

RUX HARDFACE®
**RUX
HARDFACE
C30**



🌐 www.resourcesunity.com ✉ info@resourcesunity.com

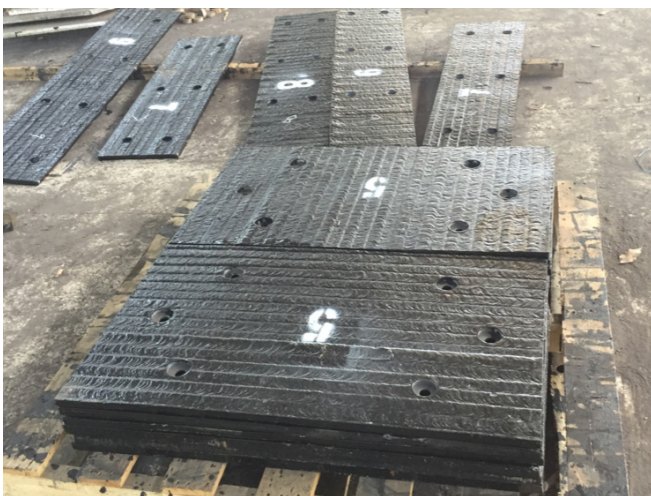
📞 +61 2 8373 6611 ☎ +61 2 8373 6690

RUX HARDFACE[®] C30

RUX HF (C30) implements overlay welding technology to build a layer of highly resistant material on top of BNH 500 Q&T plate. This resistant material is generally described as carbide - hence the term 'carbide overlay'. RUX HF (C30) has advanced the technology of conventional carbide overlay. Wear resistance and impact toughness properties have been largely improved by the advanced development of our wear material technology. Conventional overlay carbide was limited to a sliding type of abrasion, with no impact on its application, and carbides tended to chip under impact. Resources Unity minimised this issue with the RUX HF (C30) series.

FEATURES

- High resistance, welding capabilities, and flexibility ($\geq 700\text{MPa}$)
- Premium chemistry of the overlay hard-face
- Super strong bonding strength with backing wear plate
- High-grade Q&T backing plate



BENEFITS

- Higher wear resistance
- No chipping or flaking issues
- An overall stronger product that handles all types of abrasions well up to a medium level impact (please consult with a Resources Unity engineer for definition of impact levels)



CHEMICAL COMPOSITION

Chemical Composition (%)									Rockwell Hardness
C	Mn	Si	Cr	Mo	Nb	Ni	W	V	
4.0-5.0	0.5-2.5	0.5-2.5	20.0-26.0	1.5-2.5	1.0-1.5	4.6-4.9	4.5-2.5	1.0-1.5	≥ 62RC

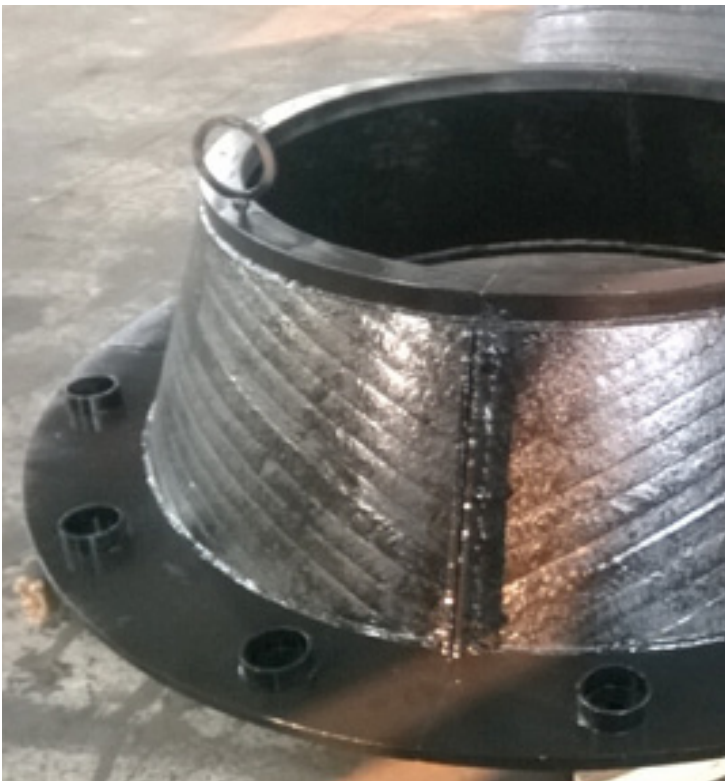
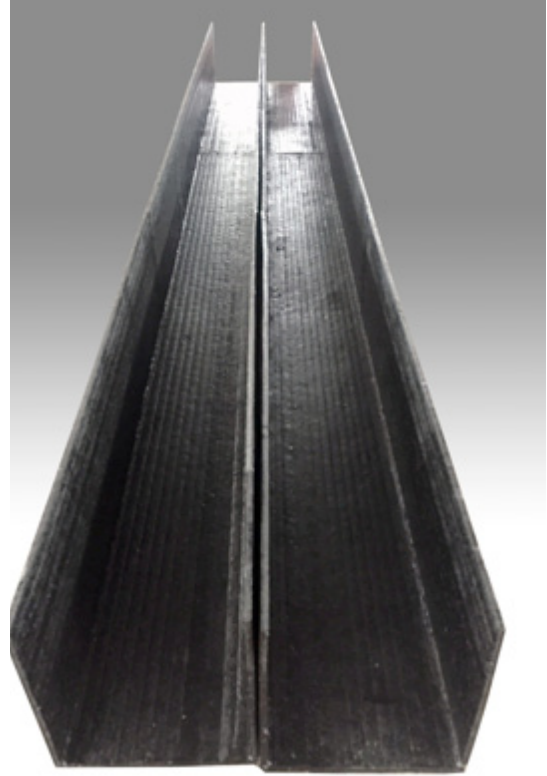
SPECIFICATIONS

Product Category	Thickness (mm)	Hard-Facing (mm)	Hardness RC	Standard Steel (mm)
C30	10	5	≥ 62RC	5
C30	15	6	≥ 62RC	8
C30	20	10	≥ 62RC	10
C30	30	14	≥ 62RC	16
C30	40	20	≥ 62RC	20
C30	50	24	≥ 62RC	26
Custom Made	Custom Made	Custom Made	≥ 62RC	Custom Made

Definition of Stress Concentration

A stress concentration (often called stress raisers or stress risers) is a location in an object where stress is concentrated. An object is strongest when force is evenly distributed over its area, so a reduction in area, e.g., caused by a crack, results in a localised increase in stress. A material can fail, via a propagating crack, when a concentrated stress exceeds the material's theoretical cohesive strength. The real fracture strength of a material is always lower than the theoretical value because most materials contain small cracks or contaminants (especially foreign particles) that concentrate stress. Fatigue cracks always start at stress raisers so removing such defects increases the fatigue strength.

Please note: The C30 wear plate has seams on its surface, and are not a sign of a product defect.



CHARACTERISTICS

The C30 Wear plate has seams on its surface that release stress concentration. One method to decrease the stress concentration is to create a seam at the sharp edge to release the stress. This provides a smooth flow of stress. In a threaded component, the force flow line is bent as it passes from the shank portion to the threaded portion. As a result, stress concentration takes place. To reduce this, a small “undercut” is made between the shank and the threaded portion.

MECHANICAL PROPERTY

	C30 Steel Liner
Specific Gravity	7.80 kg/m ³
Tensile Strength	≥700MPa max
Yield Strength	≥700MPa max
Elongation	/
R.A. at point of fracture	/
Impact Toughness	/

