

ZERON® 100X

SOLID WELDING WIRE FOR SUPERDUPLEX STEELS

PRODUCT DESCRIPTION

Solid wire for TIG, MIG and sub-arc welding.

For applications where Zeron® 100X wire is to be used for welding supermartensitic stainless steels it is possible for wire to be supplied with a total hydrogen content of 3ppm maximum.

SPECIFICATIONS

AWS A5.9M	ER2594
BS EN ISO 14343-A	25 9 4 N L (prefix W=TIG, G=MIG, S=SAW)
Weir Materials	MDS 12809/07
Approvals	ABS, TÜV, DNV (TIG and SAW in conjunction with SSB flux)

ASME IX QUALIFICATION

QW432	F-No 6
QW442	A-No 8

CHEMICAL COMPOSITION (WIRE WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	W	Cu	N	PRE _N	PRE _W
Min.	--	--	--	--	--	24.0	9.0	3.5	0.5	0.5	0.2	40	40
Max.	0.03	1.0	1.0	0.01	0.03	26.0	10.0	4.0	1.0	1.0	0.3	--	--
Typical	0.015	0.7	0.4	0.002	0.02	25	9.3	3.7	0.6	0.7	0.23	41	42

ALL-WELD MECHANICAL PROPERTIES

Typical values as welded	Min.	TIG	MIG	SAW	TIG at 160°C
Tensile strength (MPa)	760	870	860	885	769
0.2% proof strength (MPa)	550	695	645	700	523
Elongation (%) 4d	15	36	25	26	39
5d	20	32	23	24	34
Reduction of area (%)	--	68	28	48	72
Impact ISO-V(J) -50°C	--	130	60	40	--
-75°C	--	>100	--	--	--
Hardness cap/mid (HV)	--	290	290	290	--

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+	1.6	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
MIG	To order	To order	To order	To order	--	--	--
SAW	--	--	--	25kg coil	--	25kg coil	--

FUME DATA

Fume composition, wt % typical:

Fe	Mn	Ni	Cr	Cu	Mo	V	F	OES (mg/m ³)
7	6	1	7	0.5	0.2	<0.1	28	0.7