



#### Dear Customers,

We are so thrilled to deliver our steel, produced at our mill in Aliaga-İzmir, under the brand name of HABAŞ to all around the World. We have built a new Hot Strip Mill (SMS Siemag) with the latest technology with a capacity of 2.500.000 mtons / annual. We will be producing our Hot Rolled Coil Products with the highest quality with our motto "Service-Quality-Trust" and will be delivering to yourselves.

HABAŞ will continue to apply the same quality oriented service and highest customer satisfaction for Hot Rolled Products as applied to all other products since the establishmet on 1956. We have the pride to supply all the international grades such as EN, DIN, ASTM, JIS, ISO to all our customers at home and abroad.

With my kindest regards, Mehmet Rüştü Başaran









## HABAS PROCESS FLOW CHART



www.habas.com.tr

## **PROCESS FLOW - HABAŞ PORT**

 HRC production starts at Habas Port

Our privately owned
pier as the first pier lies
on the south mouth of
NEMRUT bay, 7 km
away from our plant

 Main raw material of our production process is iron and steel scraps.





HABAŞ



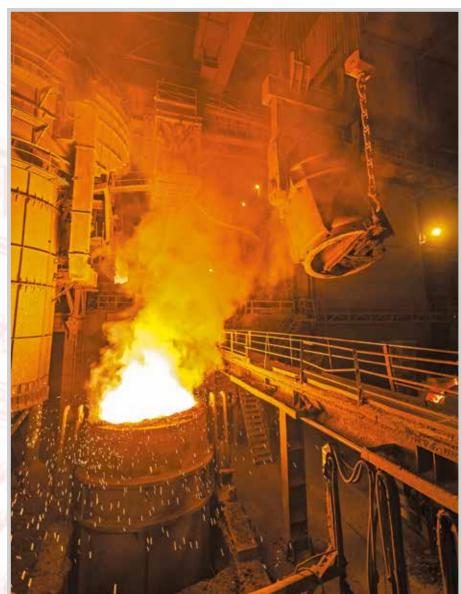


# HABAS PROCESS FLOW - HABAS MELT SHOP









 We achieve the aimed liquid steel quality by adding some alloyed materials into the ladle furnace after the scrap is melted in the EAF.

 Liquid steel ladle is transferred to slab casting machine.

## **PROCESS FLOW - HABAŞ SLAB CASTING**

Semi-product slab is produced by using continues casting method.







HABAS

## HABAS SEMI-PRODUCT-SLAB



- Thickness: 200 225 mm
- Width: 700 2,100 mm
- Length: 4 16m (max 40 ton)
- Quality : IF, DD11, S235, St 37-2, S275
- S355, S355V, J55
- API X42-X80;
- DUAL PHASE Dp600
- SAE J403 1006 1025;
- JIS G 3106, SS400 & SM490 etc...



## **PROCESS FLOW - HSM OVERVIEW**

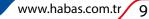
- 1(2) 450 mton/walking beam furnace
- High-pressure water descaler
- 1 (2) High reversing roughing stand with attached edger stand
- 1 Coil box (without mandrel)
- 1 Crop shear

Plant layout

- 7 Stand finishing mill
- Laminar strip cooling
- 2 (3) Down-coiler
- Strip conveyor system



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## HABAS HOT ROLLED COILS (HRC)





• Thickness :	
• Width :	
• Coil weight :	
Coil inner diameter :	
• Coil outer diameter max: .	2,150 mm
• Spec. Coil weight:	
• Telescopicity	
• Capacity:	2,500,000 ton/year
Steel grades	
• Ultra-low carbon steels (I	F)

- Low-carbon structure steels
- Medium carbon structure steels
- Unalloyed steels suitable to cold rolling
- High pressure tnak steels
- Ship built structure steels
- Pipe, profil manufacturing steels
- Micro alloyed HSLA steels
- Machine manufacturing steels
- Multi phase steels

