# **FCAW Consumables**



# **DUAL SHIELD 7100 LH**

All position rutile, low-hydrogen flux cored wire for mild and medium tensile steels

Classification AWS A5.20: E71T-1C/E71T-1M

### **DESCRIPTION**

DUAL SHIELD 7100 LH is a multi-purpose all positional rutile, low hydrogen cored wire for use with  $CO_2$  or  $Ar/CO_2$  shielding gas. The wire is suitable for all mild and medium tensile steels. The running characteristics are exceptional with a stable arc, low spatter and flat welds.

APPROVALS: ABS, BV, DNV, IRS & LRS

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 80%Ar/20%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal Composition (Wt.%)	All Weld Mechanical Pro	
C 0.06 Si 0.50 Mn 1.25	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN) @ -20°C (Joules)	480 610 24

### **CURRENT RANGE**

Size	Current	Voltage
(mm)	(Amp)	(V)
1.2	150-350	23-35
1.6	150-450	22-36

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg.

# **DUAL SHIELD 7100**

FCAW wire for mild steel and 490N/mm<sup>2</sup> class high tensile strength steel

Classification AWS A5.20: E71T-1C

### **DESCRIPTION**

DUAL SHIELD 7100 is a multi purpose all position flux cored wire for use with  ${\rm CO_2}$  gas. The smooth metal transfer facili-tates easy deposition in vertical-up welding. The slag coverage is complete and designed for easy removal. Weld metal is consistently free of inclusions and porosity.

APPROVALS: ABS, BV, CCS, DNV, KR, LR & NK

WELDING CURRENT: DC+
SHIELDING GAS: 100%CO,

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### TYPICAL PROPERTIES

	l Metal tion (Wt.%)	All Weld Mechanical Prop	erties
C Si Mn	0.04 0.55 1.25	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN)	490 560 30
		@ 0°C (Joules) @ -20°C (Joules)	90 50

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-35
1.6	160-460	23-36

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg or select sizes in Marathon Pac weighing 100/200/300 kg.



# OK TUBROD 15.14A

FCAW wire for mild steel and 490N/mm² class high tensile strength steel

Classification AWS A5.20: E71T-1C/E71T-1M

# E71T-9C/E71T-9M

## **DESCRIPTION**

OK TUBROD 15.14A is a multipurpose all position flux cored wire for use with  $\mathrm{CO}_2$  or  $\mathrm{Ar/CO}_2$  shielding gas. The wire is suitable for all mild and medium tensile steels. The smooth metal transfer facilitates easy deposition even in positional welding. Weldmetal is radiographically sound and provides good impact toughness down to -30°C.

APPROVALS: ABS, BV, CCS, DNV, KR, LR, NK & TUV

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

	l Metal tion (Wt.%)	All Weld Mechanical Prop	erties
C Si Mn	0.04 0.50 1.30	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN)	500 580 28
		@ -18ºC (Joules) @ -30ºC (Joules)	80 50

#### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-300	21-30
1.4	150-360	21-32
1.6	160-410	22-34

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg or select sizes in Marathon Pac weighing 100/200/300 kg.

# OK TUBROD 15.00A

Basic slag type flux cored wire for mild steel and 490N/mm<sup>2</sup> class high tensile strength steel

Classification AWS A5.20: E71T-5C-J/E71T-5M-J

### **DESCRIPTION**

OK TUBROD 15.00A is a basic flux cored wire which produces a low hydrogen weld deposits. It is especially suitable for fabrication of unalloyed steels where superior toughness and crack resistance are required.

APPROVALS: ABS, BV, DNV, GL & LR

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

#### **TYPICAL PROPERTIES**

Weld Metal Composition (Wt.%)	All Weld Mechanical Prop	perties
C 0.06 Si 0.60 Mn 1.35	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN) @ -30°C (Joules) @ -51°C (Joules)	440 540 30 110 80

# **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-280	22-31
1.4	150-300	22-33
1.6	170-320	24-35



# **COREWELD 70**

Metal cored wire for mild steel and 490N/mm<sup>2</sup> class high tensile strength steel

Classification AWS A5.18: E70C-6M

### **DESCRIPTION**

COREWELD 70 is a metal cored wire that combines the high deposition rates of a flux cored wire with the high efficien-cies of solid wire. The wire exhibits low levels of spatter, slag and fumes.

APPROVALS: ABS, BV, DNV, GL & LR

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal Composition (Wt.%)	All Weld Mechanical Prop	perties
C 0.05 Si 0.60 Mn 1.35	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN) @ -18°C (Joules) @ -30°C (Joules)	450 550 30 60 40

#### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-350	20-33
1.4	150-430	21-34
1.6	300-500	27-35

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg or select sizes in Marathon Pac weighing 100/200/300 kg.

