CHF101/CHW-S12

SAW Flux/Wire Combination for High Tensile Steels

AWS A5.17 F7A4/EM12K
BS EN 756-S 38 4 FB S2Si
ISO 14171-A-S 38 4 FB S2Si
ISO 14171-B-S 49A4 FB SU21

Type of Flux: Agglomerated (sintered)
Type of Current: DCEP or AC

Features & Applications

CHW-S12(EM12K) is a non-alloy steel submerged arc welding wire, and CHF101 is an aluminum-alkali sintered flux with spherical particles.The weld metal of this flux/wire combination shows excellent welding performances.The arc combustion is stable, the weld forming is beautiful, the slag removal is easy, the weld has high low temperature impact toughness, and can be used both DC and AC.

It is suitable to weld structures made by equivalent tensile strength mild steels or low alloy steels such as boilers, pressure vessels, as well as LPG cylinders. It is also suitable for uniomelt welding.

Value of chemical composition of welding wire and deposited metal (%)

		C	Mn	Si	S	P	Cr	Ni	Cu
CHW-S12 (EM12K)	Standard	0.05-0.15	0.80-1.25	0.10-0.35	≤0.030	≤0.030	—	—	≤0.35
	Typical	0.080	1.06	0.22	0.011	0.016	0.025	0.026	0.10
Deposited Metal	Typical	0.054	1.30	0.30	0.014	0.021	0.020	0.010	0.042

Mechanical Properties of Deposited Metal (AW)

	Yield Strength ReL (MPa)	Tensile Strength Rm (MPa)	Elongation A4 (%)	Impact Value KV8(J)	
				-20℃	-40℃
Standard	≥400	480-660	≥22	≥34	≥27
Typical	430	525	32	120	105

The standard of mechanical properties conforms to shipping institutions and the certificate of inspection would follow it unless the purchaser has special requirement.

Quality Requirement of Flux

Moisture	Solid Impurities	S	P	Mesh
≤0.10%	≤0.30%	≤0.050%	≤0.060%	10-60

Approvals

Institute	LR	ABS	GL	BV	DNV	NK
Grade	3YM	3YM	3YM	A3YM	Ⅲ YM	KAW53M

Notice:

1) The flux should be re-baked at 300℃ -350℃ for 1.5-2 hours before use.

2) The surfaces to be welded must be cleaned away impurities of oil contamination, rust, moisture and so on.