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मानक

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IS 3577 (1992): Wrought aluminium and aluminium alloys
rivet, bolt and screw stock - Dimensions and tolerances
[MTD 7: Light Metals and their Alloys]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

पिटवां एल्युमिनियम और उसकी मिश्र धातुएँ – रिबेट,
काबले और पेंच स्टॉक – आयाम और छूटें

(पहला पुनरीक्षण)

Indian Standard

WROUGHT ALUMINIUM AND ITS ALLOYS—
RIVET, BOLT AND SCREW STOCK —
DIMENSIONS AND TOLERANCES

(*First Revision*)

UDC 669.71-42 : 621.88

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Light Metals and Their Alloys Sectional Committee had been approved by the Metallurgical Engineering Division Council.

This standard was first published in 1967. This revision has been prepared on the basis of the developments that have taken place in the manufacturing practices since the first publication of the standard. In this revision, the tolerances for manufacturing rivets, bolts and screws by the cold heading process and by machining have been specified separately. Different classes of accuracy for tolerances have also been specified in this revision.

For manufacturing bolts, rivets and screws by the cold up-setting or cold heading process, wires up to about 8 mm diameter in coil form are normally used. As such forming operations are carried out in automatic machines, closer limits of tolerances are required and therefore, two classes of tolerances for wires have been specified for such use. Aluminium or aluminium alloy rods are normally not used for manufacturing these item by the cold heading process. They are used for manufacturing rivets, bolts and screws by machining process, and four classes of tolerances have been specified for bars.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

WROUGHT ALUMINIUM AND ITS ALLOYS — RIVET, BOLT AND SCREW STOCK — DIMENSIONS AND TOLERANCES

*(First Revision)***1 SCOPE**

This Standard lays down diameters and tolerances on the diameters for wrought aluminium and aluminium alloys in the form of rivet, bolt and screw stock.

2 REFERENCES

IS 5047 (Part 1) : 1986 'Glossary of terms relating to aluminium and aluminium alloys: Part 1 Unwrought and wrought metals (*second revision*)' is necessary adjunct to this standard.

3 TERMINOLOGY

3.0 For the purpose of this standard, the following definitions, as given in IS 5047 (Part 1) : 1986 shall apply.

3.1 Bolt Stock — Round bar or wire suitable

for the manufacture of bolts.

3.2 Rivet Stock — Round bar or wire suitable for the manufacture of rivets.

3.3 Screw Stock — Round bar or wire suitable for the manufacture of screws.

4 DIMENSIONS AND TOLERANCES**4.1 Cold Heading Stock**

The diameters of rivets, bolt and screw stocks and their tolerances shall be as given in Table 1.

4.2 Machining Stock

The diameters and tolerances for rivet, bolt and screw stock for machining shall be as given in Table 2.

Table 1 Diameters and Tolerances of Rivet, Bolt and Screw Stock Used For Manufacture of Rivet, Bolt and Screw by Cold Heading Process

(Clause 4.1)

Diameter	Tolerances	
	Standard Manufacturing Accuracy	High Manufacturing Accuracy
mm		
1.40		
1.60	—0.04	—0.03
2.00		
2.27		
2.30		
2.50		
2.58	—0.05	—0.04
2.60		
3.00		
3.40		
3.45		
3.50		
3.84		
4.00		
4.35		
4.50		
4.80		
5.00		
5.23	—0.08	—0.05
5.50		
5.80		
6.00		
6.50		
7.00		
7.50		
7.80		
8.00		
8.50	—0.12	—0.06
9.00		
9.50		
9.80		
10.00		

Table 2 Diameters and Tolerances of Rivet, Bolt and Screw Stock Used for Manufacture of Rivet, Bolt and Screw by Machining Process

(Clause 4.2)

Diameter	Tolerances			
	Class I	Class II	Class III	Class IV
mm	mm	mm	mm	mm
5.0				
5.5	—0.025	—0.048	—0.08	—0.16
6.5				
7.0				
7.5				
8.0	—0.03	—0.058	—0.10	—0.20
8.5				
9.0				
9.5				
10.0				
10.5				
11.0				
11.5				
12.0				
13.0	—0.035	—0.07	—0.12	—0.2
14.0				
15.0				
16.0				
17.0				
18.0				
19.0				
20.0				
21.0	—0.045	—0.084	—0.14	—0.28
22.0				
24.0				
25.0				

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