CUT-TO-LENGTH LINE

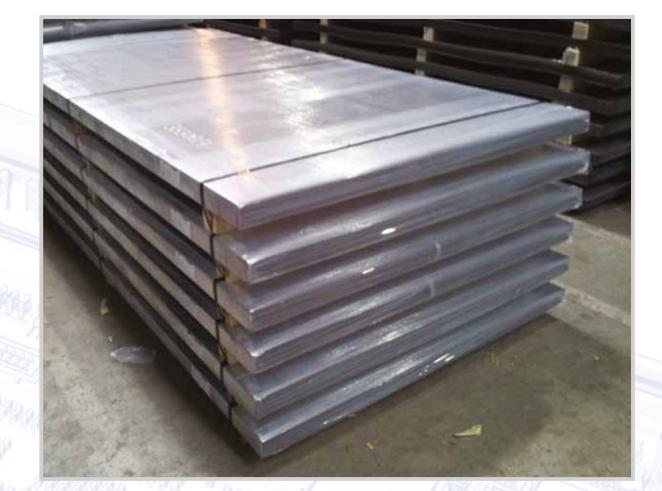
• Cutting type:

Acc. to customer's request, rectangular

- Thickness: 1,2 25,4 mm
- Length: 1,000 20,000 mm
- Width: 700 2,100 mm
- Edge trimming: 1,2 16 mm
- Package weight: 15 ton max
- Package type:

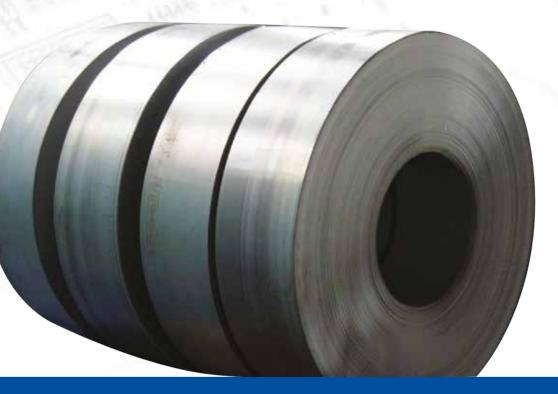
Export Packing

- AUTOMATIC CROSS BANDING MACHINE FOR BUNDLES. TIMBER'S APPLICATOR
- Package height: 500 mm max



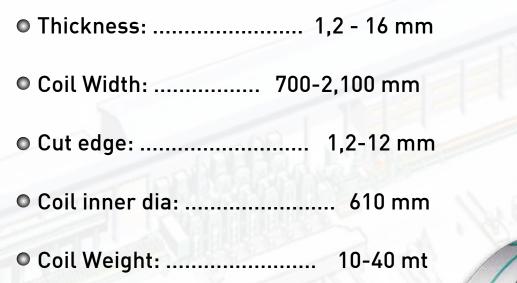


- Thickness: ..... 1,2 12,7 mm
- Slitting Width: ..... 70-2,100 mm
- Coil inner dia: ..... 610 mm
- Coil outer dia: .....1,000-2,200 mm



