MIDALLOY ER90S-B9 / EB9 WELDING WIRE

CLASSIFICATION
- GTAW & GMAW AWS 5.28 Class ER90S-B9 / ASME SFA 5.28 ER90S-B9
  SAW AWS 5.23 Class EB9 / ASME SFA 5.23

DESCRIPTION
- MIDALLOY ER90S-B9 is a bare welding wire for joining 9 CrMo modified steels with small additions of Vanadium and Niobium such as A213-T91 tubes, A335-P91 pipe, and A387 Grade 91 plates and A182 F91 forgings.

APPLICATIONS
- Designed for improved long term creep properties in heavy wall components such as headers, main steam piping and turbine rotors in fossil fueled power-generating plants.

TYPICAL CHEMISTRY (GTAW)

C	Mn	Si	S	Ni	Cr	Mo	V	Al	Cu	Nb	N
.09	.59	.20	.002	.63	8.93	.87	.21	.006	.05	.07	.045

TYPICAL MECHANICAL PROPERTIES

TENSILE STRENGTH	112,600 PSI
YIELD STRENGTH	100,700 PSI
ELONGATION IN 2"	17.2 %
CHARPY IMPACT **	40 ft. lbs.

** @1400° PWHT for 2 hours

- $Mn + Ni \leq 1.3$ X Factor < 15   Mn/S>50

RECOMMENDED WELDING PARAMETERS

PROCESS	DIA. OF WIRE	AMPERAGE	VOLTAGE	GAS/FLUX
GTAW (TIG)	1/16"	50-120	7-13	Ar
	3/32"	120-200	10-16	Ar
	1/8"	150-220	12-18	Ar
GMAW (MIG) SHORT ARC	.035"	90-160	14-20	CO_2
	.045"	120-200	16-20	CO_2
	1/16"	-	-	-
GMAW (MIG) SPRAY	.035"	180-230	25-28	Ar / CO_2
	.045"	250-350	25-30	Ar / CO_2
	1/16"	280-400	26-36	Ar / CO_2
SUBMERGED ARC	3/32"	250-340	26-34	MARATHON 543
	1/8"	350-480	26-34	MARATHON 543
Travel Speed – 8-15 IPM Stickout – ¾" Avg.				

STANDARD PACKAGING
- TIG   50 lb. carton
- MIG   33 lb. Spool 55 lb.
- SUB-ARC   EB9 Sub-Arc Wire

10/17/13

Midalloy