DIN EN ISO 25239-3:2020-12 (E)

Friction stir welding - Aluminium - Part 3: Qualification of welding operators (ISO 25239-3:2020)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms and definitions ... **6**

4 Requirements ... **6**

4.1 Welding operator qualification ... 6

4.2 Essential variables and ranges of qualification ... 7

4.2.1 General ... 7

4.2.2 Friction stir welding methods ... 7

4.2.3 Welding equipment ... 7

4.2.4 Parent materials ... 7

4.2.5 Weld joint geometry ... 7

4.2.6 Quality acceptance levels ... 7

4.3 Qualification methods ... 8

4.3.1 Qualification based on standard welding test ... 8

4.3.2 Qualification based on welding procedure test ... 8

4.3.3 Qualification based on pre-production welding test ... 8

4.3.4 Qualification based on production sample welding test ... 8

4.4 Test welds ... 9

4.4.1 General ... 9

4.4.2 Testing and acceptance levels of test welds ... 9

4.4.3 Re-testing ... 9

4.5 Test report ... 10

5 Certificate ... **10**

5.1 General ... 10

5.2 Period of validity ... 10

5.2.1 Initial qualification ... 10

5.2.2 Confirmation of the validity ... 10

5.2.3 Prolongation of qualification ... 10

Annex A (normative) **Knowledge of the welding unit and its operation** ... **12**

Annex B (normative) **Knowledge of welding technology** ... **14**

Annex C (informative) **Example of a qualification test certificate for FSW welding operators** ... **15**

Bibliography ... **17**