

## HARDFACED WEAR RESISTANT PLATE - VORAX VRX 550

### Applications

Hardfaced plate available includes chromium carbide grades with outstanding resistance to abrasion, erosion and low impact resistance at both ambient and elevated temperatures. Typical applications include: Dredge Pump parts, Hoppers, Crusher Rolls, Sinter plant, Screw Conveyers, Blast furnace, Mixing tools, Exhaust fan blades, Shovel bucket teeth, etc.

## BASE PLATE SPECIFICATIONS

Types of Base Metal	S235JR. Others on Request
Dimensions of Base Plate	1500 x 3000mm, 1250 x 2500mm, 1000 x 2000mm
Thickness of Base Plate	3, 4, 5, 6, 8, 10, 12, 15, 20mm and others on request

## CLADDING SPECIFICATIONS

Main Dimensions 1400 x 2900mm, 1150 x 2400mm, 900 x 1950mm, others dimensions on request

### Chemical Composition (Spectrum Analyser)%

	C	Cr	Mn	P	S	Ni	B	Nb	Fe
min	4,1	29,0	2,0	0,55	0,015	0,015	0,5	0,0	bal.
max	5,1	35,0	3,0	1,10	0,035	0,035	1,5	2,0	bal.

Deposit Thickness 3, 4, 5, 6, 8, 10 and any thickness until max plates thickness of 35mm

Wear Resistant Abrasion, Erosion

Hardness (EN 6508-1) 60 - 64 HRC

Tensile Strength >2150 MPa

Bending Yes. Bend carefully in little steps with low pressure

Cutting Yes. Plasma, water jet and laser

Working Temperature (°C) 350-450

Testing Rockwell Hardness Testing and Chemical Composition in every Batch.

## TOLERANCES

Thickness (mm) -0+1mm

Flatness (mm) ± 10 mm on 3000mm

### Surface Conditions

The appearance of an overlaid plate does not reflect its resistance to wear and it is often the less cosmetically attractive materials which have the better mechanical properties. It may even contain some small cracks that extend down to the base plate.

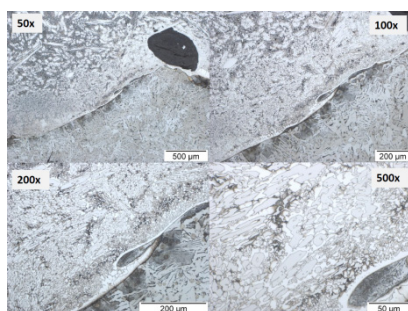
### Cracks

Another characteristic of good quality plate is the presence of stress relief cracks which, contrary to first impressions, are actually beneficial to this material. The presence of cracks in the hardfacing, at the correct frequency and spacing, allows the plate to be rolled, formed and bent without damage.

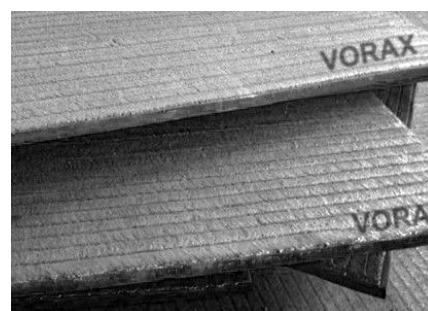
### Fabrication

Cold formed, grinding, cutting - drilling (plasma, water jet, laser).

## MICROSTRUCTURE AND CARBIDE CONTENT



Carbide content ≈ 60%



Typical look of VORAX wear plates