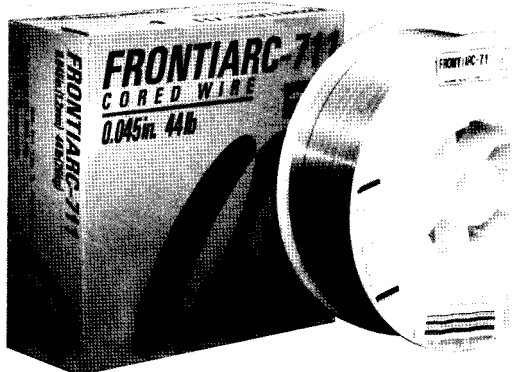


# FRONTIARC-711

## Flux-Cored Wire

### Code Data

AWS: A5.20-95 ASME SFA5.20  
 E71T-1, E71T-1M, E71-T12, E71-T12M  
 CWB to CSA W48.5: E480IT-9-CH  
 ABS: 3SA,3YSA



## FRONTIARC-711

A mild steel flux cored wire versatile enough to have four AWS classes: E71T-1, E71T-1M, E71-T12 and E71-T12M achieving 1.X more than 20 ft-lbs, at -20° F, and can be welded with 100% CO<sub>2</sub> or 75% Ar-25% CO<sub>2</sub>.

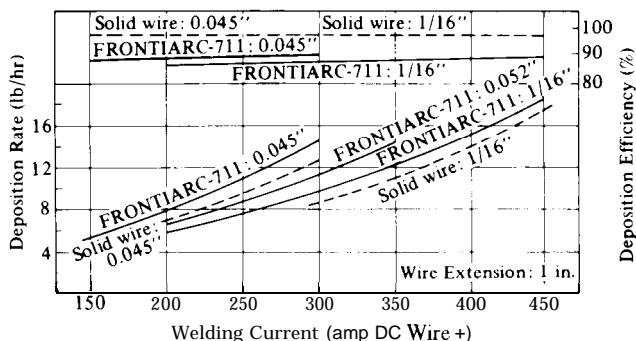
### Outstanding Features

- High welding current (220-250 amp) can be used in vertical upward welding with a greatly improved efficiency.
- Welding of all-position can be done with same welding current setting.
- Welding current density is higher and deposition rate is also higher than those for the solid wire of same size.
- Less spattering and good slag removability shorten the time of bead grinding operation.
- May be used with Argon CO<sub>2</sub> gas mixture.
- Diffusible hydrogen content is as low as that of low hydrogen type electrode and crack and blow hole resistibility is excellent.
- Fume generation is lower than conventional flux-cored wire.

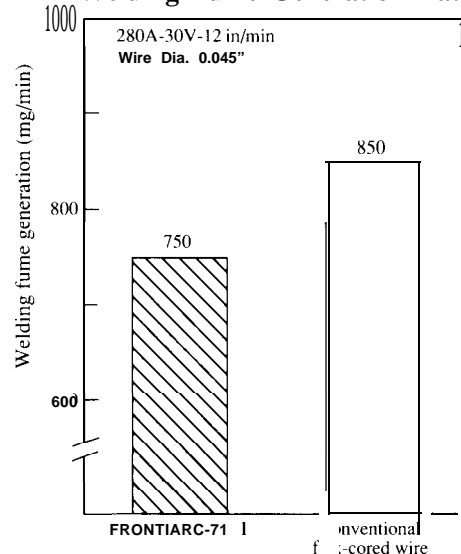
### Application and usage

All position welding for ship hulls, vehicles, bridges, chemical plant machinery and other metal fabrication.

### Welding Efficiency



### Welding Fume Generation Rate



### Typical Chemical Composition of Weld Metal and Diffusible Hydrogen Content

Data reflects use of 100% CO<sub>2</sub>,

C	Mn	Si	P	S	Diffusible hydrogen content (ml/100g)
0.05	1.28	0.50	0.013	0.009	*5.0

