

UP-C Tungsten Carbide Reinforced Composite Overlay

UP-C is manufactured by plasma transferred arc, with evenly distributed tungsten carbide particles over the overlay, UP-C possesses excellent anti-abrasion property.

HARDNESS	> 2000 HV (Carbide) > 500 HV (Matrix) > 58 HRC (Bulk)				
CARBIDE CONTENT	around 50 vol % (As-welded)				
TYPICAL COMPOSITION (wt %)	C	W	Ni	Si	B
	2.5	55	Bal.	<3	<3.5
AVAILABLE THICKNESS (mm)	A: Overlay 3-6 mm B: Base plate \geq 4 mm (A \leq B)				
AVAILABLE SIZE (mm)	1000 \times 2000 max.				
ADVANTAGES	< 5% dilution conduces to less deformation Extraordinary high wear resistance				
OPERATION TEMPERATURE	< 500 °C				
ASTM G65 Procedure A	0.06-0.08 (Undiluted Deposit)				
MACHINABILITY	Water jet cutting, Diamond saw cutting, EDM				
FORMABILITY	Poor, not suggested				
APPLICATION	Extremely severe abrasion condition – Wear plate, Sugar cane hammer, Deformer roll, Mining teeth, Scrape, Drill collar blade, Valve				

