

PRODUCT DATA SHEET

WearTuf 400

Revision: 04

CHARACTERISTICS

WearTuf 400 is a fully martensitic Q&T abrasion resistant steel plate, having a hardness of average 400 Brinell. WearTuf 400 is a versatile wear plate that combines abrasion resistance with outstanding weldability and cold forming capabilities. The high impact toughness grants a very good crack resistance of the steel during fabrication and in service.

APPLICATIONS

WearTuf 400 has found its application base among the traditional earth moving, mining and transport equipment, such as buckets, dumpers, tippers, crushers, hammers, conveyors and other mineral feeding systems. Being supplied in the thin and wide dimension range, WearTuf 400 also focuses on light weight wear design concepts and applications.

DIMENSIONS

WearTuf 400 is supplied in the thickness range of 4.0- 60.0 mm and in plate width of 900-3 100 mm. Supplied plate length from 4 000 to 18 000 mm.

HARDNESS GUARANTEE

Surface hardness: 370- 430 Brinell

According to the requirements of GB/T 24186, during the preparation of hardness samples, the influence of overheating and other factors on the samples shall be minimized (the heat affected zone of flame heating is generally 50%-100% of the plate thickness). The surface Brinell hardness shall be tested after the steel plate surface is keyed to a depth of 0.5-2.0 mm.

IMPACT TOUGHNESS

Average 24J/-20 °C

According to the standard GB/T 24186, three full-size V-groove impact specimens (10x10mm²) parallel to the rolling direction are tested at -20 °C, and the average value of the three impact energies is obtained as the impact toughness of the steel plate. (**)

CHEMICAL COMPOSITION

Ladle analysis: The steel is grain refined and fully killed, wt%

Plate thickness, (mm)	C max	Si max	Mn max	P max	S max	Cr max	Ni max	Mo max	B max
4.0-12.0	0.18	0.50	1.50	0.025	0.010	0.40	0.10	0.20	0.004
12.1-25.0	0.20	0.50	1.50	0.025	0.010	0.60	0.15	0.25	0.004
25.1-40.0	0.20	0.60	1.50	0.025	0.010	1.00	0.20	0.35	0.004
40.1-60.0	0.21	0.70	1.50	0.025	0.010	1.20	0.25	0.50	0.004



MECHANICAL PROPERTIES TYPICAL VALUES

Tensile strength Elongation

Rm A5

1250 MPa 10%

According to G B / T 2 4 1 8 6 , uniaxial tensile testing is performed in transverse direction to Rolling.

SURFACE CONDITION AND PROPERTIES

The surface finish delivered meets and exceeds the requirements of GB/T24186.

The plates will be delivered as shot blasted and painted, using a low zinc silicate corrosion protective shop primer. Plates can also be delivered as unpainted.

ULTRASONIC TESTING

All plates delivered meets the GB/T24186

HEAT TREATMENT

Since the properties in the as delivery condition cannot be retained after exposure at service temperatures above 200°C, WearTuf 400 is not intended for further heat treatment.

DELIVERY CONDITION

WearTuf 400 is delivered in the as quenched (Q) condition, and when found necessary in the condition of quenched and tempered (QT). The plates are delivered with sheared or thermally cut edges.

PROCESSING PERFORMANCE

More information on the steel processing performance of WearTuf 400 can be found by consulting the WearTuf Technical manuals on 1) Welding, 2) Cutting and , 3) Machining.

TOLERANCES

The thickness tolerances of WearTuf 400 meets and exceeds the thickness tolerance of GB/T24186 . Flatness tolerances conforms to GB/T24186. For more information, consult the Leong Jin product catalogue: Product information, dimensions and tolerances.

(*)The centre of plate hardness is defined as the mean hardness over the plate through thickness centre, corresponding to a width of 25% of the plate thickness.

(**) In plate thickness less than 12 mm, subsize Charpy test samples are used. The specified min value is then proportional to the cross section of the sample. According to GB/T24186, impact tests are not required for nominal thickness < 6 mm.

(***) In the range of 4.0 – 12.0 mm the Leong Jin Narrow thickness tolerances can be offered. Tolerances on shape, length and width meets the requirement of GB/T24186.