## HOT ROLLED PICKLING (HRP)







# HABAS GENERAL AREAS OF USAGE

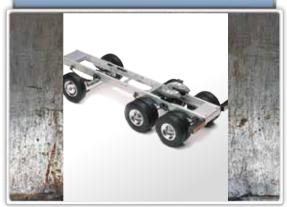








### Automotive/machine







USAGE AREA	STANDARD	QUALITY/GRADE
SOFT STEELS SUITABLE TO COLD ROLLING	SAE J403-95 DIN 1614-P1-86	HB3006,HB 3008 HB 5111 HB 6111 HB 6222 HB6223 HB6224
STEELS SUITABLE FOR COLD ROLLING AND DEEP DRAWING	DIN EN 10111-98	HB 6111 HB 6222 HB6223 HB6224 HB6624
LOW & MEDIUM STRENGTH CARBON STEELS (AUTOMOTIVE SECTOR, PIPE, PROFIL, VARIOUS MACHINERY EQUIPMENTS MANUFACTURING)	SAE J403-95 DIN EN 10025-94	HB 3006,HB3008 HB3012,HB3012,HB 3015 HB 5185
STEELS FOR SUITABLE TO PIPE & PROFIL MANUFACTURING	ASTM A 53-99B	HB 5009
HIGH STRENGTH STEELS SUITABLE TO COLD ROLLING	DIN EN 10149-P2-95	HB4932,HB4936,HB4920, HB4960

HABAS HOT ROLLED COILS USAGE AREAS

USAGE AREAS	STANDARD	QUALITY/GRADES
LPG TANK MANUFACTURING	DIN EN 10120-97	HB6837,HB6842, HB6847,HB6852
TANK STEELS SUITABLE TO BE USED UNDER HIGH PRESSURE AND TEMPERATURE	DIN EN 10028-P2-93	HB6335, HB6341, HB6347, HB6352
CONSTRUCTION MACHINE MANUFACTURING, HEAVY INDUSTRY MACHINE MANUFACTURING, GENERAL CONSTRUCTION PLATES, VARIOUS MACHINE EQUIPMENT MANUFACTURING, GENERAL CONSTRUCTIONAL STEELS FOR HEAVY INDUSTRY AND RAILWAY VEHICLE MANUFACTURING	DIN EN 10025-94 ASTM A283-98 SAE J403-95 JIS G 3101-95	HB 6235, HB6275 HB5020, HB5030, HB5040, HB5045, HB 6741
RIM STEELS	DIN EN 10111-98, DIN EN 10025-94, DIN EN 10149-P2-95	HB6111, HB6222, HB3937,HB3944, HB3955 HB4936, HB4942
STEELS FOR MANUFACTURING AUTOMOTIVE SPARE PARTS & CHASSIS	JIS G 3113-90 ASTM A 36-97A DIN EN 10113-P2-93	HB6275 HB3741 HB9355

## HOT ROLLED COILS USAGE AREAS

USAGE AREAS	STANDARD	QUALITY/GRADES
STRUCTURE STEEL SUITABLE FOR FOLDING	DIN EN 10025-94 JIS G 3106-99	HB6037,HB6044 HB6050,HB6052
MEDIUM STRENTH STEELS SUITABLE FOR PRESSURISED USAGE	ASTM A 285-96	HB6838, HB6850
MEDIUM STRENGTH STEELS SUITABLE FOR SHIP-BUILT	ABS-P2-00	HB3701,HB3702 HB6704,HB6705
VARIOUS MACHINERY EQUIPMENTS AND HIGH STRENGTH STRUCTURE STEELS FOR GENERAL CONSTRUCTION	DIN EN 10025-94, ASTM A 656-98	HB3355, HB3250,HB3260 HB5270
STEELS, WITH VARIOUS STRENGTH RATES, RESISTANT TO ATMOSPHERE AND GAS CORROSION	DIN EN 10025-94 DIN EN 10111-98	HB3281 (Cu) HB6284 (Cu) HB6282 (Cu)

HABAS HOT ROLLED COILS USAGE AREAS

USAGE AREAS	STANDARD	QUALITY/GRADES
PETROLEUM DRILLING PIPE STEELS	API 5CT-99	HB9256
BORON ADDED / SUITABLE TO THERMEX PROCESS STEELS FOR AGRICULTURE EQUIPMENTS AND SPECIAL USAGES	DIN EN 10083-P3-96	HB5620, HB5630
PETROLEUM PIPE STEELS	API 5L-00	HB9035, HB9042, HB9046, HB9052, HB9056, HB9060, HB9065, HB9070, HB9080
DUAL PHASE STEELS	DP 600	HB3660

