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**Light gauge steel sections for
general structure**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Iron and Steel Federation (JISF) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS G 3350**:2005 is replaced with this Standard.

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Light gauge steel sections for general structure

Introduction

This Japanese Industrial Standard was established in 1957 and to this day has gone through eight revisions. The last revision was made in 2005 and the revision at this time is to respond to the change in technology trend.

The corresponding International Standard has not yet been published at this moment.

1 Scope

This Standard specifies the cold formed light gauge steel sections for buildings and other structure (hereafter referred to as “light gauge sections”).

Further, the specification of light gauge sections made of coated steel sheets and strips shall be in accordance with Annex A in addition to the text.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS G 0320 *Standard test method for heat analysis of steel products*

JIS G 0404 *Steel and steel products—General technical delivery requirements*

JIS G 0415 *Steel and steel products—Inspection documents*

JIS G 3302 *Hot-dip zinc-coated steel sheet and strip*

JIS G 3317 *Hot-dip zinc-5 % aluminium alloy-coated steel sheet and strip*

JIS G 3321 *Hot-dip 55% aluminium-zinc alloy-coated steel sheet and strip*

JIS Z 2201 *Test pieces for tensile test for metallic materials*

JIS Z 2241 *Method of tensile test for metallic materials*

JIS Z 8401 *Guide to the rounding of numbers*

3 Classification, symbol and applicable thickness

The light gauge sections shall be classified into one grade, and symbol of grade, designation according to sectional shape and symbol of sectional shape shall be as given in table 1. The applicable thickness of light gauge sections shall be as given in table 2.

4 Manufacturing method

Light gauge sections shall be made by cold roll forming and so on, from hot rolled steel sheets and strips, cold rolled steel sheets and strips, or coated steel sheets and strips.

Table 1 Symbol of grade, designation according to sectional shape and symbol of sectional shape

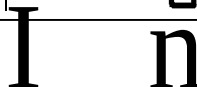
Symbol of grade	Designation according to sectional shape	Symbol of sectional shape
SSC400	Light channel	
	Light Z section	
	Light angle	
	Lip channel section	
	Lip Z section	
	Hat section	

Table 2 Applicable thickness

Unit: mm

Applicable thickness	1.6 or over up to and incl. 6.0
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5 Chemical composition

The steel sheets and strips used for light gauge sections shall be tested in accordance with **10.1** and its heat analysis values shall be as given in table 3.

Table 3 Chemical composition ^{a)}

Unit: %

Symbol of grade	C	P	S
SSC400	0.25 max.	0.050 max.	0.050 max.

6 Mechanical properties

The light gauge sections shall be tested in accordance with **10.2** and its yield point, tensile strength, and elongation shall be as given in table 4.

Table 4 Mechanical properties

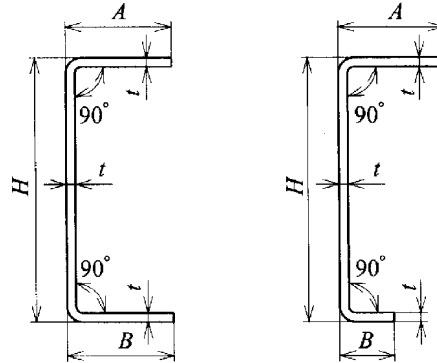
Symbol of class	Yield point or proof strength N/mm ²	Tensile strength N/mm ²	Elongation		
			Thickness mm	Test piece	%
SSC400	245 min.	400 to 540	5 or under	No. 5	21 min.
			Over 5	No. 1A	17 min.

7 Shape, dimension and mass

7.1 Sectional shape, designation, standard sectional dimensions, sectional area and unit mass

The sectional shape, designation, standard sectional dimensions, sectional area and unit mass of light gauge sections shall be as specified in tables 5 to 10.

Further, the radius of curvature at corner shall be generally $1.5t$ at the centre line of the plate thickness (t).

Table 5 Sectional shape, designation, standard sectional dimensions, sectional area and unit mass of light channel

Designation	Standard sectional dimensions mm		Sectional area cm ²	Unit mass kg/m
	$H \times A \times B$	t		
1618	450×75×75	6.0	34.82	27.3
1617		4.5	26.33	20.7
1578	400×75×75	6.0	31.82	25.0
1577		4.5	24.08	18.9
1537	350×50×50	4.5	19.58	15.4
1536		4.0	17.47	13.7
1497		4.5	17.33	13.6
1496				
1458	250×75×75	6.0	22.82	17.9
1427		4.5	15.08	11.8
1426				
1388		6.0	19.82	15.6
1387				
1357	200×50×50	4.5	12.83	10.1
1356		4.0	11.47	9.00
1355		3.2	9.263	7.27
1318		6.0	16.82	13.2
1317		4.5	12.83	10.1
1316				
1315		3.2	9.263	7.27
1287	150×50×50	4.5	10.58	8.31
1285		3.2	7.663	6.02
1283		2.3	5.576	4.38
1245	120×40×40	3.2	6.063	4.76
1205	100×50×50	3.2	6.063	4.76
1203		2.3	4.426	3.47
1173	100×40×40	2.3	3.966	3.11
1133	80×40×40	2.3	3.506	2.75
1093	60×30×30	2.3	2.586	2.03
1091		1.6	1.836	1.44
1055	40×40×40	3.2	3.503	2.75
The sectional area and the unit mass shall be in accordance with calculation method in table 12.				