

Rebar Rolling Branch

TBS CO GROUP, after many years of experience in constructional rebar and after the commission of steel making units –in order to improve the quality of its products and development of its constructional products- the production of high diameter rebar placed on agenda and also according to the needs of country's constructional industry started the production of rebar with strength more than A4 (tread 500) (for saving 25 percent in rebar consumption).

In this factory, simple and ribbed rebar, A2, A3 and A4 produce in sizes 8 to 32 in branch form with utilizing of modern technology. The plant equipment that was purchased from Italian company Danieli was put into operation after installation in February 2003.



With respect that production of bars in the Iranian market is limited to simple carbon steel without alloying elements, going on this way faced by serious obstacles. So that in this complex, with commission of steel making units, production of steel bars with alloying elements and also production of ribbed rebar that have suitable tensile strength and sufficient ductility especially in the high diameter bars was provided.

The following benefits were guaranteed in this company rebar by holding down the carbon amount and using the alloying elements and also control and optimize and stabilization the parameters such as speed, caliber design and bar temperature:

- Maintaining the Rebar welding capability
- In addition to getting the required yield and ultimate strength, was raised the ultimate strength to yield strength ratio that made to increasing the energy absorption capacity before breaking in order to making rebar efficiency more appropriate in seismic uses.
- High elongation that the percent of this company rebar elongation is usually equal to lower category. Such as elongation percent of A3 rebar is equal to A2 rebar in this company in order to guarantee rebar bending and ductility capabilities.
- Precise control of size and shape of the rebar tread in order to ensure the setting of rebar concrete and reduction of stress and fatigue. To achieve this accuracy, this company is equipped to modern cutting rollers and pressing tread workshop . TBS CO Group achieving these advantages in rebar production is constantly controlled by using most modern control laboratory equipment, chemical analysis, mechanical properties and metallographic structure.

Rebar Rolling Clough line

TBStrading Steel company that was founded with the aim of producing portfolio of industrial and constructional rebar and supply of raw material of wire industrial units, after the commissioning of the rebar rolling branch factory in order to eliminate the needs of downstream steel industries and also to develop exports, inaugurated the largest and most modern factory of clough production of country that was constructed by SMS German group with the implementation of the second phase of rolling factories and added a variety of constructional and industrial wire to its product portfolio.



In Rebar Rolling Clough line, A2 and A3 ribbed rebar, simple rebar, industrial and tensile wire produce in Clough form in different sizes from 5.5 to 16, in order to be used for downstream industries for producing the following products:

- Constructional rebar
- Truss and joist
- Towing wire
- Barbed wire
- Metal chains
- Nails and Screws and Rivet
- Bead Wire and Wire used in rubber industry
- Electrodes and welding industries
- Fence lace and fence and gabion
- Springs industries
- Other downstream steel and transforming steel
- Free cutting steel

In this factory, used controlled cooling system to achieve mechanical properties and metallographic structure that customer desired.

Ribbed bars technical information

According to 3132 national standard of Iran in these grades:

- Simple rebar 240 in diameters of 8 to 32 mm in branch form and 8 to 16 mm in 1500-2000 kilos cloughs.
- Tread 340 (A2) in diameters of 8 to 16 mm in 1500-2000 kilos Cloughs.
- Tread 350 (A2) in diameters of 8 to 16 mm in 1500-2000 kilos Cloughs.
- Tread 400 (A3) in diameters of 8 to 16 mm in branch form and 8 to 16 mm in 1500-2000 kilos Cloughs
- Tread 420 in diameters of 8 to 16 mm in branch form and 8 to 16 mm in 1500-2000 kilos Cloughs
- Tread 500 (A4) in diameters of 8 to 16 mm in 1500-2000 kilos Cloughs.
- Tread 520 in diameters of 8 to 16 mm in 1500-2000 kilos Cloughs

rebar weight		
the weight of a 12 meter branch(kg)	weight / length(kg/m)	nominal diameter(mm)
4.75	0.395	8
7.4	0.616	10
10.65	0.888	12
14.5	1.21	14
18.7	1.56	16
24	2	18
29.6	2.47	20
35.7	2.98	22
45.6	3.8	25
58	4.83	28
75.7	6.31	32