### **Thickness & Width Tolerances**

#### THICKNESS TOLERANCES FOR DIN EN 10111:2008 DD11

and a second second	WIDTH - W (mm)			
THICKNESS - T (mm)	W ≤ 1200	1200 < W ≤ 1500	1500 < W ≤ 1800	W > 1800
T≤2,00	± 0,13	± 0,14	± 0,16	
<mark>2,00<t≤2,5< mark="">0</t≤2,5<></mark>	± 0,14	± 0,16	± 0,17	± 0,19
2,50 <t≤3,00< td=""><td>± 0,15</td><td>± 0,17</td><td>± 0,18</td><td>± 0,20</td></t≤3,00<>	± 0,15	± 0,17	± 0,18	± 0,20
3,00 <t≤4,00< td=""><td>± 0,17</td><td>± 0,18</td><td>± 0,20</td><td>± 0,20</td></t≤4,00<>	± 0,17	± 0,18	± 0,20	± 0,20
4,00 <t≤5,00< td=""><td>± 0,18</td><td>± 0,20</td><td>± 0,21</td><td>± 0,22</td></t≤5,00<>	± 0,18	± 0,20	± 0,21	± 0,22
5,00 <t≤6,00< td=""><td>± 0,20</td><td>± 0,21</td><td>± 0,22</td><td>± 0,23</td></t≤6,00<>	± 0,20	± 0,21	± 0,22	± 0,23
6,00 <t≤8,00< td=""><td>± 0,22</td><td>± 0,23</td><td>± 0,23</td><td>± 0,26</td></t≤8,00<>	± 0,22	± 0,23	± 0,23	± 0,26
8,00 <t≤11,00< td=""><td>± 0,24</td><td>± 0,25</td><td>± 0,25</td><td>± 0,28</td></t≤11,00<>	± 0,24	± 0,25	± 0,25	± 0,28

THICKNESS TOLERANCES FOR	DIN EN 10025-2:2004	S235 VE S275

	WIDTH - W (mm)			
THICKNESS - T (mm)	W ≤ 1200	1200 < W ≤ 1500	1500 < W ≤ 1800	W > 1800
T≤2,00	± 0,17	± 0,19	± 0,21	-
2,00 <t≤2,50< td=""><td>± 0,18</td><td>± 0,21</td><td>± 0,23</td><td>± 0,25</td></t≤2,50<>	± 0,18	± 0,21	± 0,23	± 0,25
2,50 <t≤3,00< td=""><td>± 0,20</td><td>± 0,22</td><td>± 0,24</td><td>± 0,26</td></t≤3,00<>	± 0,20	± 0,22	± 0,24	± 0,26
3,00 <t≤4,00< td=""><td>± 0,22</td><td>± 0,24</td><td>± 0,26</td><td>± 0,27</td></t≤4,00<>	± 0,22	± 0,24	± 0,26	± 0,27
4,00 <t≤5,00< td=""><td>± 0,24</td><td>± 0,26</td><td>± 0,28</td><td>± 0,29</td></t≤5,00<>	± 0,24	± 0,26	± 0,28	± 0,29
5,00 <t≤6,00< td=""><td>± 0,26</td><td>± 0,28</td><td>± 0,29</td><td>± 0,31</td></t≤6,00<>	± 0,26	± 0,28	± 0,29	± 0,31
6,00 <t≤8,00< td=""><td>± 0,29</td><td>± 0,30</td><td>± 0,31</td><td>± 0,35</td></t≤8,00<>	± 0,29	± 0,30	± 0,31	± 0,35
8,00 <t≤10,00< td=""><td>± 0,32</td><td>± 0,33</td><td>± 0,34</td><td>± 0,40</td></t≤10,00<>	± 0,32	± 0,33	± 0,34	± 0,40
10,00 <t≤12,50< td=""><td>± 0,35</td><td>± 0,36</td><td>± 0,37</td><td>± 0,43</td></t≤12,50<>	± 0,35	± 0,36	± 0,37	± 0,43
12,50 <t≤15,00< td=""><td>± 0,37</td><td>± 0,38</td><td>± 0,40</td><td>± 0,46</td></t≤15,00<>	± 0,37	± 0,38	± 0,40	± 0,46
15,00 <t≤25,00< td=""><td>± 0,40</td><td>± 0,42</td><td>± 0,45</td><td>± 0,50</td></t≤25,00<>	± 0,40	± 0,42	± 0,45	± 0,50

