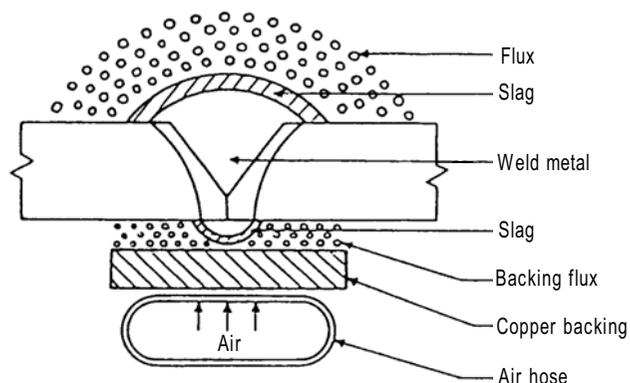


# FCB Process

**Principles:**

FCB is an automatic one-side submerged arc welding process by which a uniform reverse side bead can be obtained. Welding is conducted from the surface side of the welding groove after supplying the backing flux, MF-1R or PFI-50R, on the copper backing and pushing up the copper backing to the reverse side of the groove by the pressurized air hose.



**Features:**

The combination of the backing flux and copper plate provides better contact onto the reverse side of the groove, which can accommodate a fluctuation of root gap and wide welding conditions to ensure consistent reverse bead without excessive melt through.

**Applications:**

Plate-to-plate butt welding for shipbuilding

**Welding consumables**

Type of steel	Flux	Wire	Backing flux	Remarks
General	PFI-50	US-43	PFI-50R or MF-1R	MF-1R is more suitable for thin plate with thickness 20 mm or less.
TMCP	PFI-55E	US-36	PFI-50R or MF-1R	

Note: Redrying conditions of flux: 200~300°Cx1h  
(Backing fluxes must not be dried by heating)

**Approvals : PFI-50 / US-43 / PFI-50R**

Number of wires	AB	LR	NV	BV	NK	Others
Two	○	3A, 3YA	IIIYM	A3, 3YM	○	GL, CCS, CR
Three	○	3A, 3YA	IIIYM	A3, 3YM	○	CCS

○: Subject to satisfactory procedure test by user

**Approvals: PFI-55E / US-36 / PFI-50R**

Number of wires	AB	LR	NV	BV	NK	Others
Two	○	3A, 3YA	IIIY	A3YM	KAW53	CCS
Three	3*,3Y*	3A, 3YA	IIIY	A3YM	KAW53	CCS
Four	3*,3Y*	3Y40A	IIIY	A3YM	KAW53Y40SP	CCS

○: Subject to satisfactory procedure test by user

**Packages**

Wire: **US-43, US-36**

Dia. (mm)	Type	Weight (kg)
4.8	coil	25
	coil	75
	coil	150
6.4	coil	25
	coil	78
	coil	159

Flux: **PFI-45, PFI-50, PFI-55E**

Mesh size	Type	Weight (kg)
10x48	can	20

Flux: **PFI-50R, MF-1R**

Mesh size	Type	Weight (kg)
10x65	can	20