

# CA-508 × UC-36

For multi-layer welding of aluminum-killed steel for low temperature service

AWS F7A8-EH14  
F7P8-EH14

## Applications

Butt welding of aluminum-killed steel for low temperature service used in offshore structures, steel pipes, chemical vessels, low temperature service equipment, and other structures for cold regions.

## Characteristics

- (1) Excellent notch toughness at low temperature down to -60°C.
- (2) Crack resistibility, pockmark and porosity resistibility are excellent.
- (3) Slag detachability and bead appearance are very good.
- (4) Suitable for multi-layer welding of TMCP steel.
- (5) Applicable to both AC and DC(+).

## Notes on usage

- (1) Store the flux at the place of moisture free and dry the flux at 250~350°C for about one hour before use.
- (2) Remove rust, scales, oil, paint, water, dirt and slag of tack welds from the groove in order to get sound welds.
- (3) In case of multi-layer welding, use welding current and speed as low as possible at the first layer of groove to avoid cracking.
- (4) The use of the flux which has been re-used for welding in many times may cause deterioration of its usability. Therefore, the unused flux should be mixed properly with such used flux.

## Typical chemical composition of weld metal (%)

C	Mn	Si	P	S	Remarks	
					Base metal	PT(mm)
0.07	1.42	0.16	0.016	0.008	SM490A	25
0.11	1.51	0.21	0.013	0.007	API-2H Gr50	80

## Typical mechanical properties of weld metal

YP N/mm <sup>2</sup> (MPa)	TS N/mm <sup>2</sup> (MPa)	EL (%)	IV (J)		Remarks		
			-46°C	-60°C	Base metal	PT (mm)	PWHT
510	555	34	-	178	SM490A	25	As weld
506	596	31	134	98	API-2H Gr50	80	As weld

• Approval : ABS, BV, DNV, GL, KR, LR, NK