

TECHNICAL SPECIFICATIONS AR500

WEAR-RESISTANT STEEL

AR500 is an anti-wear steel with an approximate hardness of 500 HBW, designed for applications requiring wear resistance.

Applications

Crushers, screens, hoppers, dosing feeders, elevators designed for mines, loaders, loader blades, conveyors, cutting blades, sprockets and pulleys for chains, earth moving machines, excavators, presses, etc

Chemical composition (casting analysis)

Steel thickness mm	C máx %	Si máx %	Mn máx %	P máx %	S máx %	Cr máx %	Ni máx %	Mn máx %	B máx %	CEV Typical values	CET Typical values
4-13 mm	0.27	0.70	1.60	0.025	0.010	1.00	0.25	0.25	0.004	0.49	0.34
13-32mm	0.29	0.70	1.60	0.025	0.010	1.00	0.50	0.30	0.004	0.62	0.41
32-38mm	0.29	0.70	1.60	0.025	0.010	1.00	1.00	0.60	0.004	0.64	0.43
38-80mm	0.30	0.70	1.60	0.025	0.010	1.40	1.50	0.60	0.004	0.74	0.46

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mn + V}{5} + \frac{Cu + Ni}{15}$$

$$CET = C + \frac{Mn + Mn}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40}$$

The steel is fine grade.

Hardness

HBW
470 - 530

Resilience

Typical steel value $\frac{3}{4}$ IN. thick

Temperature test °C	Impact energy Charpy-V, probeta longitudinal Ft-lbs (J)
-40 (-40 °F)	22 (30)

Testing

Brinell hardness test, according to EN ISO 6506-1, on machined surface 0.02 - 0.12 in. under the steel surface, per casting and 40 Tn. Tests are performed for each variation of $f \frac{5}{8}$ in. in steel thickness of the same casting.

Supply conditions

Q.

Dimensions

AR500 is supplied in thicknesses from 6 mm to 100 mm. Special sizes are available upon request.

