

AWS CLASSIFICATION A5.15-90 ENiFeT3-CI

OPERATIONAL CHARACTERISTICS / WELDING PARAMETERS

DESCRIPTION

Stoody Castweld Ni 55-O/S open arc wire is used on worn cast iron parts requiring joining or build up. It has good tolerance for the high phosphorus often found in cast irons. It works well when welding thick sections, and is also recommended for joining cast iron to dissimilar metals. Castweld Ni 55-O/S can also be submerged arc welded using a neutral flux.

Open Arc

Diameter, In. (mm)	.045 (1.2)	1/16 (1.6)
Current, Amp. DCEP	140 – 170	200 – 250
Voltage	23 – 26	24 – 27
Wire Extension	1/2" – 5/8"	5/8" – 3/4"
Shielding Gas / Flux	None or CO ₂	None or CO ₂
Position	Flat	Flat
Bead Profile Desired	Convex Stringer Beads	
Base Metal Prep.	Grind Surface Clean	

TYPICAL DEPOSIT CHARACTERISTICS

Machinability	Poor
Number of Deposit Layers	Unlimited
Tensile Strength, Ksi	75
Yield Strength, Ksi	46
Elongation	18%

Diameter, In. (mm)	3/32 (2.4)
Current, Amp. DCEP	250 – 350
Voltage	25 – 28
Wire Extension	3/4" – 1"
Shielding Gas	None or CO ₂
Position	Flat
Bead Profile Desired	Convex Stringer Beads
Base Metal Prep.	Grind Surface Clean

TYPICAL DEPOSIT CHEMISTRY (wt%)

Carbon	1.0
Manganese	3.8
Nickel	55.0
Silicon	0.5
Iron	Balance

Submerged Arc

Diameter, In. (mm)	1/6 (1.6)	3/32 (2.4)
Current, Amp. DCEP	250 – 300	325 – 400
Voltage	18 – 30	31 – 33
Wire Extension	1" – 1 1/4"	1" – 1 1/2"
Shielding Gas	Stoody R-20 Flux	Stoody R-20 Flux
Position	Flat	Flat
Bead Profile Desired	Convex Stringer Beads	
Base Metal Prep.	Grind Surface Clean	

NOTE: When welding cast iron, always preheat and slow cool. Convex stringer beads desired. Peen after each weld.

TYPICAL APPLICATIONS

Typical applications include:

- Joining, build up & repair of cast iron parts
- Engine blocks & heads
- Cast iron universal joints welding to steel drive shafts
- Pump housings
- Assorted castings

STANDARD SIZES & PACKAGING

Diameter	Packaging	Part #
.045" (1.2mm)	33# Wire Basket, LLW	11895600
1/16" (1.6mm)	33# Wire Basket, LLW	11858700
3/32" (2.4mm)	50# Poly Pak	11863300

Stoody Company

5557 Nashville Road • Bowling Green, KY 42101
1-800-426-1888

PDS-SP-014
Revision 6
April 24, 2008

NOTICE - Failure to follow manufacturer's directions for use may result in equipment or material failure and void any applicable warranty. The data provided or referenced herein is provided for informational purposes only, without guarantee or warranty and represents "typical" results when Stoody products are used in accordance with internal Stoody procedures. Other tests and procedures may produce differing results. Stoody expressly disclaims any liability resulting from reliance on this data.

PROTECT YOURSELF AND OTHERS - Users should read and follow all recommended guidance on health and safety from their employer, the supplier, the manufacturer, and government authorities. These, at a minimum include the Warning Labels on the products and the Material Safety Data Sheets ("MSDS"). The MSDS and additional safety information may be found on materials or links at: www.stoody.com.