

# Hot Rolled Coil, Strip, and Plate Products



Hot Rolled Coil



Hot Rolled Plate

## SPECIFICATIONS

Specification No.	Designation Grade	Application
API 5L	GRADE A GRADE B GRADE X 42 up to GRADE X 70	Hot rolled steel in coil for oil and gas line pipe.
API 5CT	GRADE H40 GRADE J55 GRADE K55	Hot rolled steel for casing and tubing (Full body normalized or seam normalized)
AS 1594	GRADE HA-1 GRADE HA 200 GRADE HA 250 GRADE HA 300 GRADE HA 350	Hot rolled steel for general structures
ASTM A 36	ASTM A 36	Structural Steels
ASTM A 252	GRADE 1, 2, 3	Electric resistance welded carbon steel for builed tubes
ASTM A 283	GRADE A, GRADE B GRADE C, GRADE D	Low and intermediate tensile strength carbon steel plates, shape and bars



Specification No.	Designation Grade	Application
ASTM A 284	GRADE C, GRADE D	Low and intermediate tensile strength carbon silicon steel plates for machine parts and general construction.
ASTM A 285	GRADE A GRADE B GRADE C	Pressure vessel plates carbon steel, low and intermediate tensile strength.
ASTM A 414	GRADE A, GRADE B GRADE C, GRADE D GRADE E, GRADE F GRADE G	Steel sheet carbon for pressure vessel.
ASTM A 515	UP TO GRADE 70	Pressure vessel plates carbon steel for moderate and higher temperature service.
ASTM A 516	GRADE 55 (380) GRADE 60 (415) GRADE 65 (450) GRADE 70 (485)	Pressure vessel plates carbon steel for moderate and lower temperature service.
ASTM A 1011	C1006, C1008, C1010 C1010M1, C1010M2, C1012	HR for rerolling process.
ASTM A 569	SAE 1012	Steel carbon (0.15% max) hot rolled sheet and strip commercial quality.
ASTM A 570	GRADE 30, GRADE 33, GRADE 36 TYPE I, GRADE 36 TYPE II, GRADE 40, GRADE 45, GRADE 50.	Structural steel, sheet, strip, carbon, hot rolled.
ASTM A 572	GRADE 42, GRADE 50 GRADE 60, GRADE 65	High strength low alloy Columbium -Vanadium steel for structural quality.
ASTM A 573	GRADE 58, GRADE 65 GRADE 70	Structural carbon steel plates of improve toughness for service at atmospheric temperature.
ASTM 607	Class I, type I Class I, type II GRADE 45 AND 50	High strength low alloy Columbium-Vanadium steel for structural quality.
ASTM A 622	A 622	Steel strip and sheet, carbon drawing quality special killed, hot rolled.
ASTM A 635	SAE 1006 up to SAE 1026	Steel strips and sheet, heavy thickness coils, carbon, hot rolled max thickness 25 mm.
ASTM A 659	SAE 1015 up to SAE 1021	Steel carbon (0.16 - 0.25 % max) hot rolled sheet and strip commercial quality.
ASTM A 655	GRADE 50 GRADE 60 GRADE 70 GRADE 80	Hot rolled structural steel high strength low alloy plate with improved formability (truck's frame)
<b>ASTM A 786</b>	<b>A 786</b>	<b>Hot rolled steel for checker plate</b>
ASTM A 907	GRADE 30 GRADE 33 GRADE 36 GRADE 40	Steel strip and sheet heavy thickness coils, carbon, hot rolled structural quality.





