INTERNATIONAL STANDARD

ISO 14920

Third edition
2023-08

Thermal spraying — Spraying and fusing of self-fluxing alloys

Projection thermique — Projection et fusion d'alliages autofondants

ISO 14920:2023 - Preview only Copy via ILNAS e-Shop

Reference number
ISO 14920:2023(E)

© ISO 2023

ISO 14920:2023 - Preview only Copy via ILNAS e-Shop



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2023 – All rights reserved

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**

ISO 14920:2023 - Preview only Copy via ILNAS e-Shop

© ISO 2023 – All rights reserved