

## NIQUEL ARC

SPECIAL WELDING ROD FOR PULSED POWER WELDING IN ALL POSITIONS TO WELD CAST IRON, CAST GREY IRON, PERLITIC IRON TOGETHER WITH OTHER MATERIALS.

CLASSIFICATION: A.W.S: E-NiFe-Cl-A

**APPLICATIONS:** This electrode was specially formulated to weld cast perlitic iron, mild iron, grey iron contaminated with dirt, grease or fatigued scrap iron when good machining properties are desired. It is ideal to join materials which are different with cast iron as different kinds of steel, stainless steel, nickel alloys. It is used to repair gear teeth, roller mill teeth in the sugar industry; to correct cast defects; to repair pulleys, sprockets, machinery foundations, casings, bearing housings, cams, flywheels, monoblocks, steel mill rollers, brackets and in general, to weld cast iron and achieve high traction resistance and ductility.

**CHARACTERISTICS AND PROCEDURE:** This is a welding rod for low AMP to weld in any position. Its weld metal has great mechanical resistance to wear by friction. Its filler metal is Nickel-Iron and it is easy to machine; the weld bead has no pores or cracks. It is used in pulsed power welding. Filler metal transfer is in the form of fine droplets and it allows good visibility and control of the weld pool. Prepare the joints carefully; chamfer edges between 75° to 90° and at a minimal depth of 2/3 of the total part thickness. The crack ends should be drilled. Rust, grease, etc. should be removed before you start welding. Keep the arc short and the welding rod, perpendicular to the work. Use the lowest possible AMP. Make spaced weld beads between 30 to 40 mm long, alternated all along the joint to avert local overheating as a safety precaution. Otherwise, the welding rod will get red hot and operation will become inefficient. Hammer each weld bead slightly. Make sure the part does not overheat beyond the temperature you can withstand with the palm of your hand. To weld difficult, complicated parts, it is recommended to preheat up to 200° C. Keep that temperature during all the operation. Once you finish welding, let the part cool down slowly by covering it with asbestos or lime.

FILLER METAL CHEMICAL ANALYSIS %						SIZES	AMPERAGE
C	Mn	P	S	Si	Ni		
1.64	0.60	0.03	0.03	0.58	55.0	2.25 mm - 3/32"	70
						3.25 mm - 1/8"	110
						4.0 mm - 5/32"	140
						5.0 mm - 3/16"	160