Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AEROSPACE MATERIAL SPECIFICATION

AMS 7236A
Superseding AMS 7236

Issued 7-15-63
Revised 11-15-71

RIVETS, ALLOY, CORROSION AND HEAT RESISTANT
Cobalt Base - 20Cr - 10Ni - 15W

1. SCOPE:

1.1 Type: This specification covers rivets made of a cobalt-base, corrosion and heat resistant alloy.

1.2 Application: Primarily for joints requiring high strength up to 1500 F (816 C) and oxidation resistance up to 2000 F (1093 C).

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications (AMS) shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from Society of Automotive Engineers, Inc., Two Pennsylvania Plaza, New York, New York 10001.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods
AMS 5759 - Alloy Bars, Forgings, and Rings, Corrosion and Heat Resistant, Cobalt Base - 20Cr - 10Ni - 15W

2.2 Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, Pennsylvania 19120.

2.2.1 Military Standards:

MIL-STD-1312 - Fasteners, Test Methods

3. TECHNICAL REQUIREMENTS:

3.1 Material and Fabrication: Rivets shall be manufactured from AMS 5759 corrosion and heat resistant alloy wire cold drawn from hot finished wire or rod which has been previously ground or has had surface preparation (other than by pickling) for removal of seams and other injurious surface imperfections. Rivets shall be cold headed or hot headed, unless purchaser permits forming of the heads by machining.

3.2 Condition: Solution heat treated.

3.3 Heat Treatment: Rivets shall be solution heat treated by heating to 2150 F ± 25 (1176.7 C ± 14), holding at heat for 10 - 20 min., and either quenching in water or rapid air cooling.

3.4 Properties:

3.4.1 Formability: Rivets shall be capable of being driven satisfactorily with a full head free from cracks; rivets may be heated for driving.

3.4.2 Hardness: Rivets shall have hardness not higher than 285 HV10 or equivalent, determined in accordance with MIL-STD-1312, Test No. 6.

3.5 Quality: Rivets shall be uniform in quality and condition, clean, sound, smooth, and free from internal and external imperfections detrimental to their performance.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection: The vendor shall supply all samples and shall be responsible for performing all required tests. Results of such tests shall be reported to the purchaser as required by 4.4. Purchaser reserves the right to perform such confirmatory testing as he deems necessary to assure that parts conform to the requirements of this specification.

4.2 Classification of Tests:

4.2.1 Routine Control Tests: Tests to determine conformance to the material (3.1) and hardness (3.4.2) requirements are classified as routine control tests.

4.2.2 Periodic Control Tests: Tests to determine conformance to the formability (3.4.1) requirements are classified as qualification and/or periodic control tests.

4.3 Sampling:

4.3.1 Routine Control Tests:

4.3.1.1 Material: One sample shall be taken from bars or wire from each heat.

4.3.1.2 Hardness: One sample, consisting of five pieces, shall be taken from each lot. A lot shall be all rivets of the same part number solution heat treated in a single furnace charge.

4.3.2 Periodic Control Tests: Samples for qualification and/or periodic control tests shall be taken as agreed upon by purchaser and vendor.

4.4 Reports: The vendor of parts shall furnish with each shipment three copies of a report stating that the chemical composition of the parts conforms to the applicable material specification, showing the results of tests to determine conformance to the hardness requirements, and stating that the parts conform to the other technical requirements of this specification. This report shall include the purchase order number, specification number and its revision letter, contractor or other direct supplier of material, part number, nominal size, and quantity.

4.5 Resampling and Retesting: If any part or specimen used in the above tests fails to meet the specified requirements, disposition of the product may be based on the results of testing three additional parts or specimens for each original nonconforming specimen. Failure of any retest part or specimen to meet the specified requirements shall be cause for rejection of the parts represented and no additional testing shall be permitted. Results of all tests shall be reported.

5. PREPARATION FOR DELIVERY:

5.1 Identification: Rivets of each different part number shall be packed in separate containers. Each container shall be marked to give the following information:

RIVETS, CORROSION AND HEAT RESISTANT ALLOY
AMS 7236A
PART NUMBER _____
PURCHASE ORDER NUMBER _____
QUANTITY _____
MANUFACTURER'S IDENTIFICATION _____

5.2 Packaging: Containers of parts shall be prepared for shipment in accordance with commercial practice to assure carrier acceptance and safe transportation to the point of delivery. Packaging shall conform to carrier rules and regulations applicable to the mode of transportation.