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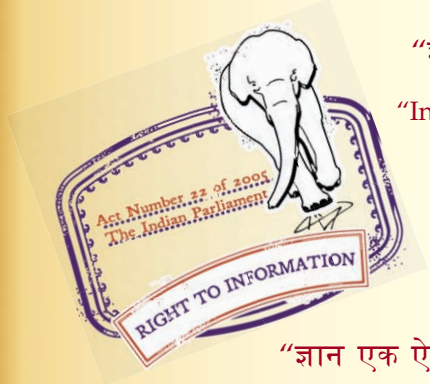

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IS : 2677 - 1979
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Indian Standard

DIMENSIONS FOR WROUGHT ALUMINIUM AND ALUMINIUM ALLOYS, PLATES AND HOT-ROLLED SHEETS

(First Revision)

UDC 669·71 — 41 — 131 : 006·78

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Indian Standard

DIMENSIONS FOR WROUGHT ALUMINIUM AND ALUMINIUM ALLOYS, PLATES AND HOT-ROLLED SHEETS

(First Revision)

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(*Continued on page* 7)

Indian Standard

DIMENSIONS FOR WROUGHT ALUMINIUM AND ALUMINIUM ALLOYS, PLATES AND HOT-ROLLED SHEETS

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 22 June 1979, after the draft finalized by the Light Metals and Their Alloys Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This standard was first published in 1964. In this revision sizes of the plates have been rationalized and the tolerances have been modified in the light of the experience gained since its first publication. Requirements for squareness tolerance for plates have also been included in this revision.

0.3 This standard should be used in conjunction with IS : 736-1974*.

0.4 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†. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard lays down the dimensions and tolerances for wrought aluminium and aluminium alloys, plate and hot-rolled sheets.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

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*Specification for wrought aluminium and aluminium alloys, plate (for general engineering purposes) (*second revision*).

†Rules for rounding off numerical values (*revised*).

2.1 Plate — A product of rectangular section, 6·0 mm thick or thicker. It is supplied with less control of surface finish and tolerance than applies to sheet.

2.2 Sheet — A product of rectangular section over 0·15 mm but less than 6·0 mm thick. It may be prepared as strip and subsequently cut to length.

3. DIMENSIONS

3.1 The standard thicknesses for plates shall be as given in col 1 of Table 1.

3.2 The standard lengths and widths of plates and hot-rolled sheets shall be as follows:

Length × *Width*	*Length* × *Width*	*Length* × *Width*
mm mm	mm mm	mm mm
1 800 × 300	2 400 × 300	3 600 × 300
1 800 × 600	2 400 × 600	3 600 × 600
1 800 × 900	2 400 × 900	3 600 × 900
1 800 × 1 200	2 400 × 1 200	3 600 × 1 200

3.3 Plates and hot-rolled sheets of sizes and thickness, other than standard sizes and thickness, shall be supplied by mutual agreement between the manufacturer and the supplier.

4. TOLERANCES

4.1 Thickness Tolerance — The tolerances on thickness of plates and hot-rolled sheets shall be as given in Table 1.

4.2 Shearing Tolerances — The shearing tolerances on lengths and widths of plate and hot-rolled sheets shall be as given in Table 2.

4.3 Squareness Tolerance — The two diagonal distances between opposite corners of any plate or hot-rolled sheet (*AA-BB, Fig.* 1) shall not differ by more than the total tolerance on its length, that is sum of plus and minus tolerance.

TABLE 1 TOLERANCES ON THICKNESS OF PLATE AND HOT-ROLLED SHEETS

(*Clauses* 3.1 *and* 4.1)

All dimensions in millimetres.