Specification No.	Designation Grade	Application
ASTM A 935	GRADE 45, GRADE 50 GRADE 55, GRADE 60 GRADE 65, GRADE 70	Steel strip and sheet heavy thickness coils, High strength low alloy Columbium or vanadium or both, hot rolled class I high carbon, class II low carbon.
BS 4360	43 A, B, C 50 A, B, C	Hot rolled steels for general structure.
BSEN 10025	S 185 S 235. JR, JO S 275. JR, JO S 355. JR, JO	Hot rolled steels for general structures.
BTKC	GRADE A, B, C	Weather corrosion resistance steel for structure
CAN/CSA G 40.21	260W, 300W, 350W, 400W, 230G, 400G	General construction steel (type G) Weldable steel (type W) Weldable notch tough steel (type WT)
DIN 1614	STW24, ST24	
DIN 1624	ST12, ST13	
DIN 17100	ST37, ST44, ST50, ST52	Steel for general structures
DNV	GRADE 450 GRADE 485 (T < = 12.7 mm)	Sub marine pipe lines system
JIS G3101	SS330, SS400, SS490, SS540	Steel for general structures
JIS G3131	SPHC, SPHD, SPHE	HRC for Cold rolled coil or sheet - commercial quality - drawing quality - deep drawing quality
JIS G3132	SPHT1, SPHT2 SPHT3, SPHT4	Hot rolled carbon steel strip for general pipe and tube
JIS G3106	SM400 A, B, C SM490 A, B, C SM490 YA, YB SM520 B, C SM570	Hot rolled steel strip for welded structures
JIS G3136	SN400 A, B, C SN490 A, B, C	Hot rolled steel strip for building structures
JIS G 3116 BSEN 10120 DIN EN 10120	SG255, SG295, SG325 P265NB P265NB	Hot rolled steel sheet, plate and strip for gas cylinder
JIS G3125	SPAH	Superior atmospheric corrosion resistance rolled steel.
JIS G3113	SAPH270, SAPH310, SAPH370, SAPH400, SAPH440, SAPH540	Hot rolled steel plate, sheet and trip, for automobile structures uses (chassis).
JIS G3134	SPFH490, SPFH540	Hot rolled steel plate, sheet and trip for automobile structure uses.
TISCO	TISTEN 55.	
JIS G 4095	S45C	Carbon steel for machine structural use.
JIS G 4104	SCr 440	Chromium steel for machine structural use.
KSE260/DBL E 260 KSE380/DBL E 380	KSE260/DBL E 260 KSE380/DBL E 380	Hot rolled steel plate, sheet and trip for automobile structures uses.
Klasifikasi Indonesia	GRADE A UP TO 25 mm GRADE B UP TO 25 mm	Hot rolled steel for ship plate
Lloyd's Register	GRADE A, B	Hot rolled steel for ship plate
Gemanischer Lloyd	GRADE A, B, C	Hot rolled steel for ship plate
MPW 1, 38 MP 1, 2, 38, 45	MPW 1, 38 MP 1, 2, 38, 45	Pipe and tube (Customer's standard)



## **DIMENSION**

### **COIL**

#### **A. Mill Edge**

Thickness	: 1.8 - 25.0 mm
Width	: 600 - 2000 mm
Coil ID	: 760 mm
Coil Weight	: 5 - 30 MT

#### **B. Slitted Coil / Trimmed Edge / Recoiled**

Thickness	: 2.0 - 8.0 mm
Width	: 100 - 990 mm
Coil ID	: 610 mm and 760 mm
Coil Weight	: 30 MT max.

#### **C. Skin Passed Mill**

Thickness	: 1.8 - 7.0 mm
Width	: 600 - 1524 mm
Coil ID	: 760 mm
Coil Weight	: 30 MT max.

### **STRIP / PLATE**

#### **A. Strip**

Thickness	: 2.0 - 6.0 mm
Width	: 600 - 2000 mm
Length	: 1000 - 6000 mm
Weight	: 6 MT max

