

DIN ISO 24394:2025-07 (E)

Welding for aerospace applications - Qualification test for welders and welding operators - Fusion welding of metallic components (ISO 24394:2023)

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Qualification test requirements	3
4.1	General	3
4.1.1	Specific to the welder qualification test	3
4.1.2	Specific to the welding operator qualification test	3
4.2	Welding processes	4
4.3	Welding positions	5
4.4	Product types or semi-finished products applicable to welder qualification tests	5
4.5	Material groups	9
4.6	Material thickness	10
4.6.1	Butt weld material thickness	10
4.6.2	Fillet weld material thickness	10
4.6.3	Casting repair material thickness	10
4.7	Special qualification tests	10
4.7.1	General requirements	10
4.7.2	Special qualification tests for welders	10
4.7.3	Special qualification tests for welding operators	11
4.8	Designation for qualification test	11
4.8.1	Welder qualification test	11
4.8.2	Welding operator qualification test	12
5	Conditions required for welder and welding operator qualification tests	12
5.1	Physical requirements for welder and welding operator	12
5.2	Person responsible for welder and welding operator qualification tests	13
6	Performing the welder and welding operator qualification test	13
6.1	Practical qualification test	13
6.1.1	General requirements	13
6.1.2	Specific requirements for the welder qualification test	13
6.2	Theory test	14
7	Test pieces	14
8	Examination and testing	18
8.1	General	18
8.2	Visual inspection and dimensional examination	19
8.3	Surface imperfection detection	19
8.4	Radiographic examination	19
8.5	Metallographic examinations	19
8.6	Bend test	20
8.7	Fracture surface examination	20
9	Acceptance criteria	20
10	Qualification test certificate and documentation	20
11	Period of validity of the qualification	21
12	Requalification test	21

Annex A (normative) Test piece acceptance criteria	22
Annex B (normative) Welder or welding operator qualification test record	27
Annex C (informative) Welder qualification test certificate	28
Annex D (informative) Welding operator qualification test certificate	29
Annex E (informative) Guidelines for the theory test	31
Bibliography	34