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Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

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the society for protective coatings

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Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

Prepared by
AWS C2 Committee on Thermal Spraying

Under the Direction of
AWS Technical Activities Committee

Approved by
AWS Board of Directors

Abstract

This specification presents an industrial process for the application of thermal spray coating (TSC) on steel. It covers safety, job reference standards, equipment setup and preparation, surface preparation, aluminum and zinc application, and sealer and topcoat application.

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Table of Contents

Page No.

Personnel iii
Foreword v
List of Tables ix
List of Figures ix

1. Scope 1
   1.1 General 1
   1.2 Safety 1
   1.3 Units of Measure 2
2. Referenced Documents 2
3. Definitions 3
4. Summary of Practice 3
5. Surface Preparation Requirements 4
   5.1 Surface Finish 4
   5.2 Angular Profile Depth 4
   5.3 Angular Profile Depth Measurement Schedule 4
6. TSC Requirements 4
   6.1 Feedstock and TSC Thickness 4
   6.2 TSC Thickness 6
   6.3 TSC Thickness Measurement Schedule 6
   6.4 TSC Tensile Bond and Measurement Schedule 6
   6.5 Bend Test 7
   6.6 TSC Finish 7
   6.7 TSC Porosity 7
   6.8 TSC QC Measurement Procedures and Instruments 7
7. TSC Application Procedure 7
   7.1 General 7
   7.2 Thermal-Spray Equipment Setup 7
   7.3 Post-Blasting Substrate Condition and Thermal Spraying Period 8
   7.4 TSC Flash Coat 9
8. TSC Application 9
   8.1 Preheat 9
   8.2 Thermal Spraying 9
9. Application of Sealers and Topcoats 10
   9.1 General 10
   9.2 Sealer 10
   9.3 Topcoat 10
   9.4 Applying Paints 10
10. Records 10
11. Debris Containment and Control 10

Page No.

12. Work Procedures and Safety 10

13. Documentation 10

13.1 TSC Applicator's Application Procedure 10
13.2 Job Reference Standard (JRS) 10

14. Contract Pre-Award Evaluation, Demonstration, and Validation 11

15. TSC Applicator Warranty 11
15.1 TSC Applicator Warranty 11
15.2 Materials Used 12

Further Reading 12

Mandatory Annex 13
Annex I—Application Process Method 13

Nonmandatory Annexes 21
Annex A—Model Procurement Specification 21
Annex B—Model Job Control Record 29
Annex C—Procedure for Calibration of Portable Test Instruments to the ASTM C 633 Test Method 33
Annex D—Guidelines for the Preparation of Technical Inquiries for AWS Technical Committees 35

List of AWS Documents on Thermal Spraying 37
List of NACE International/SSPC Documents on Thermal Spraying 37

List of Tables

Table		Page No.
1	TSC System Requirements and Acceptance Tests	5
2	Blasting Media and Mesh Size Found Suitable for TSCs on Steel Substrates	6
3	Minimum Tensile Bond Requirements	7
4	Bend-Test Cracking Threshold: Mandrel Diameter vs. TSC Thickness	7
I1	Flame- and Arc-Spray Standoff Distances and Spray Widths, Nominal	17

List of Figures

Figure		Page No.
1	Thermal Spray Coating Process	1
2	Job Reference Standard Illustration	4
3	Line and Spot Measurements	6
4	TSC Bend Test: Pass and Fail Examples	8
5	Thickness and Tensile-Bond Measurements for JRS Qualifications	11
I1	Key Production and Quality Control Checkpoints (QCCPs) for Applying Thermal Spray Coatings	13
I2	Proper Spray Gun Adjustment	18
I3	Line and Spot Measurements	18
C1	Calibration Fixture	33

Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

1. Scope

1.1 General. This standard is a procedure for the application of metallic Thermal Spray Coating (TSCs) of aluminum, zinc, and their alloys and composites for the corrosion protection of steel. Required equipment, application procedures, and in-process quality control (QC) checkpoints are specified. This standard may be used as a procurement document. Annex A presents a fill-in-the-blanks model procurement specification. The flow diagram in Figure 1 provides an overview of the thermal spray coating process presented in this standard.

Not included in this standard are requirements for design and fabrication, thermal spray equipment qualification, coating selection, and operator and inspector certification. For successful thermal spray application, the steel structure and components should be designed and fabricated according to NACE Standard RP0178. Additional consideration should be given to weldments whose oxyfuel cut edges may affect hardness which may preclude adequate profile depth.

1.2 Safety. The basic precautions for thermal spraying are essentially the same as for welding and cutting.

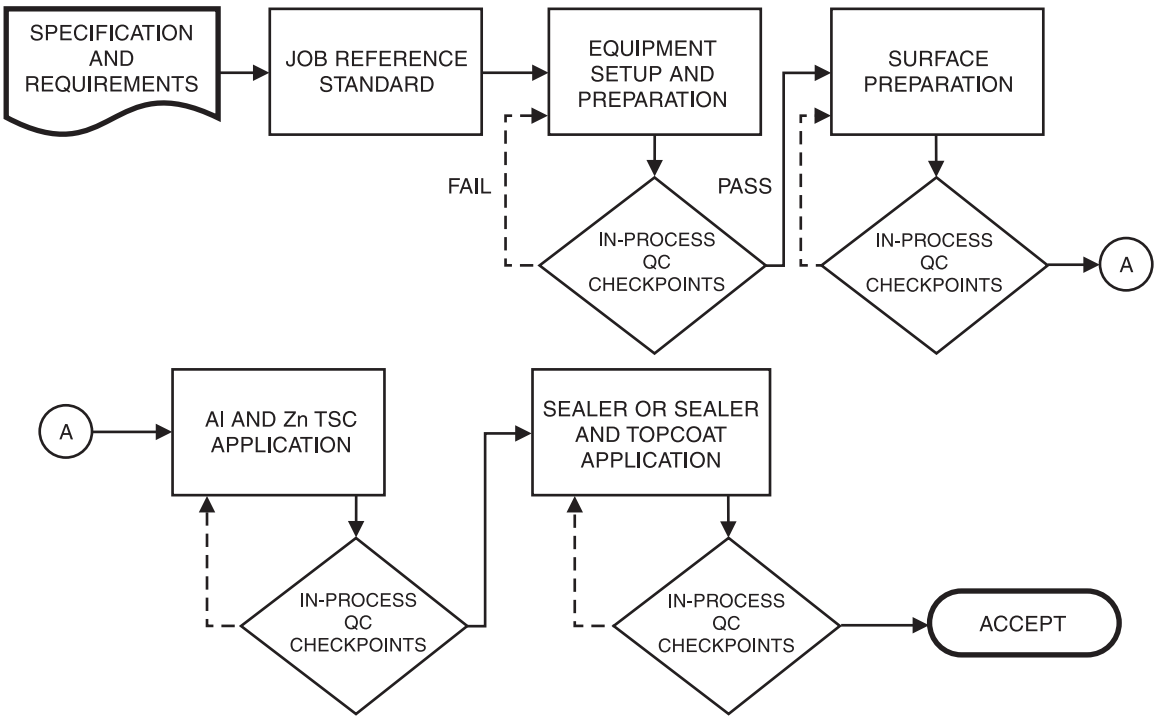

Figure 1—Thermal Spray Coating Process