mechanical properties							
minimum elongation percent		ratio of tensile strength to high yield strength	minimum tensile strength	high yield strength (newton/ square millimeter)		rebar type (according to market equivalent)	rebar type (according to 3132 national standard):
A10	A5			حداکثر	حداقل		
18	25	1.25	360	-	240	A1	س 240
15	18		500	-	340	A2	آج 340
-	17		500	455	350	-	آج 350
12	16		600	-	400	A3	آج 400
-	16		600	545	420	-	آج 420
8	10		650	-	500	A4	آج 500
-	13		690	675	520	-	آج 520

Clough Rebar technical information

mass and dimensions of industrial wire:

:mass and dimensions of industrial wire

diameter (mm)	tolerance(mm)	weight / length (kg/m)	section surface area(mm ²)
5.5	0.4±	0.187	23.76
6		0.222	28.27
6.5		0.26	33.18
7		0.302	38.48
7.5		0.347	44.18
8		0.395	50.26
8.5		0.445	56.74
9		0.499	63.62
9.5		0.556	70.88
10		0.617	78.54
11		0.746	95.03
12		0.888	113.1
13		1.04	132.7
14		1.21	153.9
15		1.39	176.7
16		1.58	201.1

packing: in clough form in 1500 and 2000 kilos

Cold heading quality steel

SAE	Steel no	DIN	chemical mixture					
			C	Si	Mn	Smax	Pmax	other
SAE 1006	1.0313	C7D	≤0.08	-	0.2-0.4	0.03	0.03	-
SAE 1008	1.0330	DC01	≤0.1	-	0.3-0.5	0.03	0.03	-
SAE 1010	1.0301	C10	0.08-0.13	-	0.3-0.6	0.03	0.03	-
SAE 1015	1.0413	C15D	0.13-0.18	-	0.3-0.6	0.03	0.03	-
SAE 1018	-	-	0.14-0.20	-	0.6-0.9	0.03	0.03	-
SAE 1020	1.0402	C22	0.18-0.23	-	0.3-0.6	0.03	0.03	-
SAE 1021	-	-	0.17-0.23	-	0.6-0.9	0.03	0.03	-
SAE 1025	1.1158	CK25	0.22-0.28	-	0.3-0.6	0.03	0.03	-
SAE 1033	1.1146	30Mn4	0.3-0.36	-	0.7-1	0.03	0.04	-
SAE 1035	1.1181	CK35	0.32-0.39	≤0.4	0.5-0.8	0.03	0.03	-
SAE 1045	1.1191	CK45	0.42-0.5	≤0.4	0.5-0.8	0.03	0.03	-
SAE 10B21	-	-	0.17-0.23	≤0.2	0.6-0.9	0.03	0.03	B:0.002
SAE 10B38	-	-	0.34-0.38	≤0.2	0.6-0.9	0.03	0.03	B:0.004

Wire for welding electrode and welding wire according to the standards

- Japan Standard JIS G3503
- Germany standard DIN 17145

or other standards in accordance with customer requirements

Steel number	Steel mark	chemical mixture							
		C	Mn	Si	P	S	Cr	Ni	Cu
1.0323	USD7	0.05-0.09	0.4-0.6	≤0.03	≤0.025	≤0.025	≤0.12	≤0.12	≤0.17
1.0324	RSD7	0.05-0.1	0.35-0.55	0.05-0.1	≤0.025	≤0.025	≤0.12	≤0.12	≤0.17
1.5112	10MnSi5 (SG1)	0.07-0.11	1.03-1.27	0.55-0.75	≤0.020	≤0.020	≤0.12	≤0.12	≤0.17
1.5125	11MnSi6 (SG2)	0.07-0.14	1.3-1.6	0.7-1	≤0.020	≤0.020	≤0.12	≤0.12	≤0.17
1.5130	10MnSi7 (SG3)	0.06-0.13	1.6-1.9	0.85-1.2	≤0.020	≤0.020	≤0.12	≤0.12	≤0.17
1.0492	11Mn4Si (S2)	0.07-0.15	0.8-1.2	≤0.15	≤0.025	≤0.025	≤0.12	≤0.12	≤0.17
–	SWRY11	≤0.09	0.35-0.65	≤0.03	≤0.020	≤0.020	N/S	N/S	≤0.20
–	SWRY21	0.06-0.1	0.35-0.65	≤0.03	≤0.020	≤0.020	N/S	N/S	≤0.20