#### **B. Plate**

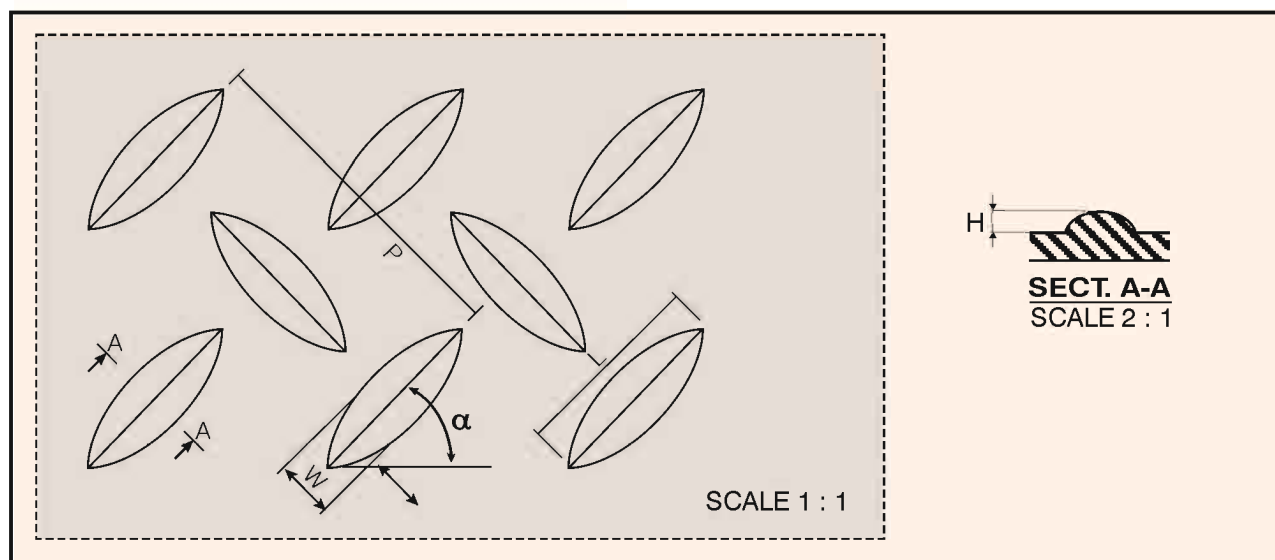
Thickness	: 6.0 - 25.0 mm
Width	: 600 - 2000 mm
Length	: 1500 - 12000 mm
Weight	: 7.5 MT max



## CHECKERED FLOOR PLATE

- Can be supplied in coil form or plate
- Gauge : Thin Gauge = 2.3 - 6 mm  
Thick Gauge = 6 - 12.7 mm
- Width : 600 - 1524 mm

Profile Dimension	Strip Thickness	
	2,3 - 6.0 mm	6.0 - 12,7 mm
Length (L)	26.8 mm	33 mm
Width (W)	4.9 mm	7.7 mm
Height (H)	1.5 mm max	1.5 mm max
Pitch Size (P)	45 mm	60 mm
Angle of Profile to Rolling Direction ( $\alpha$ )	45	45



## TOLERANCE

JIS : Specified tolerance refers to respective standard, unspecified tolerances refers to JIS G 3193  
 ASTM : A 6 (metric), A 20 (metric), A 568M, A 635M.

## SHIPMENT

All vessels must be equipped with self loading facilities.





## AVAILABLE SIZE RANGE

HSM PRODUCT CAPABILITY		SPECIFIC COIL WEIGHT 9.42 kg/mm							
Width (mm)		MINIMUM THICKNESS (MM) DEPEND ON TENSILE STRENGTH GROUP (kg/mm <sup>2</sup> )							
Min	Max	< 40.0	40.1 - 44.0	44.1 - 48.0	48.1 - 52.0	52.1 - 56.0	56.1 - 60.0	60.1 - 68.0	
600	700	1.80	1.80	2.00	2.40	2.80	3.20	3.40	
701	760	1.80	1.80	2.00	2.40	2.80	3.20	3.40	
761	820	1.80	1.80	2.00	2.40	2.80	3.20	3.40	
821	900	1.80	1.80	2.00	2.40	2.80	3.20	3.40	
901	1010	1.80	1.90	2.00	2.40	2.80	3.20	3.40	
1011	1210	1.90	2.00	2.30	2.70	3.00	3.20	3.80	
1211	1240	2.00	2.10	2.40	3.00	3.50	3.70	4.20	
1241	1300	2.30	2.50	2.70	3.20	3.70	4.10	4.50	
1301	1330	2.50	2.70	2.90	3.50	3.90	4.20	4.70	
1331	1400	2.80	3.10	3.40	3.60	4.00	4.50	5.10	
1401	1530	3.50	3.70	3.90	4.10	4.20	4.80	5.40	
1531	1570	3.60	3.80	4.00	4.20	4.50	5.00	5.70	
1571	1640	3.60	3.80	4.00	4.20	4.50	5.00	5.70	
1641	1760	4.00	4.30	4.60	5.00	5.60	6.20	6.80	
1761	1830	4.80	5.00	5.60	5.80	6.30	6.70	7.30	
1831	1870	5.00	5.50	5.75	6.00	6.50	6.80	7.50	
1871	2060	5.50	5.90	6.30	6.40	6.90	7.40	7.90	