STANDARD THICKNESS	FOR WIDTHS UP TO AND INCLUDING 1 200	FOR WIDTH 1 201 TO 2 000
(1)	(2)	(3)
4·0	± 0·43	± 0·46
4·5	± 0·43	± 0·46
5·0	± 0·43	± 0·46
5·5	± 0·38	± 0·46
6·0	± 0·38	± 0·46
6·5	± 0·38	± 0·46
7·0	± 0·38	± 0·46
7·5	± 0·38	± 0·46
8·0	± 0·38	± 0·46
9·0	± 0·42	± 0·46
10·0	± 0·46	± 0·48
11·0	± 0·49	± 0·51
12·0	± 0·52	± 0·53
14·0	± 0·54	± 0·56
16·0	± 0·58	± 0·58
18·0	± 0·64	± 0·64
20·0	± 0·69	± 0·69
22·5	± 0·73	± 0·73
25·0	± 0·76	± 0·76
30·0	± 1·0	± 1·0
35·0	± 1·15	± 1·15
40·0	± 1·20	± 1·20
45·0	± 1·30	± 1·30
50·0	± 1·45	± 1·50
65·0	± 1·50	± 1·55

NOTE 1 — Thickness shall be measured at a point, not less than 15 mm from the edge of the plate.

NOTE 2 — In the case of alloys having magnesium content of 4·0 percent or more, the tolerance for widths up to 1 000 mm shall be increased by ± 0·01 mm and tolerance for widths over 1 000 mm by ± 0·02 mm.

NOTE 3 — For intermediate thicknesses the tolerances of next higher thickness shall be applicable.

NOTE 4 — The thickness tolerance for hot-rolled coils having thickness between and including 4·0 to 6·0 mm shall be same as that of hot-rolled sheet of some thickness.

TABLE 2 SHEARING TOLERANCE ON LENGTH AND WIDTH OF PLATE

(*Clause* 4.2)

All dimensions in millimetres.

Thickness	For Lengths and Widths							
	For Lengths Up to and Including 2 400		For Lengths Over 2 400, Up to and Including 6 300		For Lengths Over 6 300, Up to and Including 8 000		For Lengths Over 8 000, Up to and Including 10 000	
	Plus	Minus	Plus	Minus	Plus	Minus	Plus	Minus
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Up to and including 12·50	7	3	8	3	10	3	13	3
Over 12·50 and up to and including 25·0	10	3	11	3	13	3	13	3
Over 25·0	13	3	13	3	13	3	13	3

Note 1 — The shearing tolerance on width of hot-rolled coil having thickness between and including 4·0 mm to 6·0 mm shall be ± 5 mm for width up to and including 1 200 mm and ± 6·5 mm for width over 1 200 mm.

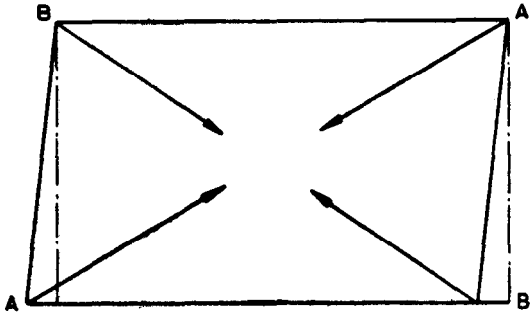

FIG. 1 SQUARENESS TOLERANCE (*AA-BB*)

(*Continued from page* 2)

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INDIAN STANDARDS

ON

DIMENSIONS FOR ALUMINIUM AND ALUMINIUM ALLOY PRODUCTS

IS:

2525-1963	Diameters of wrought aluminium and aluminium alloys, wire
2673-1979	Dimensions for wrought aluminium and aluminium alloys, extruded round tube (*first revision*)
2676-1964	Dimensions for wrought aluminium and aluminium alloys, sheet and strip
2677-1979	Dimensions for wrought aluminium and aluminium alloys, plates and hot rolled sheets (*first revision*)
2678-1972	Dimensions for wrought aluminium and aluminium alloys, drawn tube
3577-1967	Diameters of wrought aluminium and aluminium alloys, rivet, bolt and screw stock
3965-1969	Dimensions for wrought aluminium and aluminium alloys, bars, rod and section
6477-1971	Dimensions for wrought aluminium and aluminium alloys, extruded hollow sections

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

INDIAN STANDARDS INSTITUTION

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