

SPECIAL PROFILES

BORON FLATS - THN MINING PROFILES - PLOUGHSHARE BLADES - RAILWAY CONNECTIONS

BORON FLATS



TECHNICAL SPECIFICATIONS



TYPE:

Hot-Rolled Bars of rectangular cross-section (Flats)



STEEL GRADE:

- 15B35 modified
- 30Mn5 modified



FORM - DIMENSIONS:

Straight bars with width from 80 to 180mm and thickness from 25 to 90mm



LENGTH - TOLERANCE:

Bar length 6 to 12m with tolerance + / -75mm



PACKING - WEIGHT:

Bundles weighing approximately 5,200kg



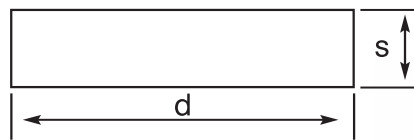
DIMENSIONS - WEIGHT - TOLERANCES:

According to DIN 1017



Boron steel flat bars are used to applications where high strength, good bendability and weldability is required.

They also offer good impact toughness and high yield strength. Hot-Rolled Boron Flats are used in the fork-lift industry and especially in the production of forks.



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STEEL CHEMICAL COMPOSITION & MECHANICAL PROPERTIES

STEEL GRADE	CHEMICAL COMPOSITION						
	C (%)	Mn (%)	Si (%)	Cr (%)	S (%) max	P (%) max	B (%)
15B35 Mod.	0.27-0.35	1.00-1.60	0.15-0.35	0.25-0.65	0.025	0.020	0.0005-0.0050
30Mn5 Mod.	0.30-0.34	1.25-1.50	0.15-0.35	0.30-0.50	0.020	0.025	0.0005-0.0040

STEEL GRADE	MECHANICAL PROPERTIES					
	NOMINAL THICKNESS S (mm)	SAMPLE	YIELD STRENGTH (N/mm ²) min	TENSILE STRENGTH (N/mm ²)	ELONGATION 5dg, (%) min	CHARPY -V-NOTCH IMPACT-j (TEST at-20° C)
15B35 Mod.	25-90	QUENCHED & TEMPERED	827	950 min	12	27 j min
		AS ROLLED	—	700 min	—	—
30Mn5 Mod.	25-90	QUENCHED & TEMPERED	750	900-1.100	—	27 j min

HARDENABILITY, HRC

STEEL GRADE	THICKNESS S (mm)	DISTANCE (mm)									
			1.5	5.0	9.0	13.0	15.0	20.0	25.0	30.0	35.0
15B35 Mod.	Up to 50	max	58	—	—	55	—	50	—	—	—
		min	51	—	—	41	—	33	—	—	—
	51-70	max	58	—	—	—	55	53	—	—	—
		min	51	—	—	—	41	33	—	—	—
	>70	max	58	—	—	—	—	55	51	—	—
		min	51	—	—	—	—	41	34	—	—
30Mn5 Mod.	25-90	max	55	55	54	53	52	48	44	39	36
		min	47	46	42	36	33	27	23	20	—

DIMENSIONS, THICKNESSES AND TOLERANCES

WIDTH d (mm)	ALLOWED WIDTH DEVIATION (mm)	THICKNESS S (mm)											
		25	30	35	40	45	50	60	65	70	75	80	90
		PERMISSIBLE THICKNESS DEVIATION (mm)											
		± 1.0			± 1.5								
NOMINAL WEIGHT (Kg/m)													
80	1.5	—	—	—	25.12	—	—	—	—	—	—	—	—
100		—	23.55	27.47	31.40	35.72	39.25	47.10	—	—	—	—	—
110	2.0	—	—	—	34.54	—	—	—	—	—	—	—	—
120		—	—	—	37.68	42.39	47.10	—	—	—	—	—	—
125	2.5	—	—	—	—	—	49.06	58.87	—	—	—	—	—
130		25.51	30.61	—	—	—	51.02	61.23	—	—	—	—	—
140		—	—	—	43.96	49.45	54.95	65.94	—	—	—	—	—
150		—	—	—	—	52.98	64.76	70.65	76.54	82.42	88.31	—	—
180		—	—	—	—	63.58	—	—	—	98.91	105.97	—	127.17