

Classification

EN ISO 14174

SA AR 1 76 AC H5

Characteristics and typical fields of application

BB 305 is an agglomerated flux of aluminate-rutile type for joining and surface welding. It is suited for direct and alternating current. The flux is suited for butt welding in two-run technique and for sheet thickness up to 10 mm for fillet welding. It is especially suited for welding tube walls.

Suited sub-arc wires: BÖHLER EMS 2, EMS 2 Mo, EMS 2 CrMo, CM 2-UP, P 23-UP und P 24-UP. It has outstanding good slag detachability (even in narrow grooves) and allows high welding speed.

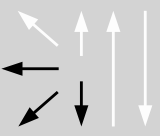
Base materials

Un- and low-alloyed steels, also joints with creep resistant steels for pipe-rack joining like 13CrMo4-5 (1.7335), 10CrMo9-10 (1.7380) and 7CrMoVTiB10-10 (1.7378)

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

	SiO ₂ +TiO ₂	Al ₂ O ₃ +MnO	CaF ₂ +CaO+MgO
wt-%	30	55	8

Operating data

	Polarity	Basicity acc. to Boniszewski:	0.7 Mol.%	0.6 wt-%
	DC (+) / DC (-)	Grain size acc. to EN ISO 14174:	4 – 14 (0.4 – 1.4 mm)	
	AC	Flux consumption:	1.0 kg flux per kg wire	
		Redrying:	300 – 350 °C, 2 – 10h	

Typical Composition of All-weld Metal with different Wires

SAW wires	C	Si	Mn	Cr	Ni	Mo	Nb	Cu	N
BÖHLER EMS 2	0.015	0.65	0.7	11.8	4.7	0.5			
BÖHLER EMS 2 Mo	0.013	0.5	1.1	22.5	8.8	3.2			0.14
BÖHLER EMS 2 CrMo	0.02	0.65	0.4	23.5	7.7	< 0.5			0.13
BÖHLER CM 2-UP	0.15	0.65	0.55	16.5	0.4	1.1			
BÖHLER P 24-UP	≤ 0.02	0.40	4.5	18.5	17.3	4.3			0.15

Approvals

Approval is available for BÖHLER BB 203 together with BÖHLER-wires:

TÜV: EMS 2 Mo, EMS 2 CrMo, P 24-UP, CM 2-UP