

9CrWV

SAW

SOLID WIRE FOR SAW WELDING OF P92 CREEP RESISTING STEELS

PRODUCT DESCRIPTION

Solid wire for SAW welding of P92 creep resisting steels

CLASSIFICATIONS

AWS A5.23M EB [92]
ISO 21952-A SZCrMoWVNb 9 0.5 1.5

ASME IX QUALIFICATION

QW422 P-No 15E
group 1
QW432 F-No 6
QW442 A-No 5

CHEMICAL COMPOSITION (WIRE WT %)

	C	Mn*	Si	S	P	Cr	Ni*	Mo	W	Nb	V	N	B	Al	Cu
min.	0.08	0.40	--	--	--	8.0	--	0.30	1.5	0.04	0.15	0.03	0.001	--	--
max.	0.13	0.80	0.40	0.015	0.015	9.5	0.80	0.60	2.0	0.07	0.25	0.07	0.005	0.03	0.15
Typical	0.10	0.5	0.30	0.004	0.008	9	0.5	0.45	1.7	0.06	0.2	0.05	0.003	<0.01	<0.05

* Mn + Ni ≤ 1.2%

ALL-WELD MECHANICAL PROPERTIES

PWHT 760°C / 2h	Min.	
Tensile strength [MPa]	620	
0.2% proof strength [MPa]	440	
Elongation [%] 4d	16	
5d	--	
Reduction of area [%]	--	
Impact ISO-V(I) +20°C	--	
Hardness (HV) [mid]	--	

TYPICAL OPERATING PARAMETERS

Flux	Current	Diameter (mm)	Typical parameters
LA490 flux	DC+	2.4	420A, 28V, 390mm/min

PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
2.4	25	B415	SA9CRWV-24
3.2	25	B415	SA9CRWV-32

LA490

SAW

SUB-ARC FLUXES FOR USE WITH 9CrWV SOLID WIRE

SAW

PRODUCT DESCRIPTION

Agglomerated fluoride-basic flux for P91 and P92 modified 9CrMo creep resistant steels

CLASSIFICATIONS

ISO 14174 (flux)	SA FB 155 AC H5
AWS A5.23M	F62PZ-EG(92)-G(92)
AWS A5.23	F9PZ-EG(92)-G(92)

COMPOSITION (FLUX WT%)

SiO ₂ + Al ₂ O ₃	30%
CaO + Mg O	36%
CaF ₂	27%
Basicity index (Boniszewski)	~3.0

ANALYSIS DEPOSIT (TYPICAL, WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	W	Nb	V	N	B
9CrWV Wire	0.10	0.5	0.3	0.004	0.008	9.0	0.5	0.4	1.7	0.06	0.20	0.05	0.003
Deposit with LA490	0.09	0.7	0.3	0.005	0.008	8.6	0.5	0.4	1.7	0.05	0.20	0.05	0.002

ALL-WELD MECHANICAL PROPERTIES

Properties after PWHT	Min.	Typical [760°C / 4h]
Tensile strength [MPa]	620	710
0.2% proof strength [MPa]	540	580
Elongation [%] 4d	17	24
5d	17	22
Reduction or area	65	70
Impact ISO-V[J] +20°C	27	45
Hardness [HV] [mid]	225	230

* Minimum impact required by ISO 24598-A : 38 J after 3h.

TYPICAL OPERATING PARAMETERS

AC or DC+: 420A, 28V, 390mm/min

PACKAGING DATA

Weight (kg)	Packaging	Item number
25	SRB	FXLA490SA-25SRB