SB - 50

APPLICATIONS

SB-50 is used to endure conditions of extra-heavy wear and when great strength is required. E.g. truck platform superstructures, excavator buckets, bucket cutting edges, skips, chutes, screens, crushers, road scrapers etc. Owing to its high yield strength and hardness, this steel can be used in structures where it is important to save weight and at the same time retain strength, or in structures where increased durability is important.

CHEMICAL COMPOSITION

	C %	Si %	Mn %	P %	S %	Cr %	B %
Min.	0,24	0,15	1,10	-	-	0,30	0,0008
Max.	0,30	0,40	1,40	0,025	0,040	0,60	0,0050

HARDNESS

Min. 450 HB

STRENGTH (TYPICAL VALUES)

YIELD STRENGTH Re N / nm2	TENSILE STRENGTH Rm N / nm2	ELONGATION A5 %
1200	1700	6 - 10

IMPACT TOUGHNESS (TYPICAL VALUES)

TEMPERATURE	J / cm²
+ 20°C	25 - 35
- 20°C	15 - 25

HEAT TREATMENT

SB-50 must not be heated over 250°C if its hardness is to be retained.

MACHINING

SB-50 can be cold-bent, in spite of its extreme hardness.
Gas-cutting must be carried out at the higher working temperature range of 100 – 150°C, in or¬der to avoid the formation of cracks.

WELDING

Owing to its chemical composition, SB-50 possesses good weldability. However, whenever there is a combined sheet thickness of more than 20 mm, a certain preheating (150 – 200°C,) is advisable. Carbon equivalent: CE = 0,48-0,65 SB-50 should be welded using filler metals which give low hydrogen content in the weld deposit. Filler metals of basic type are most suitable for SB-50.
Some examples of suitable filler metals

MAKE	MANUAL METAL ARC WELDING	GAS METAL ARC WELDING	
		WIRE	TUBE
Esab	OK 74.78	OK Autrod 13.09	OK Tubrod 15.17
SAF	Safer ND65	Nertalic	SAFDUAL 100
ELG	P70	Elgamatic 140	DWA 55E
Böhler	Fox BVD90	Nil-IG	Kb52 - FD
Orlikon	Tenacito 65	Carbofil Nil	Fluxofil 40

END - PRODUCTS FOR DELIVERY

Bucket cutting edges flat and universal bar

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