

Nicore 55

Nicore 55 is a composite metal cored wire for repair and joining of cast iron materials. The deposit, which is approximately 53% iron and 45% nickel, provides an excellent match for the coefficient of expansion exhibited by cast irons. Cracking is minimized because thermal stresses caused by the heat of welding are minimized. The light slag is easily removed enhancing visual weld inspection. The fact that this is a continuous electrode will improve the operating factor and minimize unnecessary stops and starts. This electrode can replace covered electrodes such as AWS ENiFe-CI or ENiFe-CI-A. It may be used for repair welds or for joining various types of cast irons. Cast irons may be welded to steel and other ferrous and non-ferrous materials with this product. The machinability of the weld deposit is comparable to the matching covered electrode. Substantial savings in weld metal deposition costs will be realized when replacing 55% nickel coated electrodes with Nicore 55. The deposition rate of this wire is more than twice that of a comparable coated electrode. The efficiency (approximately 97%) compared to that of coated electrodes (56% assuming 3" stub loss) is substantially greater. These two factors result in substantial savings in weld metal deposition costs. Because of the high deposition rate, the travel rate is very fast, resulting in lower heat input which is advantageous in welding cast irons...

Welding Current	DC+
Alloy Type	Cast iron

Typical Tensile Properties			
Condition	Tensile Strength	Elongation	Hardness (BHN)
As Welded	500 MPa (72 ksi)	12 %	187 BHN

Typical Weld Metal Analysis %				
C	Mn	Si	Ni	Al
1.04	0.23	0.71	45.3	0.01

Recommended Welding Parameters		
Current	Wire Diameter	Voltage
98% Ar - 2% O₂		
220-250 A	1.2 mm (.045 in.)	28-30 V