AR-WC55

AR-WC55 is a tungsten carbide, nickel base hardfacing wire designed to resist severe abrasion but unlike traditional tungsten carbide wires, it absorbs more impact without fracturing. This alloy can be applied crack-free with the proper welding procedures. Because of the unique chemistry, Tungsten-Carbide-Nickel-Chromium-Silicon-Boron, it also have excellent resistance to erosive wear, frictional wear, corrosive wear, and maintain its hardness, even at temperatures of 1100ºF (565ºC). Weld deposits contain up to 50% fully fused, pre-alloyed carbides. The alloying elements in this wire produces a high hardness alloy that encapsulates and protects the carbide particles, reducing premature wear caused by erosion next to the carbide particles. AR-WC55 has very good weldability and a very soft arc, this, in combination with the nickel matrix, reduces weld dilution and carbide dilution to produce truly outstanding multi-wear wires.

APPLICATION

This alloy is great for parts that are repeatedly hardfaced and are prone to spalling.
Processing Equipment – mixer blades – feed screws
Oil and Gas Drilling Down Hole Tools – stabilizers
Dredging Equipment – cutter heads, shredding, hammers
Wear Rings

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SPECIFICATION

WELD DEPOSIT PROPERTIES

Average Hardness
Matrix – 50-55 Rc
Tungsten carbide – 2400 HV (70 Rc+)
Deposit Thickness – 2 layers maximum
Weld Deposits Cannot be Flame Cut
Weld Deposits Check Crack

TYPICAL MECHANICAL PROPERTIES

Preferred Shielding Gas	2-5% CO2/Balance Argon @ 35CFH
Alternative Shielding Gas	75%Ar/25%CO2

RECOMMENDED WELDING PARAMETERS

Voltage	20 - 24
Amperage	140-190”
Optimum	22v – 170amp
Stick-Out	1/2” – 5/8”

PACKAGING

1/16 on 25 lb spools
3/32 on 55 lb spools