NanoAlloy 395N

Nanoalloy Flux-Cored Wire For Hardfacing Applications

DESCRIPTION

NanoAlloy 395N leads the newest generation of hardfacing products based on the science and engineering of ultra-fine, submicron grain structures. Weld deposits have a high volume fraction of ultra-hard, complex borocarbides distributed in a matrix uniquely balanced between

liquid and crystalline phases Finely dispersed Nano-particles minimize wear of the underlying matrix by maximizing the complex borocarbides exposed at the wearing surface. 395N outperforms chromium and complex carbides by up to 40%! 395N's wear resistance is equal to that of a 35% tungsten carbide alloy at a lower cost.

- Unique NanoAlloy structure for unmatched abrasion and erosion resistance
- Produces tough uniform 68 HRC weld deposits
- Wears like tungsten carbide at a fraction of the cost
- Outlasts chrome carbide and complex carbide alloys
- Ensures enhanced productivity and cost savings

APPLICATIONS

Designed for extremely abrasion and erosion resistant protective coatings of carbon steel, alloy steels and stainless steels.

Typical application industries include: steelworks, cement plants, waste management plants, power plants, foundries, chemical processing plants, mining, petrochemical plants, etc.

Specific parts: Screw conveyors, furnace chutes, extractor fans, cyclones, conveyors, mixing blades, vanes, scrapers, press screws, sieves, etc.

PROCEDURE FOR USE:

PREPARATION: Remove all "old" cracked or spalled material down to a sound base. Clean any residual oxides, coatings, spatter or residue. NanoAlloy 395N may be applied up to ½" thick, at least four passes. Nanoalloy 395n Should Not Be Used On Manganese/ Hadfield Steels As It Will Not Bond!

Welding Technique: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle from the workpeice and use a "pull" technique. For fully automated welding such as hardfacing cylindrical parts, the wire should exit at about a 10° leading angle from top dead center.

Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion. 395N can be used with or without shielding gas protection.

Note: For best results apply NanoAlloy 395N with as little heat as possible, allowing parts to cool between layers.

Finishing: For most applications, other than a superficial grind, finishing is not required. If some level of profiling is needed, grinding is recommended

TECHNICAL DATA

Typical hardness:

Hardness (1 layer): ...66-68 HRC

Hardness (2 layers)..67-71 HRC

Current polarity: DC (+)

Shielding Gases :

Recommended gas: 97.5% Ar, 2.5% CO_2 [ISO 14175 M12]

Alternative gases:82% Ar, 18% CO_2 [ISO 14175 M21] Flow (l/min): 18

Diameter	Volts	Amps
1.2mm	24	135
1.6mm	24	220