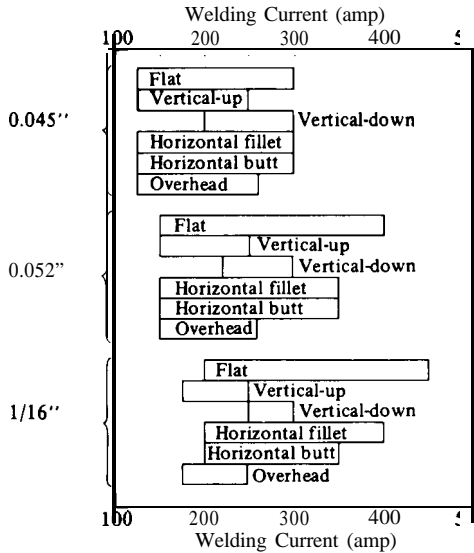
\*Testing method: Gas Chromatography method (AWS A 4-3-93)

### Typical Mechanical Properties of Weld Metal

Data reflects use of 100% CO<sub>2</sub>,

Yield Strength PSI	Tensile Strength PSI	Elongation (%)	Reduction of Area (%)	Impact Value (ft-lb)		
				32°F	0°F	-20°F
74,000	82,000	29	69	87	72	43

### Sizes available



### Recommended Welding Conditions

Wire Size (in dia)	Wire Feed Speed (in/min)	Current DC-EP* (amp)	Arc Voltage** (volt)	Deposition Rate (lbs/hr)
0.045	180	140	24-27	5.0
	200	160	25-28	6.0
	245	180	26-29	7.0
	290	200	27-30	8.0
	330	220	27-30	9.0
	380	240	28-30	10.0
	440	260	29-31	11.5
	520	280	29-31	13.0
0.052	130	150	24-27	4.0
	175	180	24-27	5.5
	215	210	25-28	7.0
	265	240	26-28	8.0
	315	270	27-29	10.0
	395	300	29-31	11.0
	460	330	30-32	13.0
	525	360	30-33	15.0
	690	400	31-34	17.5
	1/16	120	200	25-28
165		240	25-28	7.0
190		260	26-29	8.0
215		280	28-30	9.0
250		300	29-31	10.0
300		340	30-32	11.5
380		380	30-33	14.0
450		420	31-33	16.5
520		450	32-35	18.5

### Recommended Procedure Ranges and Deposition Rates

Wire Size (in dia)	Wire Extension from contact tip (in)	Cup Size (in dia)	Shielding Gas Flow Rate* (cubic ft/hr)
0.045	5/8-3/4	5/8	40-50
0.052	3/4-1	5/8**	40-50
1/16	3/4-1	5/8-3/4**	40-50

\* Gas flow is measured at gas cup (Orifice) with wire in position.

\*\* When utilizing amperage above 300 use 3/4 in. dia or larger cup size.

Tables shown are approximate values that will vary with changes in welding conditions.

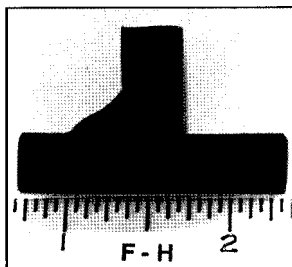
\*DC-Electrode positive

\*\*Arc voltage is measured at the wire feeder.

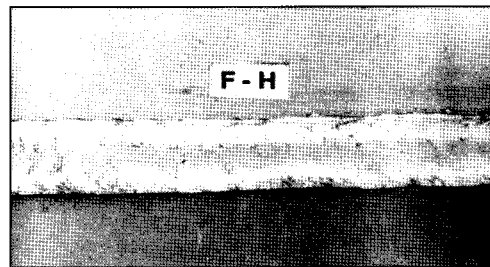
Voltages shown are for 100% CO<sub>2</sub> shielding gas. For 75% Argon + 25% CO<sub>2</sub>, use two (2) volts less than shown.

Type of current: DC (+) Packing: One 44 lb spool per carton. 2,640 lbs on one pallet.

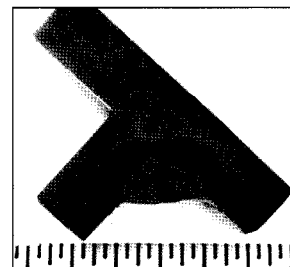
### Bead appearance and macro cross-sections. Wire diameter: 0.045"



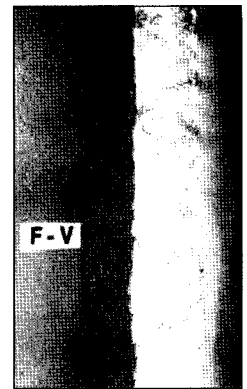
Horizontal fillet



Horizontal fillet welding: 250 amp



Vertical upward



Vertical upward welding: 220 amp

# KOBELCO

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