

BISALLOY® WEAR 600 STEEL

Introduction

BISALLOY® WEAR 600 steel is the hardest abrasion-resistant steel currently produced by Bisalloy Steels. With a nominal hardness of 600 HBW or 57.0 Rockwell Hardness (HRC), BISALLOY® WEAR 600 steel provides the highest level of wear resistance for abrasion applications, while still being tough enough to absorb impacts.

Applications

Specifically developed for use in highly abrasive and harsh environments encountered in mining, quarrying and earthworks applications, BISALLOY® WEAR 600 offers exceptionally long life in applications with maximum sliding and minimal impact such as:

- Wear Liners for Chutes
- Ground Engaging Tools
- Cutters and Cutting Edges
- Shredders
- Hammers

Mechanical properties

Properties	Specification	Typical
Charpy Impact (Longitudinal)* -40°C (10 mm x 10 mm)	-	12 J
Hardness	570 - 640 HB	600 HB

Chemical composition

Thickness (mm)	Weight %	C	P	Mn	Si	S	Ni	Cr	Mo	B	CE(IIW)*	CET*
12 - 50	Maximum	0.45	0.020	0.40	0.35	0.005	1.0	1.2	0.30	0.002	0.75	0.52

*Typical average

BISALLOY® WEAR 600 steel obtains its superior mechanical properties by quenching and when necessary by means of subsequent tempering. The properties of the delivered condition cannot be retained after exposure to temperatures in excess of 250°C and BISALLOY® WEAR 600 steel is not intended for further heat treatment.

Safety Considerations and Advice

BISALLOY® WEAR 600 steel is designed for wear applications and should not be used in any structural applications.

It is recommended that all fabrication of BISALLOY® WEAR 600 steel should be undertaken in strict accordance with these recommendations to avoid personal and/or equipment damage.

Bisalloy Steels' recommendations for the processing and handling of BISALLOY® WEAR 600 steel are provided to prevent any harm or injury which may result from the inappropriate unsafe use and handling of very high hardness steels.

All appropriate and/or necessary safety measures are the responsibility of the buyer and/or user in order to prevent personal injury or equipment damage during handling and/or processing of BISALLOY® WEAR 600 steel.

Due to the very high hardness of this BISALLOY® WEAR 600 steel product, the plant and equipment used for lifting and loading must be suitable for the job.

In particular, the following should be noted:

- If using vertical lifting dogs/clamps, ensure they are suitable for lifting such high hardness plate
- Avoid shock loading/dropping and other sudden impact during plate lifting/handling

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**