NSB-318

FOR WELDING AUSTENITIC STAINLESSS STEELS CONTAINING A NOMINAL 18Cr-12Ni-2.7Mo-Nb

DATA SHEET NO. 75

SPECIFICATION	AWS A5.4	BS EN 1600	JIS Z 3221
CLASSIFICATION	E318-16	E19 12 3 Nb R	D318-16

PRODUCT DESCRIPTION

A metallurgically advanced rutile based flux formulated with balanced additions of chemically basic, amphoteric and acid minerals, together with small alloy additions to compensate for arc losses.

The flux is concentrically extruded onto a fully alloyed core wire and bound by a blend of silicates that assures both coating strength and resistance to subsequent moisture absorption.

WELDING FEATURES OF THE ELECTRODE

This unique flux formulation ensures excellent arc stability, ease of initial arc strike and re-strike minimal spatter on AC and virtually none on DC+. The resultant weld seams are smooth, evenly rippled and free from undercut while slag detachability is excellent. Metal recovery is some 103% with respect to core wire weight.

APPLICATIONS AND MATERIALS TO BE WELDED

Applications for the electrode are to be found in the Chemical, Petro-Chemical and Cryogenic Processing and Storage Industries as well as the Food, Brewery and Pharmaceutical Industries using the following materials:

ASTM/ASMC	316Ti	316Cb	CF10MC	318C17
UNS	S31635	S316640		

NSB-318 is designed to weld Nb- or Ti-stabilised grades of Mo containing Austenitic Stainless Steels when good corrosion resistance is needed. Max service temperature is 400ºC.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Nb	FN
MIN	-	0.5	-	-	-	17	11	2.0	-	6xC	6
MAX	0.08	2.5	1.0	0.03	0.03	20	14	3.0	0.75	1.0	13
TYPICAL	0.02	1.2	0.7	0.01	0.02	19	13.5	2.6	0.3	0.6	8

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	550	660	
0.2% Proof stress	N/mm^2	-	500	H.V. 215
Elongation on 4d	%	25	30	
Reduction of Area (RA)	%	-	50	
Impact energy 20ºC	J	-	70	

WELDING AMPERAGE AC or DC+

Ø (mm)	2.0	2.6	3.2	4.0	5.0
MIN	35	65	80	120	160
MAX	80	100	125	170	210

OTHER DATA	Electrodes that have become damp should be re-dried at 150ºC for 1 hour.
RELATED PRODUCTS	Please contact our Technical Department for detail.