HSM PRODUCT CAPABILITY		SPECIFIC COIL WEIGHT 17.42 kg/mm							
Width (mm)		MINIMUM THICKNESS (MM) DEPEND ON TENSILE STRENGTH GROUP (kg/mm <sup>2</sup> )							
Min	Max	< 40.0	40.1 - 44.0	44.1 - 48.0	48.1 - 52.0	52.1 - 56.0	56.1 - 60.0	60.1 - 68.0	
600	700	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
701	760	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
761	820	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
821	900	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
901	1010	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
1011	1210	2.00	2.20	2.60	2.80	3.50	3.80	4.10	
1211	1240	2.00	2.20	2.60	3.10	3.60	4.00	4.30	
1241	1300	2.30	2.50	2.70	3.20	3.70	4.10	4.50	
1301	1330	2.60	2.80	3.20	3.60	4.00	4.40	4.80	
1331	1400	3.00	3.20	3.50	4.00	4.20	4.60	4.10	
1401	1530	3.50	3.70	3.90	4.10	4.70	5.30	5.90	
1530	1570	3.60	3.80	4.00	4.20	4.80	5.40	6.00	
1571	1640	3.80	3.90	4.10	4.30	5.00	5.60	6.40	
1641	1760	4.20	4.50	4.80	5.20	5.80	6.40	7.00	
1761	1830	5.00	5.40	5.70	5.90	6.50	7.00	7.50	
1831	1870	5.40	5.80	6.00	6.20	6.70	7.20	7.70	
1871	2060	5.80	6.20	6.60	7.00	7.50	8.00	8.50	

HSM PRODUCT CAPABILITY		SPECIFIC COIL WEIGHT 19.46 kg/mm							
Width (mm)		MINIMUM THICKNESS (MM) DEPEND ON TENSILE STRENGTH GROUP (kg/mm <sup>2</sup> )							
Min	Max	< 40.0	40.1 - 44.0	44.1 - 48.0	48.1 - 52.0	52.1 - 56.0	56.1 - 60.0	60.1 - 68.0	
600	700	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
701	760	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
761	820	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
821	900	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
901	1010	1.80	2.10	2.50	2.70	3.50	3.70	4.00	
1011	1210	2.00	2.20	2.60	2.80	3.50	3.80	4.10	
1211	1240	2.00	2.20	2.60	3.10	3.60	4.00	4.30	
1241	1300	2.30	2.50	2.70	3.20	3.70	4.10	4.50	
1301	1330	2.60	2.80	3.20	3.60	4.00	4.40	4.80	
1331	1400	3.00	3.20	3.50	4.00	4.20	4.80	5.30	
1401	1530	3.60	3.80	4.00	4.10	4.80	5.40	6.10	
1531	1570	3.70	3.90	4.10	4.30	4.90	5.50	6.20	
1571	1640	3.90	4.00	4.20	4.50	5.20	5.80	6.40	
1641	1760	4.20	4.60	4.80	5.20	5.80	6.40	7.00	
1761	1830								
1831	2060								

Note:  
Italic font : Negotiable