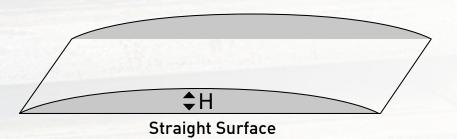
#### THICKNESS TOLERANCES FOR DIN EN 10025-2:2004 S355

THICKNESS - T (mm)	W ≤ 1200	1200 < W ≤ 1500	1500 < W ≤ 1800	W > 1800
T≤2,00	± 0,22	± 0,25	± 0,27	<u> </u>
2,00 <t≤2,50< td=""><td>± 0,23</td><td>± 0,27</td><td>± 0,30</td><td>± 0,33</td></t≤2,50<>	± 0,23	± 0,27	± 0,30	± 0,33
2,50 <t≤3,00< td=""><td>± 0,26</td><td>± 0,29</td><td>± 0,31</td><td>± 0,34</td></t≤3,00<>	± 0,26	± 0,29	± 0,31	± 0,34
3,00 <t≤4,00< td=""><td>± 0,29</td><td>± 0,31</td><td>± 0,34</td><td>± 0,35</td></t≤4,00<>	± 0,29	± 0,31	± 0,34	± 0,35
4,00 <t≤5,00< td=""><td>± 0,31</td><td>± 0,34</td><td>± 0,36</td><td>± 0,38</td></t≤5,00<>	± 0,31	± 0,34	± 0,36	± 0,38
5,00 <t≤6,00< td=""><td>± 0,34</td><td>± 0,36</td><td>± 0,38</td><td>± 0,40</td></t≤6,00<>	± 0,34	± 0,36	± 0,38	± 0,40
6,00 <t≤8,00< td=""><td>± 0,38</td><td>± 0,39</td><td>± 0,40</td><td>± 0,46</td></t≤8,00<>	± 0,38	± 0,39	± 0,40	± 0,46
8,00 <t≤10,00< td=""><td>± 0,42</td><td>± 0,43</td><td>± 0,44</td><td>± 0,52</td></t≤10,00<>	± 0,42	± 0,43	± 0,44	± 0,52
10,00 <t≤12,50< td=""><td>± 0,46</td><td>± 0,47</td><td>± 0,48</td><td>± 0,56</td></t≤12,50<>	± 0,46	± 0,47	± 0,48	± 0,56
12,50 <t≤15,00< td=""><td>± 0,48</td><td>± 0,49</td><td>± 0,52</td><td>± 0,60</td></t≤15,00<>	± 0,48	± 0,49	± 0,52	± 0,60
15,00 <t≤25,00< td=""><td>± 0,52</td><td>± 0,55</td><td>± 0,59</td><td>± 0,65</td></t≤25,00<>	± 0,52	± 0,55	± 0,59	± 0,65

## **Surface Regularity Tolerance**

WIDTH – W (mm)

//		H (mm)		
THICKNESS – T (mm)		W ≤ 1200	1200 < W ≤ 1500	1500 < W
T ≤ 2,00	Standard	18	20	25
2,00 < T ≤ 25	Standard	15	18	23
T ≤ 2,00	Special	9	10	13
2,00 < T ≤ 25	Special	8	9	12





### HABAŞ SINAİ ve TIBBİ GAZLAR İSTİHSAL ENDÜSTRİSİ A.Ş.

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