

ER329N

SOLID WIRES FOR TIG, MIG AND SAW

PRODUCT DESCRIPTION

Solid TIG, MIG and sub-arc wires for welding 2205 type duplex stainless steels.

SPECIFICATIONS

AWS A5.9M	ER2209	
BS EN ISO 14343-A	22 9 3 N L	
BS EN ISO 14343-B	SS2209	
Approvals	DNV, TÜV	For TIG wires

ASME IX QUALIFICATION

QW432	F-No 6
QW442	A-No 8

CHEMICAL COMPOSITION (WIRE WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
Min.	--	1.0	0.25	--	--	22.5	8.0	3.0	--	0.14
Max.	0.03	2.0	0.65	0.020	0.030	23.5	9.5	3.5	0.3	0.20
Typical	0.015	1.6	0.5	0.001	0.015	23	8.2	3.2	0.1	0.17*

Duplex weld metal microstructure with austenite + 30-50% ferrite.

Pitting resistance equivalent PREN = Cr + 3.3Mo + 16N is > 35.

* ER329N MIG spooled wire is selected for suitability for both MIG and auto-TIG, with typically 0.15%N to control porosity.

ALL-WELD MECHANICAL PROPERTIES

As welded	Min.	TIG	Typical MIG	SAW + SSB
Tensile strength [MPa]	690	790	800-835	790
0.2% proof strength [MPa]	450	620	560-620	630
Elongation [%] 4d	20	36	28-35	30
5d	20	33	30	27
Impact ISO-V[J] - 30°C	--	180 (> 140)	> 70	75 (>55)
- 50°C	--	180 (> 120)	> 60	55 (>35)
- 75°C	--	125 (>70)	--	--
Hardness HV	--	270 (< 310)	270 (< 310)	275 (< 320)
HRC	--	23 (< 28)	23 (< 28)	23 (< 28)

TYPICAL OPERATING PARAMETERS

	Shielding gas	Current	Diameter (mm)	Parameters
TIG	Argon	DC-	1.6 / 2.4	100A, 12V
MIG	Ar / He / CO ₂	pulsed	1.2	180A, 28V
SAW	SSB flux *	DC+	2.4	350A, 30V

PACKAGING DATA

Diameter (mm)	0.8	1.0	1.2	1.6	2.0	2.4	3.2
TIG	--	--	2.5 kg tube	2.5 kg tube	2.5 kg tube	2.5 kg tube	2.5 kg tube
MIG	15kg reel	15kg reel	15kg reel	15kg reel	--	--	--
SAW	--	--	--	25kg coil	To order	25kg coil	25kg coil

FUME DATA

MIG fume composition (wt %) (TIG and SAW fume negligible)

Fe	Mn	Cr*	Ni	Mo	Cu	OES (mg/m ³)
28	10	20	8	1.5	< 0.5	2.5