UV 305

SAW flux, aluminate-rutile type

Classification

EN ISO 14174

SA AR 1 76 AC H5

Characteristics and typical fields of application

UV 305 is an aluminate-rutile agglomerated flux with medium Si and Mn pick-up for joining un-alloyed and low alloyed steel grades,

The flux finds its most important applications in high speed fillet welding, especially fin-to-tube in water-wall construction for thermal power generation (boiler), with Union S 2 Mo, S 2 CrMo, S 1 CrMo 2 and S P 24, however also with unalloyed wires in general purpose applications.

Also very good performance in two-run technique (longitudinal and circular seams), especially for very thin wall thickness. Wall thickness is recommended up to 10 mm.

It has outstanding good slag detachability (even in narrow grooves) and allows high welding speed.

Best welding performance is with DC+ current with single wire and Twin-arc process.

Flux properties

Grain size (EN ISO 14174)	4 – 14 (0.4 – 1.4 mm)
Polarity	DC+ ; AC
Flux consumption	1 kg flux per kg wire
Redrying conditions	300 – 350°C, min 2 hrs
Diffusible hydrogen (ISO 3690)	$\leq$ 5 ml / 100gr (as produced / re-dried).

Base materials

Unalloyed steel grades for general purpose.

Unalloyed and creep resistant boiler construction steels such as 13CrMo4-5, A335 Gr: P11, P12 and P24; A387 Gr.11 and Gr.12

Composition of sub-arc welding flux (wt. %)

SiO_2+TiO_2	Al_2O_3+MnO	CaF_2+CaO+MgO	Basicity (Boniszewski)
30	55	8	0.6

Typical wires to combine

SAW wires	AWS A5.17 / A5.23	EN ISO 14171-A
Union S 2	EM12	S2
Union S 2 Si	EM12K	S2Si
Union S 2 Mo	EA2	S2Mo
Union S 2 CrMo 1	EB2	SCrMo1
Union S 1 CrMo 2	EB3	SCrMo2
Union S P 24	EG	SZCrMo2VNb

Packaging formats

PE-BAG	25 kg
BIGBAG	500 kg ; 1000 kg