NDS-2209

FOR WELDING DUPLEX STAINLESS STEELS THAT NEED A MATCHING MICROSTRUCTURE IN THE AS WELDED CONDITION - NAMELY 55 TO 65 AUSTENITE 35 TO 45 FERRITE

DATA SHEET NO. 81

SPECIFICATION	AWS A5.4	BS EN 1600
CLASSIFICATION	E2209-16	E 22 9 3 N L R

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.

UNCONTROLLED

APPLICATIONS AND MATERIALS TO BE WELDED

For welding standard 22% Chrome-Duplex Stainless Steels. Typical examples being:

ASTM A182 Gr F 51 A890 Grade 4A

EN X 2 CrNiMoN 22 5 3

Proprietary alloys include Sandvick SAF 2205, Avesta 2205, Bohler A903, Sumitomo SM 22Cr, Nippon NK Cr22.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
MIN	-	0.5	-	-	-	21.5	8.5	2.5	-	0.08
MAX	0.04	2.0	1.0	0.03	0.04	23.5	10.5	3.5	0.75	0.20
TYPICAL	0.02	0.9	0.6	0.01	0.02	23.0	9.0	3.1	0.1	0.17

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	690	750	
0.2% Proof stress	N/mm^2	-	620	
Elongation on 4d	%	20	27	PRE_N 34 TO 38
Reduction of Area (RA)	%	-	40	
Impact energy 20°C	J	-	45	

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 150°C for 1 hour
RELATED PRODUCTS	Please contact our Technical Department for detail.