AWS D17.2/D17.2M:2026
An American National Standard

Specification for Resistance Welding for Aerospace Applications

American Welding Society®

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Specification for Resistance Welding for Aerospace Applications

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Prepared by the
American Welding Society (AWS) D17 Committee on Welding in the Aircraft and Aerospace Industry

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This specification provides the general resistance welding requirements for aerospace hardware. It includes, but is not limited to, resistance spot and resistance seam welding of aluminum, magnesium, iron, nickel, cobalt, and titanium based alloys. There are requirements for machine qualification, welding schedule certification, production witness testing, and includes inspection and acceptance criteria for aerospace hardware.

American Welding Society®

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The AWS D17D Subcommittee on Resistance Welding dedicates this edition of **AWS D17.2/D17.2M:2026, Specification for Resistance Welding for Aerospace Applications**, to **Mario Diaz** in recognition of his dedication and contributions to the welding community at large. Mario served as a Secretary for the AWS D17 Committee and played a pivotal role in the development of this specification. His knowledge, work ethic, and unwavering commitment were instrumental in shaping the AWS D17.2/D17.2M standard and bringing it to completion.

In addition to his work on this committee, Mario contributed significantly through his involvement in other welding standards development efforts, through his dedication to supporting volunteers. His efforts have left a lasting impact, and his contributions are remembered with great respect and gratitude. The committee is deeply appreciative of the legacy he leaves behind.

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Foreword

This foreword is not part of this standard, but is included for informational purposes only.

In the mid-1990s, the AWS D17 Committee on Welding in the Aircraft and Aerospace Industries decided it was necessary to form a subcommittee to write a resistance spot and seam welding specification.

This is the fourth edition of the D17.2/D17.2M specification. This specification is intended to replace the following documents:

MIL-W-6858D, *Welding, Resistance: Spot and Seam*, March 28, 1978

AMS-W-6858A, *Welding, Resistance Spot and Seam*, April 1, 2000

MIL-W-6858D or AMS-W-6858A, or both, take precedence over this specification only when they are cited by the contract documents.

A vertical line in the margin and underlined text in clauses, tables, or figures indicates an editorial or technical change from the 2019 edition. If a clause referenced in a Table is underlined, it indicates the number of the clause, figure or table changed and the content remained the same. If a clause number is underlined in the Table of Contents it means updates were made to that clause; if only the word in the title is underlined it indicates only a title change.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS D17 Committee on Welding in the Aircraft and Aerospace Industries, American Welding Society, 8669 NW 36th Street, Suite 130, Miami, FL 33166.

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Table of Contents

Page No.

Personnel vii
Foreword ix
List of Tables xiii
List of Figures xiii

1. General Requirements 1
1.1 Scope 1
1.2 Units of Measure 1
1.3 Safety 1
1.4 Mandatory Provisions and Authority 2

2. Normative References 2

3. Terms and Definitions 2

4. Design Requirements 4
4.1 Engineering Authority 4
4.2 Alternative Procedures and Requirements 4
4.3 Weld Classification 4
4.4 Spot Weld Certification Type 4
4.5 Wire Mesh Weld Certification 4

5. Personnel Requirements 9
5.1 Training Programs 9
5.2 Visual Acuity Testing Requirements 9

6. Equipment Requirements 10
6.1 Welding Machines 10
6.2 Shear Testing Equipment 10
6.3 Jigs and Fixtures 10

7. Qualification of Welding Machines 10
7.1 Qualification Approval 10
7.2 Machine Qualification Scope 10
7.3 Welding Machine Qualification Status 11

8. Welding Schedule Certification 17
8.1 Welding Schedule Certification Test Report 17
8.2 Test Versus Production Conditions 17
8.3 Welding Schedule Certification Test Coupon Configuration and Test Requirements 17
8.4 Welding Schedule Recertification 18
8.5 Existing Welding Schedule Certifications 18

9. Fabrication and Production Welding 24
9.1 Materials and Methods of Preparation 24
9.2 Fit-up 24
9.3 Production Witness Testing 24
9.4 Control Adjustments 24

10. Inspection and Acceptance Criteria 26
10.1 Visual Acceptance Criteria 26
10.2 Radiographic Inspection of Class A and Class B Welds 27
10.3 Metallographic Acceptance Criteria 27
10.4 Unacceptable Test Results 33

11. Mechanical Testing Criteria 35
11.1 Spot Welds—Sheet 35
11.2 Design Allowable Certification for Sheet 35
11.3 Production Witness Test Specimens—Design Allowable Certification for Sheet 35
11.4 Foil Welding—Class A and Class C 36
11.5 Peel Testing Method for Foil 36
11.6 Unusual Specimen Configuration 37
11.7 Welding Schedule Certification for Wire Mesh Welds—Shear and Peel Acceptance Criteria 37

12. Quality Assurance Provisions 39
12.1 Production Quality Control 39
12.2 Production Witness Test Coupons 39
12.3 Inspection of Production Parts 41
12.4 Resistance Tack Welds 41
12.5 Rework of Wire Mesh 41
12.6 Repair 41

Annex A (Informative)—Resistance Welding Schedule for Spot Welding 43
Annex B (Informative)—Resistance Welding Schedule for Seam and Roll Spot Welding 45
Annex D (Informative)—Informative References 47
Annex E (Informative)—Recommendation for a Metallographic Method for the Examination of Weld Penetration in Resistance Seam Welds 49
Annex F (Informative)—Requesting an Official Interpretation on an AWS Standard 53