High carbon steel wire

This wire used for production of springs, tire bead, steel ropes, High –voltage cables, pre stressed wire and presented according to SAE, JIS, DIN, ATMS standards or other standards in accordance with customer requirements.

steel number	DIN	JIS	chemical mixture							
			C	Si	Mn	P max	S max	Cr	Cu	Ni
1.0611	C62	SWRH62A	0.6-0.65	0.15-0.35	0.5-0.8	0.03	0.03	-	-	-
-	-	SWRH62B	0.59-0.66	0.15-0.35	0.6-0.9	0.03	0.03	-	-	-
1.0603	C67	SWRH67A	0.65-0.72	0.1-0.3	0.55-0.65	0.03	0.03	-	-	-
-	-	SWRH67B	0.64-0.71	0.15-0.35	0.6-0.9	0.03	0.03	-	-	-
1.0617	C72	SWRH72A	0.7-0.75	0.1-0.3	0.5-0.8	0.03	0.03	-	-	-
-	-	SWRH72B	0.69-0.76	0.15-0.35	0.6-0.9	0.03	0.03	-	-	-
1.0620	C78	SWRH77A	0.75-0.80	0.15-0.35	0.5-0.8	0.03	0.03	-	-	-
-	-	SWRH77B	0.74-0.81	0.15-0.35	0.6-0.9	0.03	0.03	-	-	-
1.0626	C82D		0.8-0.85	0.1-0.3	0.5-0.8	0.03	0.03	≤0.15	≤0.25	≤0.2
-	-	SWRH82B	0.79-0.86	0.15-0.35	0.6-0.9	0.03	0.03	-	-	-

Low steel carbon and constructional wire for tensile industries in order to producing lace, fence, barbed wire and ...

steel number	DIN	GOST	chemical mixture					
			C	Si	Mn	P max	S max	Other
1.0034	RSt34-2	ST 2SP	≤0.12	≤0.2	0.3-0.5	0.035	0.035	-
1.0036	USt37-2	ST 3KP	≤0.17	≤0.05	0.3-0.5	0.045	0.045	Ceq≤0.34 N≤0.007
1.0038	RSt37-2	ST 3SP	≤0.17	0.06-0.15	0.3-0.5	0.045	0.045	Ceq≤0.34 N≤0.009
1.0116	St37-3	ST 3SP	0.12-0.17	0.2-0.3	0.45-0.7	0.04	0.04	Ceq≤0.34 N≤0.009
1.0419	RSt44-2	-	0.14-0.22	0.15-0.35	0.5-0.8	0.045	0.045	Ceq≤0.4 N≤0.009
1.0144	St44-3	-	0.14-0.2	0.2-0.35	0.5-0.8	0.04	0.04	Ceq≤0.4 N≤0.009
1.0050	St50-2	ST5SP	0.25-0.35	0.15-0.3	0.5-0.8	0.045	0.045	Ceq≤0.48 N≤0.009
1.0060	St60-2	ST6SP	0.35-0.45	0.15-0.3	0.5-0.8	0.045	0.045	N≤0.009
1.0070	St70-2	-	0.45-0.55	0.15-0.3	0.5-0.8	0.045	0.045	N≤0.009

