AK S80A
AK AF80SD

GB/T 36034 S78A4U FB-SUN5M3 （H08Mn2Ni3Mo）
GB /T 36037 SA FB 1
AWS A5.23M F76A4-EG-G

Characteristics and applications: AK-S80A is a submerged arc welding wire for low alloy high strength steel, AK-AF80SD is a fluorine-base type sintered flux, light gray spherical particle, particle size 12 ~ 50 mesh, copper-plated wire AK-S80A and flux AK-AF80SD combination, it can obtain excellent welding process performance, DC welding, welding wire positive electrode, arc stability, beautiful shape, easy slotting slag, weld metal S, P content is low, with excellent low-temperature impact toughness and crack resistance. Mainly used for pumping energy storage, large hydropower equipment 800MPa grade high-strength steel pressure pipeline welding. It is also suitable for welding important structures of Q690E and E690 alloy steel such as ocean engineering, ships, bridges, pressure vessels, etc. .

Note:

1. before the use of flux must be 350 ° C ~ 400 ° C baking 1 ~ 2 hours, welding wire before use should be dry, oil-free, rust-free state.
2. before welding should be strictly removed welding oil, rust, moisture and other impurities.
3. Recommended welding specifications (taking φ4.0 wire as an example) i = (525 ± 50) a, U = (30 ± 2) V, welding speed V = (38 ± 2) cm/min, and inter-pass temperature (150 ± 15) ° C.
4. To ensure the plasticity of deposited metal, it is necessary to de hydrogen at 200 ~ 240 °C for 2 ~ 4 hours after welding.
5, welding materials in the storage room to keep dry, and the ground and wall to keep a certain distance. Storage should pay attention to distinguish models, specifications, can not be mixed up.

Flux Quality Requirements:

1. Flux water content 0.10% 2. Mechanical inclusions ≤0.30. 3 in flux, flux s 0.050% 4. Flux p content ≤0.060%

Deposited metal x-ray detection requirements: Grade I

Chemical composition of welding wires and deposited metals (mass fraction) :

	C	Si	Mn	S	P	Ni	Mo	Cr	Cu
Welding Wire Actual Result	0.035	0.39	1.53	0.004	0.010	2.13	0.50	0.27	0.06
Molten metal Actual Result	0.047	0.31	1.67	0.003	0.012	2.70	0.47	0.26	0.12

Mechanical properties of deposited metal:

	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	Impact function(J)	Impact function(J)
GB/T	780-980	≥670	≥ 13	——	≥47J/-40℃
AWS	780-900	≥680	≥ 15	——	≥27J
Actual Result	840	715	19	——	130