EXECUTIVE 90S-B3

LOW ALLOY
SOLID WIRE TECHNICAL DATA SHEET

DESCRIPTION

Executive 90S-B3 is designed for gas metal arc welding of 2¼ Cr - 1 Mo steels using MIG or TIG welding processes where high temperature service and creep resistance is important. The alloy content of the wire produces weld metal that matches the base material and maintains mechanical properties after post-weld heat treatment. The Executive 90S-B3 also offers tightly controlled low melting residual elements to meet X factor of less than 15 in order to resist temper embrittlement.

Executive 90S-B3 filler metal is produced using high quality raw materials and tightly controlled chemistry to provide top quality, exceptionally clean wires that deliver smooth feedability and the results fabricators demand.

APPLICATIONS & FEATURES

Executive 90S-B3 is used to weld 2¼ Cr - 1 Mo steels for elevated service temperatures and creep resistance such as pressure vessels and pressure piping.

Typical material grades include ASTM A387-Gr 22, A335-Gr 22 and F182-Gr 22.

TYPICAL WIRE CHEMISTRY & MECHANICAL PROPERTIES

C	Mn	Si	Cr	Mo	P	S	Cu	Ni
0.081	0.59	0.46	2.63	0.96	0.014	0.008	0.14	0.15

Tensile Strength:	94,500 PSI min	**Yield Strength:**	80,500 PSI min	**Elongation:**	19%
Charpy V-Notch:				**X Factor:**	< 15

*PWHT 1 hour @ 1275°F/ 690°C

TYPICAL WELDING PARAMETERS

Process		Diameter	Voltage	Amperage	Speed (in/min)	Shielding Gas / Flux
GMAW	- Short	.035"	14-20	90-160	100	100% CO_2
		.045"	16-20	120-200	150	75% Ar / 25% CO_2
	- Spray	.035"	25-28	180-230	125	98% Ar / 2% O_2
		.045"	25-30	250-350	150	75% Ar / 25% CO_2
GTAW		.093" .125"	Direct Current; Electrode -			100% Ar

STANDARD PACKAGING

GMAW (MIG)	33-lb plastic spools	1,980-lb pallet
GTAW (TIG)	10-lb plastic tube	40-lb box

CLASSIFICATION

AWS/SFA 5.28, Class **ER90S-B3**