Free Cutting Steel

steel number	DIN	ASE	JIS	chemical mixture					
				C	Si	Mn	P	S	Other
1.0711	9S20 (9S20K)	1112	SUM21	≤ 0.13	≤ 0.05	0.6-1.2	0.07-0.12	0.16-0.23	-
1.0715	11SMn30	1213	SUM22	≤ 0.13	≤ 0.05	0.9-1.3	0.07-0.12	0.24-0.33	-
1.0718	9SMnPb28 (11SMnPb30)	12L13	SUM22L	≤ 0.14	≤ 0.05	0.9-1.3	≤ 0.11	0.27-0.33	Pb: 0.15-0.35
1.0736	9SMn36 (11SMn37)	1215	SUM25	≤ 0.15	≤ 0.05	1-1.5	0.07-0.10	0.34-0.40	-
1.0737	9SMnPb36 (11SMnPb37)	12L14	-	≤ 0.15	≤ 0.05	1.1-1.5	≤ 0.10	0.34-0.40	Pb: 0.15-0.35
1.0721	10S20	1108	-	0.07-0.13	≤ 0.4	0.7-1.1	≤ 0.06	0.15-0.25	-
1.0726	35S20	1140	-	0.32-0.39	≤ 0.4	0.7-1.1	≤ 0.06	0.15-0.25	-
1.0727	45S20 (46S20)	1146	-	0.42-0.5	0.1-0.3	0.7-1.1	≤ 0.06	0.18-0.25	-

Product List

Contact us for information on prices

Branch rebar rolling line						
No.	Type	Nominal diameter	Length (m)	weight of each 12m(Kg)	Class	Stock
1	Ribbed Branch A2	8	12	4.75	Tread 340	Factory
2	Ribbed Branch A2	10	12	7.4	Tread 340	Factory
3	Ribbed Branch A3	12	12	10.65	Tread 400	Factory
4	Ribbed Branch A3	14	12	14.5	Tread 400	Factory
5	Ribbed Branch A3	16	12	18.7	Tread 400	Factory
6	Ribbed Branch A3	18	12	24	Tread 400	Factory
7	Ribbed Branch A3	20	12	29.6	Tread 400	Factory
8	Ribbed Branch A3	22	12	35.7	Tread 400	Factory
9	Ribbed Branch A3	25	12	45.6	Tread 400	Factory
10	Ribbed Branch A3	28	12	58	Tread 400	Factory
11	Ribbed Branch A3	32	12	75.7	Tread 400	Factory

No.	Type	Nominal diameter	Length(m)	weight of each 12m(Kg)	Class	Stock
1	Ribbed Branch A2	8	12	4.75	Tread 340	Tehran Storehouse
2	Ribbed Branch A2	10	12	7.4	Tread 340	Tehran Storehouse
3	Ribbed Branch A3	12	12	10.65	Tread 400	Tehran Storehouse
4	Ribbed Branch A3	14	12	14.5	Tread 400	Tehran Storehouse
5	Ribbed Branch A3	16	12	18.7	Tread 400	Tehran Storehouse
6	Ribbed Branch A3	18	12	24	Tread 400	Tehran Storehouse

No.	Type	Nominal diameter	Length(m)	weight of each 12m(Kg)	Class	Stock
7	Ribbed Branch A3	20	12	29.6	Tread 400	Tehran Storehouse
8	Ribbed Branch A3	22	12	35.7	Tread 400	Tehran Storehouse
9	Ribbed Branch A3	25	12	45.6	Tread 400	Tehran Storehouse
10	Ribbed Branch A3	28	12	58	Tread 400	Tehran Storehouse
11	Ribbed Branch A3	32	12	75.7	Tread 400	Tehran Storehouse

No.	Type	Diameter(mm)	Coil weight (kg)	Class	Stock
1	Ribbed Clough A2	8	1520	A2	Tehran Storehouse
2	Ribbed Clough A2	10	1520	A2	Tehran Storehouse
3	Ribbed Clough A2	8	1520	A2	Factory
4	Ribbed Clough A2	10	1520	A2	Factory

No.	Type	Diameter (mm)	Steel Mark	Coil weight (kg)	Stock
1	Simple Clough	6.5	RST34-2	1520	Tehran Storehouse
2	Simple Clough	6.5	RST34-2	1520	Factory