

FL 830 ESHC

CATEGORY ESAW Electroslag

TYPE High basic flux for stainless steel strip electro slag cladding.

APPLICATIONS Designed for ES strip cladding in offshore, apparatus, vessel, boilers and chemical industry.

PROPERTIES Ceweld® FL 830 ESHC can be used with a large variety of alloys. Due to a excellent arc stability this flux is suitable for long stick out welding and standard ES cladding in case high demands on arc stability is required. Dilution of the weld metal with this flux is the lowest available on the marked today combined with a flat transition line offering more process stability in terms of chemical analysis in the overall Wght of the strip. FL 830 ESHC can be used in a large variety of travel speed ranging from 14 till 30 cm per minut due to a higher slag temperature during welding.

Basicity index: ~4,0 (acc. to Boniszewski)
Grain size: 18 - 60 mesh

CLASSIFICATION EN ISO 14174: (E) SA FB 2

SUITABLE FOR Electro slag (ESW) cladding with stainless steel strip, 308L, 309L, 316L, 2209 Duplex, 347, 309LNb, 309LMo.

WELDING POSITIONS:



ALL WELD DEPOSIT ANALYSIS ON S355 (0,17C)

EQ. strip	strip/layer	C	Si	Mn	Cr	Ni	Mo	Nb	Cr. loss	Ni. loss	VS	Amps.
SA 347L	Strip	0.022	0.37	2.05	19.91	10.62	0.031	0.52				
	First layer	0.029	0.35	1.89	17.32	9.35	0.029	0.44	13%	12%	18 cm	1150
SA 309L	second layer	0.022	0.33	2.07	19.13	10.3	0.030	0.48	3.9%	2.8%	18 cm	1150
	Strip	0.022	0.32	2.08	23.39	13.24	0.01					
SA 309LNb	First layer	0.030	0.29	1.99	19.80	11.40	0.01		15%	14%	18 cm	1150
	First layer	0.030	0.27	1.89	17.99	10.55	0.01		23%	20%	22 cm	1150
SA 309LMo	Strip	0.014	0.39	1.98	23.37	12.8	0.13	0.65				
	First layer	0.031	0.36	1.88	20.08	11.39	0.12	0.51	14%	11%	22 cm	1250
SA 2209	Strip	0.023	0.43	1.92	22.16	12.87	2.59					
	First layer	0.033	0.42	1.93	20.34	11.84	2.48		8%	8%	14 cm	650
	First layer	0.035	0.45	1.94	19.59	11.35	2.42		12%	12%	18 cm	650
	First layer	0.036	0.36	1.86	18.57	10.86	2.25		16%	15.6%	22 cm	1150
SA 316L	First layer	0.036	0.43	1.83	18.15	10.32	2.13		18%	19.8%	27 cm	1300
	Strip	0.020	0.42	1.84	21.76	8.83	2.73					
SA 316L	First layer	0.031	0.35	1.76	18.49	7.6	2.38		15%	13.6%	22 cm	1150
	Second layer	0.024	0.38	1.86	20.77	8.61	2.76		4,5%	2,5%	22 cm	1150
SA 316L	Strip	0.009	0.27	1.74	18.52	12.63	2.82					
	First layer	0.026	0.24	1.64	15.92	11.37	2.58		14%	10%	22 cm	1250
	second layer	0.024	0.26	1.72	17.83	12.31	2.6		3.7%	2.5%	22 cm	1200

Normal welding parameters for a 60 x 0,5 mm strip are: current 1250 A, voltage 22-24 V and travel-speed 160-270 mm/min. The stick-out is typically about 35 mm. however FL 830 ESHC can be used in a large current range. Increased current increases the deposition rate, penetration and weld metal temperature considerably. To minimise the dilution within a certain current range, the travel speed should be held at a reasonably low level and layer thickness above 4.2 mm. Within this range the dilution is less than 12%. FL 830 ESHC offers a excellent low hydrogen content due to the chemical composition and the use of pre melted raw materials.

REDRYING TEMPERATURE If necessary for 2 hrs at 300-350°C ± 50°C (normally not needed)

PACKING 30 kg Metallic gasket sealed buckets