Commentary on Specification for Resistance Welding for Aerospace Applications 55

List of AWS Documents on Welding in the Aircraft and Aerospace Industries 67

List of Tables

Table		Page No.
4.1	Shear Load Requirements for Spot Weld Sheet Specimens Group 1—Aluminum and Magnesium Alloys	5
4.2	Shear Load Requirements for Spot Weld Sheet Specimens Group 2—Steel, Nickel, and Cobalt Alloys	6
4.3	Shear Load Requirements for Spot Weld Sheet Specimens Group 3—Titanium Alloys	7
4.4	Shear Load Requirements for Spot Welds in Foil	8
7.1	Machine Qualification Specimens and Examination Requirements	12
8.1	Resistance Welding Schedule Data	19
8.2	Test Results Required for Welding Schedule Certification	20
8.3	Welding Schedule Certification Specimen and Examination Requirements Spot Welds—Sheet	21
8.4	Welding Schedule Certification Specimen and Examination Requirements Spot Welds—Foil	21
8.5	Welding Schedule Certification Specimen and Examination Requirements Seam Welds—Sheet	21
8.6	Welding Schedule Certification Specimen and Examination Requirements Seam Welds—Foil	22
8.7	Welding Schedule Certification Specimen and Examination Requirements—Wire Mesh	22
9.1	Spot and Seam Welds Schedule Certification Essential Variables	25
9.2	Wire Mesh Welds Schedule Certification Essential Variables	25
10.1	Limits for Visible Discontinuities in a Production Part	27
10.2	Nugget Size (All Groups)	28
10.3	Production Witness Welds, Test Coupons	34
12.1	Production Witness Examination Data	42

List of Figures

Figure		Page No.
3.1	Edge Bulge Crack	3
7.1	Spot Welds in Sheet	13
7.2	Close-Spaced Spot Welds in Sheet	14
7.3	Spot Welds in Foil	14
7.4	Seam Welds in Foil	15
7.5	Seam Welds in Sheet	15
7.6	Pressure Test of Seam Welds in Foil for Class A Welds	16
8.1	Testing Diagram for the Tensile Shear Weld Coupons from Wire Mesh Welded Products	23
8.2	Testing Diagram for the Peel Test Weld Coupons from Wire Mesh Welded Products	23
10.1	Surface Indentation	26
10.2	Nomenclature Diagram of Spot and Seam Weld Radiographs	28
10.3(A)	Clear Penetration Discontinuity Free Zone (CP-DFZ) in Class A and Class B Welds in Equal Thickness Members	30
10.3(B)	Clear Penetration Discontinuity Free Zone (CP-DFZ) in Class C Welds in Equal Thickness Members	30
10.3(C)	Clear Penetration Discontinuity Free Zone (CP-DFZ) in Class A and Class B Welds of Three or More Members	30

10.3(D) Clear Penetration Discontinuity Free Zone (CP-DFZ) in Class A and Class B Welds in Unequal Thickness Members 31
10.4(A) Clear Annulus Discontinuity Free Zone (CA-DFZ) in All Classes of Welds in Equal Thickness Members. . . . 31
10.4(B) Clear Annulus Discontinuity Free Zone (CA-DFZ) in All Classes of Welds in Unequal Thickness Members. . . . 31
10.5 Minimum Penetration for Both Equal and Unequal Thickness Members 32
10.6 Longitudinal Cross Section of Seam Weld Illustrating Minimum and Maximum Penetration Requirement 32
10.7 Shear Tests in Joints with Three or More Members. . . . 33
10.8 Surface Indentation, Metallographic 34
11.1 Peel Testing of Seam Weld in a Foil Sample 37
11.2 Peel Testing of Spot Weld in a Foil Sample 37
11.3 Measurement of Foil Peel Test Sample Button Size 38

Specification for Resistance Welding for Aerospace Applications

1. General Requirements

1.1 Scope. This specification covers requirements for resistance spot and seam welding of the following metals and their alloys.

1.1.1 Material Groups

Group 1—Aluminum and magnesium

Group 2—Steel, nickel, and cobalt

Group 3—Titanium

1.1.2 Classification. All welds produced in accordance with this specification shall be classified on the engineering drawing or contract. Weld classifications shall be as follows: Class A, Class B, or Class C. These classifications refer to the qualification test requirements, level of inspection required, and to the applicable acceptance criteria. When specified on the engineering drawing, alternate testing requirements, acceptance criteria, and inspection methods take precedence. A part may contain weld joints with multiple classifications.

1.2 Units of Measure. This standard makes use of both U.S. Customary Units and the International System of Units (SI). The latter are shown within brackets ([ ]) or in appropriate columns in tables and figures. The measurements may not be exact equivalents; therefore, each system shall be used independently.

1.3 Safety. Safety and health issues and concerns are beyond the scope of this standard and therefore are not addressed herein. Safety and health information is available from the following sources:

American Welding Society:

(1) ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*

(2) AWS Safety and Health Fact Sheets

(3) Other safety and health information on the AWS website

Material or Equipment Manufacturers:

(1) Safety Data Sheets supplied by materials manufacturers

(2) Operating Manuals supplied by equipment manufacturers

Applicable Regulatory Agencies

Work performed in accordance with this standard may involve the use of materials that have been deemed hazardous, and may involve operations or equipment that may cause injury or death. This standard does not purport to address all safety and health risks that may be encountered. The user of this standard should establish an appropriate safety program to address such risks as well as to meet applicable regulatory requirements. ANSI Z49.1 should be considered when developing the safety program.