

BISPLATE® 80

BISPLATE® 80 is a high strength, low alloy steel plate with a yield strength three times that of carbon steel and featuring low carbon, excellent notch toughness, good weldability and formability.

APPLICATIONS

Utilising the high strength properties of BISPLATE® 80 allows reduction in section thickness without loss of structural integrity. The following lists some applications where the strength advantage has been realised:

- Transport equipment (*Low loaders*)
- High-rise buildings (*Columns*)
- Mining equipment (*Dump truck trays/Longwall roof supports*)
- Lifting equipment (*Mobile cranes/Container handling equipment*)
- Bridges
- Storage tanks
- Excavator buckets
- Induced draft fans

FABRICATION

BISPLATE® 80 is a high strength steel manufactured with a controlled carbon equivalent for optimum weldability.

BISPLATE® 80 can be successfully welded to itself and a range of other steels, provided low hydrogen consumables are used and attention is paid to preheat, interpass temperature, heat input and the degree of joint restraint. Stress relieving can be achieved at 540°C – 570°C. Heating above this temperature should be avoided to minimise any adverse effects on mechanical properties. Cold forming can be successfully conducted, provided due account is taken of the increased strength of the steel.

For further details on fabrication please refer to Bisalloy's technical literature.

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MECHANICAL PROPERTIES

PROPERTIES	SPECIFICATION	TYPICAL
0.2% Proof Stress	690 MPa (Min)*	750 MPa
Tensile Strength	790 - 930 MPa*	830 MPa
Elongation in 50mm G.L.	18% (Min)*	26%
Charpy Impact (Longitudinal) -20°C (10mm x 10mm)	40J (Min)*	160J
Hardness		255HB

*Dependant on Plate Thickness

CHEMICAL COMPOSITION

THICKNESS (mm)		C	P	Mn	Si	S	Cr	Mo	B	CE(IIW)*	CET*
5 - <16	Maximum	0.18	0.025	1.5	0.25	0.008	0.25	0.25	0.002	0.40	0.29
≥16 - 80	Maximum	0.20	0.025	1.5	0.25	0.008	0.30	0.25	0.002	0.50	0.35
>80 - 100	Maximum	0.18	0.025	1.5	0.25	0.008	1.20	0.25	0.002	0.58	0.34

*Typical Average