

RIVET - TITANIUM - BIMETAL
PROTRUDING - SHEAR HEAD
95Ksi Fsu

Published and distributed by:

AIRBUS INDUSTRIE
31707 BLAGNAC CEDEX
FRANCE

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152 055

1 Scope and field of application

This standard specifies the dimensions, tolerances of titanium, bimetal-rivet for use in the floor structure.

2 References

AMS4967	Titanium alloy bars and forgings, 6Al-4V
AMS4982	Titanium alloy bars and forgings, 55Ti-cb
ISO8080	Aerospace, anodic treatment of titanium and titanium alloys
MIL-L-87132	Lubricant cetyl alcohol, 1 hexadecanol application to fasteners
ANSI B46.1	Surface texture
PS-TBM-921	Procurement specification for HI-FATIQUE titanium-alloy rivet

3 Required characteristics

3.1 Configuration - Dimensions - Tolerances

3.1.1 Configuration shall be in accordance with the figure.

3.1.2 Dimensions, tolerances and masses shall conform with the figure and the table 1 and 2

3.2 Material

Body; 6Al-4V Titanium Alloy according to AMS4967 or AMS4928

Tail; 55Ti-45cb Titanium alloy according to AMS4982

Heat treat; processed to produce A95 KSi shear strength and a soft formable tail

3.3 Surface treatment

Finish; blue anodize in accordance with ISO8080

Lubrication; chlorine-free cetyl alcohol in accordance with MIL-L-87132

3.4 Surface texture

RHR max. in accordance with ANSI B46.1; 63 microinches on 'D' diameter.

Head-to-shank radius, and bearing surface of head;

125 microinches on other surfaces.

(1) Notes see page 4

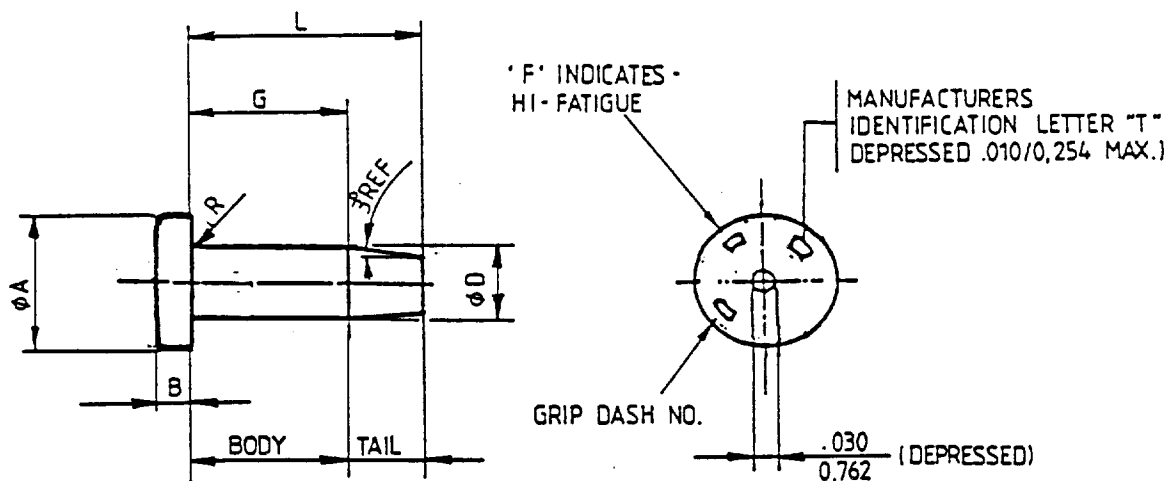

Figure-Configuration

Table-Dimensions, masses, static values

Dimensions in millimetres (inch)

DIA DASH NO. (a)			- 5	- 6	- 8
NOM. DIA D	- .0005	inch	.1640	.1895	.2495
	- 0,013	mm	4,166	4,813	6,337
A	min	inch	.235	.288	.363
		mm	5,969	7,315	9,220
	max	inch	.249	.302	.377
		mm	6,325	7,671	9,576
B	min	inch	.049	.056	.074
		mm	1,245	1,422	1,880
	max	inch	.055	.062	.080
		mm	1,397	1,575	2,032
R	± .005	inch	.015	.020	.020
	± 0,127	mm	0,381	0,508	0,508
ULTIMATE TENSILE STRENGTH	min	lbs	1400	2000	3700
		N	6227	8896	16458
DOUBLE SHEAR STRENGTH	min	lbs	4010	5380	9300
		N	17836	23930	41367
PRELOAD		lbs	500	800	1600
		N	2224	3558	7117

a) Dash-No. indicates nom. dia in 1/32 inch increments

Table 2

Table 2

Dia dash no.				- 5		- 6		- 8	
Grip dash no.	Grip range		G	L	Mass	L	Mass	L	Mass
	min	max	$\pm .015$ $\pm 0,381$	$\pm .010$ $\pm 0,254$		$\pm .010$ $\pm 0,254$		$\pm .010$ $\pm 0,254$	
	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{lbs/1000pcs}}{\text{kg/1000 pcs}}$	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{lbs/1000pcs}}{\text{kg/1000 pcs}}$	$\frac{\text{inch}}{\text{mm}}$	$\frac{\text{lbs/1000pcs}}{\text{kg/1000 pcs}}$
- 3	.126	.187	.125	.392	1,76	.417	2,64	.472	—
	3,200	4,749	3,175	9,956	0,798	10,592	1,19	11,988	—
- 4	.188	.250	.187	.454	1,98	.479	2,97	.534	6,25
	4,775	6,35	4,749	11,532	0,897	12,167	1,34	13,564	2,83
- 5	.251	.312	.250	.517	2,19	.542	3,25	.596	6,74
	6,375	7,924	6,35	13,131	0,993	13,767	1,47	15,138	3,05
- 6	.313	.375	.312	.579	2,42	.604	3,53	.659	7,23
	7,95	9,525	7,924	14,707	1,01	15,342	1,60	16,739	3,27
- 7	.376	.437	.375	.642	2,63	.667	3,81	.722	7,72
	9,55	11,099	9,525	16,306	1,19	16,942	1,72	18,339	3,50
- 8	.438	.500	.437	.704	2,86	.729	4,09	.784	8,21
	11,125	12,7	11,099	17,882	1,29	18,517	1,85	19,914	3,72
- 9	.501	.562	.500	.767	3,07	.792	4,37	.847	8,70
	12,73	14,27	12,70	19,48	1,39	20,117	1,98	21,514	3,94
- 10	.563	.625	.562	.829	3,30	.854	4,65	.909	9,19
	14,30	15,88	14,27	21,06	1,49	21,691	2,10	23,089	4,16

- (1) Notes :
1. Caution : Do not cut to shorter length
 2. Do not use in less than specified minimum grip.
 3. 'A' diameter and 'D' diameter to be concentric within 5% of 'D' diameter.
 4. Bearing surface of head to be perpendicular to 'D' diameter within $\pm 1/2^\circ$. Top of head and 'D' diameter to be perpendicular within $\pm 1^\circ$.
 5. All dimensions apply before application of lubrication.

4 Designation

Each rivet shall only be designated as in following example :

Description block		Identity block
Rivet		ABS0660-5-3
Number of ABS standard	_____	_____
Dia dash no.	_____	_____
Grip dash no.	_____	_____

5 Technical specification

The rivets shall conform to the requirements of PS-TBM-921