

Thermal spraying - Spraying and fusing of self-fluxing alloys

Contents

| | Page |
|--|----------|
| Foreword | iv |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Influence on the substrate and design | 1 |
| 4.1 Substrate | 1 |
| 4.2 Design | 2 |
| 5 Spray material of the self-fluxing alloy | 2 |
| 5.1 Selection | 2 |
| 5.2 Composition | 2 |
| 6 Preparation of the component | 2 |
| 6.1 General | 2 |
| 6.1.1 Surface cleanliness | 2 |
| 6.1.2 Removal of prior surface treatments | 2 |
| 6.1.3 Pre-machining requirements | 3 |
| 6.1.4 Surface preparation requirements | 3 |
| 6.2 Methods of surface preparation | 3 |
| 6.2.1 Surface preparation requirements | 3 |
| 6.2.2 Surface preparation inspection | 3 |
| 6.2.3 General masking of surface preparation | 3 |
| 6.2.4 Plug masking for surface preparation | 3 |
| 6.3 Cleanliness | 3 |
| 7 Spray and fusion process | 4 |
| 7.1 Spraying with simultaneous fusion | 4 |
| 7.1.1 Procedure | 4 |
| 7.1.2 Particle size and particle size range of the powder particles | 4 |
| 7.1.3 Coating thickness | 4 |
| 7.2 Spraying with subsequent fusion | 4 |
| 7.2.1 Procedure | 4 |
| 7.2.2 Particle size and particle size range of the powder particles | 4 |
| 7.2.3 Coating thickness | 5 |
| 7.3 Spraying technique — Procedure | 5 |
| 7.3.1 General | 5 |
| 7.3.2 Preheating | 5 |
| 7.3.3 Spraying | 5 |
| 7.3.4 Fusing the deposit | 5 |
| 7.3.5 Cooling | 6 |
| 8 Final machining | 6 |
| 9 Hardness testing | 6 |
| 9.1 General | 6 |
| 9.2 Standard hardness test | 6 |
| Annex A (informative) Reference values for the expected hardness of the fused coating | 8 |
| Bibliography | 9 |