High efficient vertical up welding process

SEGARC x Flux Cored Wire

KOBELCO

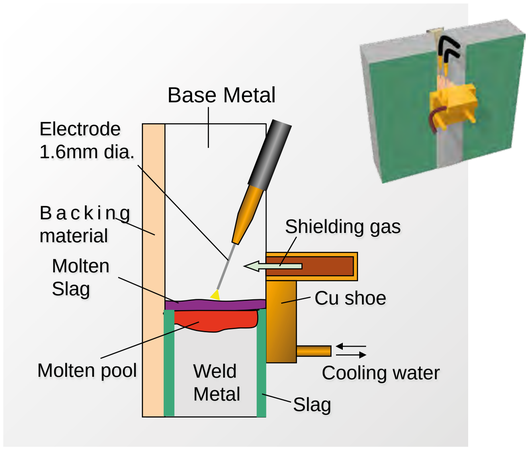
What's the SEGARC process?

SEGARC process is composed with welding equipment called SEGARC-2Z and special designed flux cored wire. One-run vertical butt welding is possible with SEGARC.

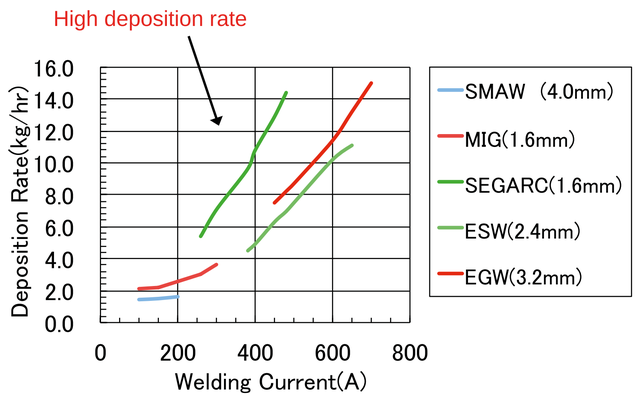
Advantage of SEGARC

- High deposition rate and high efficiency
- With oscillate function, applicable plate thickness range gets wider up to 65mm^t with single electrode
- Applicable plate thickness range gets wider up to 80mm^t with double electrode

Schematic of SEGARC



Comparison of deposition rate



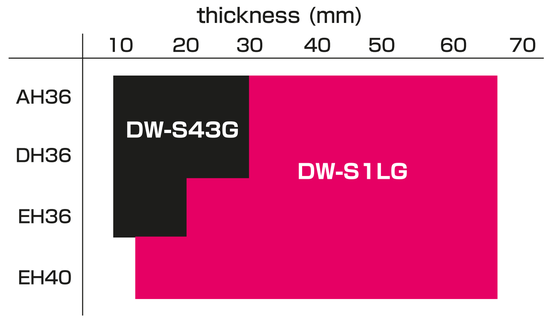
Application

SEGARC process is used in tank fabricators, general constructions (Bridge), shipyards as the high efficient welding process.

Bead appearance, Macro structure

Plate thickness: 60mm^t

Applicable range for plate thickness



Applicable heat input DW-S43G, ≦200 KJ/cm(0℃)、≦100 KJ/cm(-20℃)
DW-S1LG, ≦550 KJ/cm(-40℃)

Typical mechanical properties and chemical composition of weld metal

Trade designation of special flux cored wire	Applicable steel grade	0.2%P.S (MPa)	T.S (MPa)	El (%)	Impact value (J)
FAMILIARC™ DW-S43G	Mild steel and 490MPa steel	470	600	27	60 (-20℃)
TRUSTARC™ DW-S60G	550～610MPa high tensile steel	520	650	26	65 (-20℃)
FAMILIARC™ DW-S1LG	Mild steel and 490MPa low temperature steel	500	615	25	100 (-60℃)
FAMILIARC™ DW-S50GTF (For face side) / FAMILIARC™ DW-S50GTR (For root side)	Mild steel and 490MPa steel	500	640	24	90 (-40℃)

Main components for SEGARC

Recommended Power source	***Miller, Dimension 652*** or ***Dimension 812***
Recommended Wire source	***Miller, 24A***
Welding equipment	***SEGARC-2Z*** (Including Welding tractor, Control panel, Rail etc.)
Flux cored wire	Refer to above Table.
Backing material	Back side: ***KL-4 (GT)***, or ***Water cooled copper backing*** Face center: ***Water cooled sliding copper shoe***
Shielding gas	100%CO_2 (Gas flow rate: 35～40ℓ/min)