annex D** (informative) Examples of design and explanations
- Annex E** (informative) Example test certificate for work specimen for thermal sprayer used on-site in accordance with ISO 2063-2
  - E.1** Example form
  - E.2** Tests and test results
- Annex F** (informative) Appearance of surfaces in different treated conditions
- Annex G** (informative) Checklist for this document — Work and test steps and connection to relevant standards or recommendations

Page count: 28