

## GENERAL DESCRIPTION

### Water Quenched High Wear Resistant Steel

The water quenched VS400 with its high initial hardness has excellent weldability and cold forming properties. The low alloyed analysis gives a reasonable carbon equivalent.

## MAIN CHARACTERISTICS OF VS400

Thicknesses	3 - 100 mm
Widths	1000 x 3000 mm
Lengths	Up to 12000 mm

## TYPICAL PROPERTIES AND VALUES OF VS400

Hardness at room temperature 360 ñ 440 HB in delivered condition.

Heat analysis is %.

C	Si	Mn	P	S	Cr	Mo	B
Max	Max	Max	Max	Max	Max	Max	Max
0.20	0.80	1.50	0.025	0.010	1.0	0.50	0.005

The steel is produced to fine grain practice.

Carbon equivalent CE + 0.24/0.41 (CE = C+(Mn + Mo)/10+ (Cr + Cu)/20+ Ni/40)

Yield Point	N/mm <sup>2</sup>	1150
Tensile Strength	N/mm <sup>2</sup>	1300
Elongation A (%)		12

Bending radius at folding test on transverse test specimen.  
(a + specimen thickness, bending angle 180°) min : ≥ 2a

Impact energy at -40 on Charpy-v notch bar tested longitudinally 30J Minimum

Pre heating is required for butt welds above a combined thickness of 50mm. The following gives minimum pre heating temperatures in°C, relative to plate thickness and joint type.

Type of Joint	Plate Thickness (mm)								
	8	10	15	20	25	30	40	50	60
Butt Weld	None	None	None	None	100	150	180	200	200
Fillet Weld	None	None	None	130	160	180	200	200	200

Recommended heat input 1.2 - 2.5 KJ/mm, interpass temperature 250°C maximum.

## TECHNICAL SUPPORT

Technical support and advice may be obtained by contacting the nearest Triten office or distributor.