CASTWELD Ni

Electrodes MMA [SMAW]

Cast iron

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 1071-A : E C Ni-CI1 DIN 8573 : E Ni BG 12 AWS A-5.15 : E NiCl	UDT	Power generation industry Hardfacing and repairing Petrochemical and chemical industry

- Pure nickel core electrode.
- For cold regeneration of all types of gray cast iron and malleable cast iron, also for joining them to steel, copper and monel.
- Among the electrodes in its class, it wets the cast iron the most and bonds best with it (provided there is no sulfur and phosphorus in the cast iron).
- When P or S is present, the weld metal is less ductile and more susceptible to cracking.
- Low hardness guarantees ease of processing.
- Very nicely arranged, smooth overlay with a delicate scale pattern.
- No spattering, slag releases very well.
- Easy-to-handle electrode.
- It does not contain barium compounds, which makes it friendly to the welder.

Application

Making connection and repair welds on cast iron materials
Repair of casting defects.
Reconstruction of damaged or destroyed cast iron elements.
Making dissimilar joints between cast iron and steel, copper, nickel superalloys, etc.
Making buffer layers between cast iron and other materials or overlays with special properties.

Base material

DIN / EN1561	DIN	DIN / EN 1563
GG-10	GTS-35	G GG-40 EN-GJS-400-15
		EN-GJS-400-18
GG-15 EN-GJL-150	GTS-45	G GG-45 EN-GJS-450-10
GG-20 EN-GJL-200	GTS-55	G GG-50 EN-GJS-500-7
GG-25 EN-GJL-250	GTW-35	G GG-60 EN-GJS-600-3
GG-30 EN-GJL-300	GTW-40	G GG-70 EN-GJS-700-2
GG-35 EN-GJL-350	GTW-45	G GG-80
GG-40	GTW-S-38	
Gray cast irons, nodular cast irons	Dissimilar connections with steel or cast steel, etc.	Malleable cast iron from EN GJMB 350 to ENGJMB 650

Typical chemical composition %

Si	Mn	Ni	Fe
0.6	0.65	min.97	0.6

Typical mechanical properties

Yield strength Re [N/mm2]	200
Tensile strength Rm [N/mm2]	250
Elongation A5 [%]	3
Hardness	100-130 HB /
Coating type	basic-graphite
Wire/rod type	pure Ni

Welding current	
Welding positions	
Redrying	180°C/1h
Additional description	Recommendations: Heating is only possible for the whole element. Carrying out the regeneration at 250-300°C will significantly facilitate the cutting of the overlay. Very slow cooling, in sand or under thermal blankets. Weld on a short arc, in small sections. Avoid deep penetration and reduce mixing of materials.
Remarks	Attention should be paid to the possibility of formation of low-melting nickel eutectics. In the case of contaminated cast iron, e.g. S, P, Cu, etc., the eutectic crystallization temperature is much lower than that of steel or cast iron, which may cause welding imperfections.

Welding parameters and packing

⌀	Length [mm]	Welding current [A]	Weight of packet [kg]	Weight of carton [kg]	Pcs/1 kg
2,5	300 /	50-80	1,4	8,4	55-56
3,2	350 /	80-110	2,0	12,0	31
4,0	350 /	110-150	2,0	12,0	
5,0	350 /	150-190			

METALWELD-FIPROM POLSKA spółka z o.o.

ul. Mikołajczyka 57, 41-200 Sosnowiec

+48 (32) 297 75 50 - 51

+48 (32) 297 75 88

export@metalweld.pl