PRODUCT **DATA SHEET**

Bisalloy STRUCTURAL

BISALLOY® STRUCTURAL 100 STEEL

Introduction

BISALLOY® STRUCTURAL 100 steel is a low alloy, high strength steel plate with very high yield strength (over three times that of carbon steel) and featuring low carbon, excellent notch toughness and good weldability and formability.

Applications

Utilising the high strength properties of BISALLOY® STRUCTURAL 100 steel allows reduction in section thickness without loss of structural integrity. Some applications where the strength advantages of BISALLOY® STRUCTURAL 100 steel have been realised include:

- Transport Equipment such as Low Loaders
- Columns for Low and High Rise Buildings
- Transfer Beams for Low and High Rise Buildings
- Road and Rail Bridge Beams and Columns
- Mobile Lifting Equipment
- Overhead Cranes
- Container Handling Equipment

BISALLOY® STRUCTURAL 100 steel is manufactured in accordance with AS/NZS 3597 Grade 900.

Mechanical properties

Hardness (Typical)	
Plate Thickness (mm)	Brinell Hardness (HB 3000/10)
5 - <30	320

Tensile			
Plate Thickness (mm)	0.2% Proof Stress (MPa) Min	Tensile Strength (MPa)	% Elongation (50 mm G.L) Min
5 - <30	890	940 - 1100	13

Charpy V-Notch Impact			
Plate Thickness (mm)	Energy (J) (Min)	Test Temp. (°C)	Test Directions
5	By Agmnt	-20	L
6 - <8.5	20	-20	L
8.5 - <12	30	-20	L
12 - 30	40	-20	L

Chemical composition

Thickness (mm)	Weight %	C	P	Mn	Si	S	Cr	Mo	B	CE(IIW)*	CET*
5 - <30	Maximum	0.18	0.025	1.2	0.60	0.008	1.00	0.25	0.002	0.44	0.26

*Typical average. Low heat input butt welding required to ensure transverse weld tensile properties are achieved. Alternate chemistry may be specified when necessary