

The old BS1470 standard has been replaced by nine EN standards:

- EN485-1: Technical conditions for inspection and delivery
- EN485-2: Mechanical Properties
- EN485-3: Tolerances for HOT Rolled Material
- EN485-4: Tolerances for COLD Rolled material
- EN515: Temper Designations
- EN573-1: Numerical alloy designation system
- EN573-2: Chemical symbol designation system
- EN573-3: Chemical Compositions
- EN573-4: Product forms in different alloys

For those familiar with the old BS1470 it is useful to highlight where the new EN standards differ:

- Chemical Compositions – No Change.
- Alloy Numbering System – No Change.
- Temper Designations for Heat Treatable Alloys – A new wider range of special tempers having up to four digits after the T have been introduced for non-standard applications (e.g. T6151).
- Temper Designations for Non Heat Treatable Alloys – No change to existing tempers but a more comprehensive definition of how tempers are achieved.
- Mechanical Properties – Similar but not identical. Also, 0.2% Proof Stress must now be quoted on test certificates.
- Thickness Tolerances – Considerably tighter for alloys 1050A & 3103. To reflect manufacturing difficulty the tolerances for alloys 5251, 5083 & 6082 are now wider than this, although still a little tighter than in BS1470.
- Length and Width Tolerances – These tend to be tighter and are now all on the plus side (i.e. minus zero).
- Flatness Tolerances – These are considerably tighter.

CONTACT

Address:	Please make contact directly with your local service centre, which can be found via the Locations page of our web site
Web:	www.aalco.co.uk

DISCLAIMER

This Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product and product dimensions. The information is based on our present knowledge and is given in good faith. However, no liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose.

Any advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. Any contract between the Company and a customer will be subject to the company's Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.

Length Tolerances

Thickness (mm)	Hot Rolled EN485-3 Minus 0mm Plus:	Cold Rolled EN485-4 Minus 0mm Plus:
0.2 to 3.0	8.0mm	6.0mm
3.0 to 6.0	8.0mm	8.0mm
6.0 to 12.0	10.0mm	10.0mm
12.0 to 50.0	12.0mm	-
Over 50.0	14.0mm	-

Applies to lengths 2001mm to 3000mm

Width Tolerances

Width (mm)	Hot Rolled EN485-3 Minus 0mm Plus:	Cold Rolled EN485-4 Minus 0mm Plus:
0.2 to 3.0	-	3.0mm
3.1 to 6.0	7.0mm	4.0mm
6.1 to 12.0	7.0mm	5.0mm
12.1 to 50.0	8.0mm	-
51.0 to 200	8.0mm	-
201 to 400	12.0mm	

Applies to widths 1001mm to 2000mm for hot rolled and 501mm to 1250mm for cold rolled. For 1500mm wide cold rolled the tolerances are plus 4mm, 5mm & 5mm.

Thickness Tolerances – Hot Rolled

Thickness (mm)	Tolerance (+ or -) in mm for given width in mm	
	1250	1500
2.5 to 4.0	0.28	0.28
4.1 to 5.0	0.30	0.30
5.1 to 6.0	0.32	0.32
6.1 to 8.0	0.35	0.40
8.1 to 10.0	0.45	0.50
10.1 to 15.0	0.50	0.60
15.1 to 20	0.60	0.70
21 to 30	0.65	0.75
31 to 40	0.75	0.85
41 to 50	0.90	1.0
51 to 60	1.1	1.2
61 to 80	1.4	1.5
81 to 100	1.7	1.8
101 to 150	2.1	2.2
151 to 220	2.5	2.6
221 to 350	2.8	2.9
351 to 400	3.5	3.7

Flatness Tolerances

Product	Thickness	Max Deviation over a 2500mm length	Max Deviation over a 1250mm width
Cold Rolled	0.5 to 3.0	10.0mm	5.0mm
	3.0 to 6.0	7.5mm	3.75m
Hot Rolled	6.0 to 200	5.0mm	2.5mm

Thickness Tolerances – Cold Rolled

Note that for thickness tolerances of cold rolled material the alloys are split into two groups:

- ◆ Group I – 1000 series, 3000 series, 4006, 4007, 5005, 5050, 8011A
- ◆ Group II – 2000 series, 6000 series, 7000 series, 3004, 5040, 5049, 5251, 5052, 5154A, 5454, 5754, 5182, 5083, 5086

Thickness mm	Tolerance on thickness (+ or –) in mm					
	1000mm Wide		1250mm Wide		1500mm Wide	
	Group I	Group II	Group I	Group II	Group I	Group II
0.20 to 0.40	0.02	0.03	0.04	0.05	0.05	0.06
0.41 to 0.50	0.03	0.03	0.04	0.05	0.05	0.06
0.51 to 0.6	0.03	0.04	0.05	0.06	0.06	0.07
0.61 to 0.8	0.03	0.04	0.06	0.07	0.07	0.08
0.81 to 1.0	0.04	0.05	0.06	0.08	0.08	0.09
1.01 to 1,20	0.04	0.05	0.07	0.09	0.09	0.10
1.21 to 1.50	0.05	0.07	0.09	0.11	0.10	0.12
1.51 to 1.80	0.06	0.08	0.10	0.12	0.11	0.13
1.81 to 2.0	0.06	0.09	0.11	0.13	0.12	0.14
2.1 to 2.5	0.07	0.10	0.12	0.14	0.13	0.15
2.6 to 3.0	0.08	0.11	0.13	0.15	0.15	0.17
3.1 to 3.5	0.10	0.12	0.15	0.17	0.17	0.19
3.6 to 4.0	0.15		0.20		0.22	
4.1 to 5.0	0.18		0.22		0.24	
5.1 to 6.0	0.20		0.24		0.25	
6.1 to 8.0	0.24		0.30		0.31	
8.1 to 10.0	0.27		0.33		0.36	
10.1 to 12.0	0.32		0.38		0.40	
12.1 to 15.0	0.36		0.42		0.43	
15.1 to 20	0.38		0.44		0.46	
21 to 25	0.40		0.46		0.48	
26 to 30	0.45		0.50		0.53	
31 to 40	0.50		0.55		0.58	
41 to 50	0.55		0.60		0.63	

When measuring thickness a zone 10mm wide from the edges of the product shall be disregarded.