



AEROSPACE STANDARD	AS7481	REV. C
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Studs, Steel, UNS S66286 Aged After Roll Threaded Procurement Specification For		FSC 5307

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature. This standard has been stabilized.

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1. SCOPE:

1.1 Type:

This procurement specification covers studs made from a corrosion and heat resistant age hardenable iron base alloy of the type identified under Unified Numbering System as UNS S66286 and of 130 ksi tensile strength at room temperature, with maximum test temperature of parts at 1200 °F.

1.2 Application:

Primarily for aerospace propulsion system applications where the coefficient of expansion of the stud is more compatible in light alloys, and where stress-rupture and creep resistance are of primary importance at elevated temperatures.

1.3 Safety - Hazardous Materials:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

2. REFERENCES:

2.1 Applicable Documents:

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

- AMS 2759/3 Heat Treatment of Precipitation Hardening, Corrosion Resistant and Maraging Steel Parts
- AMS 5731 Steel Bars, Forgings, Tubing, and Rings, Corrosion and Heat Resistant, 15Cr 25.5Ni 1.2Mo 2.1Ti 0.006B 0.30V, Consumable Electrode Melted, 1800 °F (982 °C), Solution Heat Treated
- AS3062 Bolts, Screws, and Studs, Screw Thread Requirements
- AS3063 Bolts, Screws, and Studs, Geometric Control Requirements

2.1.2 U.S. Government Publications: Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

- MIL-S-7742 Screw Threads, Standard, Optimum Selected Series; General Specification for
- MIL-S-8879 Screw Threads, Controlled Radius Root With Increased Minor Diameter; General Specification For
- MIL-STD-1312-6 Fastener Test Methods, Method 6, Hardness
- MIL-STD-1312-8 Fastener Test Methods, Method 8, Tensile Strength
- MIL-STD-1312-10 Fastener Test Methods, Method 10, Stress-Rupture

2.1.3 ASTM Publications: Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

- ASTM E 8 Tension Testing of Metallic Materials
- ASTM E 112 Determining Average Grain Size
- ASTM E 139 Conducting Creep-Rupture, and Stress-Rupture Tests of Metallic Materials
- ASTM E 140 Standard Hardness Tables for Metals
- ASTM E 1417 Liquid Penetrant Examination
- ASTM D 3951 Commercial Packaging

2.1.4 ANSI Publication: Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

- ANSI/ASME B46.1 Surface Texture (Surface Roughness, Waviness, and Lay)