

9015-B9

CATEGORY SMAW Stick Electrodes

TYPE Basic, Cr and Mo-alloyed electrode for heat resistant steels T/P91 and T/P92

APPLICATIONS Headers, main steam piping and turbine casings, in fossil fuelled power generating plants. Oil refineries and coal liquefaction and gasification plants. Preheat and Interpas temperature 200°C - 300°C.

PROPERTIES 9015-B9 is designed to weld equivalent 'type T91' T92 CrMo steels modified with small additions of vanadium and tungsten to give improved long term creep properties. These consumables are specifically intended for high integrity structural service at elevated temperature so the minor alloy additions responsible for its creep strength are kept above the minimum considered necessary to ensure satisfactory performance. In this case, weldments will be weakest in the softened (intercritical) HAZ region of parent material, as indicated by so-called 'type IV' failure in transverse weld creep tests.

CLASSIFICATION AWS A 5.5: E 9015-B9
EN ISO 3580-A: E CrMo91 B 42 H5

SUITABLE FOR X11CrMo9-1, X12CrMo9.1, X20CrMoV10-1, 1.7389, 1.7386, 1.4922, 1.4935, 1.4904 ASTM: A 199Gr.T9, A335Gr. P9, A351, A213/213M, P91, P92

APPROVALS CE approved

WELDING POSITIONS:



ANALYSES %

C	Mn	Si	Cr	Ni	Mo	V	N	Nb
0.1	0.8	0.35	9.0	0.7	1.0	0.2	0.04	0.05

PWHT: 750°C/2hr, oven cooling till 300°C and then cooled on air.

MECHANICAL PROPERTIES

Heat Treatment	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V			Hardness H _{Rc} / HV
				+20°C	-40°C	-60°C	
AW	>650	760	>17	>70 J			

AW = as welded

WELDING PARAMETERS / PACKING

D (mm)	Welding Parameters			Packing		
	Length (mm)	Current (A)	kg / can	kg / 6pack	kg / 1000	
2.5	350	70-110	2.4	14.4	19.8	
3.2	350	95-150	2.4	14.4	36.4	
4.0	350/450	130-190	3.0	18	66.7	

REDRYING TEMPERATURE 350°C/1hr