

BISALLOY® STRUCTURAL 70 STEEL

Introduction

BISALLOY® STRUCTURAL 70 steel is a low carbon, low alloy, high strength structural steel exhibiting excellent cold formability and low temperature fracture toughness. BISALLOY® STRUCTURAL 70 steel can be welded with minimal pre-heat and has excellent low temperature fracture toughness.

Applications

The combination of BISALLOY® STRUCTURAL 70 steel's mechanical properties and ease of fabrication offers economic advantages in many structural applications such as:

- Transport Equipment such as Trays, Low Loaders and Trailer Outriggers
- Storage Tanks for Water, Oil and Gas
- Columns for Low and High Rise Buildings
- Transfer Beams for Low and High Rise Buildings
- Structural Components for Mining Dump Trucks and other Mobile Equipment
- Underground Longwall Mining Supports
- Mobile Lifting Equipment
- Overhead Cranes

BISALLOY® STRUCTURAL 70 steel is manufactured in accordance with AS/NZS 3597 Grade 600.

Mechanical properties

Hardness (Typical)		Tensile				Charpy V-Notch Impact			
Plate Thickness (mm)	Brinell Hardness (HB 3000/10)	Plate Thickness (mm)	0.2% Proof Stress (MPa) Min	Tensile Strength (MPa)	% Elongation (50 mm G.L) Min	Plate Thickness (mm)	Energy (J) (Min)	Test Temp. (°C)	Test Directions
5 - 100	230	5 - 100	600	690 - 830	20	5	By Agmt	-40	L
						6 - <8.5	40	-40	L
						8.5 - <12	60	-40	L
						12 - 65	75	-40	L
						70 - 100	75	-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
≥30 - 80	Maximum	0.18	0.025	1.3	0.60	0.008	1.00	0.25	0.002	0.54	0.32
>80 - 100	Maximum	0.18	0.025	1.5	0.60	0.008	1.20	0.25	0.002	0.58	0.34

*Typical average

PLEASE NOTE: Every care has been taken to ensure the accuracy of information contained in this manual which supersedes earlier publications, however Bisalloy Steels shall not be liable for any loss or damage whatsoever caused from the application of such information. Typical values are provided for reference information only and no guarantee is given that a specific plate will provide these properties. Information is subject to change without notice. **Published August 2020**