# **DUAL SHIELD 7000-A1**

### FCAW wire for 0.5Mo heat resistant steel

Classification AWS A5.29: E81T1-A1C

### **DESCRIPTION**

DUAL SHIELD 7000-A1 is an all-position flux cored wire recommended for welding 0.5Mo steels. It is used in the fabrica-tion and erection of boilers, pressure piping & tubing and other pressure vessel applications. 75%Ar /  $25\%\text{CO}_2$  shielding gas mixture may be used to improve arc characteristics, increase wetting action, decrease penetration and provide easier arc control for out-of-position welding.

WELDING CURRENT: DC+

SHIELDING GAS:  $100\%CO_2$  or  $75\%Ar/25\%CO_2$ 

#### **TYPICAL PROPERTIES**

	d Metal ition (Wt.%)	All Weld Mechanical Pro	
С	0.05	YS (N/mm²)	480
Si	0.45	UTS (N/mm <sup>2</sup> )	560
Mn	0.80	Elongation (%)	30
Мо	0.50		

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-34
1.6	160-430	24-36



# **DUAL SHIELD 8000-B2**

### FCAW wire for 0.5-1.25Cr-0.5Mo heat resistant steel

Classification AWS A5.29: E81T1-B2C

### **DESCRIPTION**

DUAL SHIELD 8000-B2 is an all-position 1.25Cr-0.5Mo flux cored wire for welding creep resistant steels of type 0.5Cr-0.5Mo, 1Cr-0.5Mo and 1.25Cr-0.5Mo.

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

#### **TYPICAL PROPERTIES**

Weld Metal Composition (Wt.%)		All Weld Mechanical Properties	
С	0.05	YS (N/mm²)	520
Si	0.50	UTS (N/mm²)	610
Mn	0.60	Elongation (%)	24
Cr	1.30		
Мо	0.55		

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-34
1.6	160-430	24-36

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg.

# **DUAL SHIELD 9000-B3**

### FCAW wire for 2.25Cr-1.0Mo heat resistant steel

Classification AWS A5.29: E91T1-B3C

### **DESCRIPTION**

DUAL SHIELD 9000-B3 is an all-position 2.25Cr-1Mo flux cored wire for welding creep resistant steels of similar composition.

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Cr Mo	0.05 0.50 0.55 2.25 1.05	YS (N/mm²) UTS (N/mm²) Elongation (%)	600 690 22

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-34
1.6	160-430	24-36



# OK TUBROD 15.24

### A 1Ni alloyed basic flux cored wire

Classification AWS A5.29: E80T5-G

### **DESCRIPTION**

OK TUBROD 15.24 is a basic low hydrogen flux cored wire depositing a 1Ni weld metal. It combines high strength combined with low temperature toughness for service down to -50°C and has good CTOD-performance. This applies to both the as welded and stress relieved condition. It provides good operability and slag release.

WELDING CURRENT: DC-

SHIELDING GAS: 80%Ar/20%CO,

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Ni	0.06 0.50 1.50 0.80	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN) @ -51°C (Joules)	540 600 28

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-34
1.6	160-430	24-36

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg.

# **DUAL SHIELD T-115**

Basic slag type flux cored wire for 760N/mm<sup>2</sup> class high tensile strength steel

Classification AWS A5.29: E110T5-K4M

#### **DESCRIPTION**

DUAL SHIELD T-115 is a basic slag flux cored wire designed for applications requiring a high strength weld deposit of excellent quality. The weld deposit is resistant to cracking in heavy sections or under high restraint.

WELDING CURRENT: DC+

SHIELDING GAS: 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Cr	0.06 0.60 1.35 0.25	YS (N/mm²) UTS (N/mm²) Elongation (%) Impact (CVN)	730 810 21
Ni	2.20	@ -30°C (Joules)	50
Mo	0.45	@ -51°C (Joules)	35

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.2	140-330	22-34
1.4	150-390	22-34
1.6	160-460	24-36



# SHIELD-BRIGHT 308L

### FCAW wire for 18Cr-8Ni stainless steels

Classification AWS A5.22: E308LT1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 308L is a flux cored wire for welding type 301, 302, 304 and 304L stainless steels. Low carbon content helps to minimize chromium carbide precipitation and thereby improve the intergranular corrosion resistance. It may also be used for welding types 321 and 347 if the service conditions do not exceed an approximate temperature of 260°C.

APPROVALS: ABS, BV, CCS, DNV, KR, LR & NK

WELDING CURRENT: DC+

**SHIELDING GAS:** 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C	0.03	YS (N/mm²)	400
Si	0.75	UTS (N/mm²)	570
Mn	1.10	Elongation (%)	45
Cr Ni	19.20 10.00		

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.0	100-170	21-27
1.2	130-250	23-31
1.6	160-320	24-33

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5 kg.

# SHIELD-BRIGHT 308H

# FCAW wire for 18Cr-8Ni type stainless steels

Classification AWS A5.22: E308HT1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 308H is a flux cored wire for welding type 304H stainless steel. It can also be used for welding type 301, 302, and 304 stainless steels. It contains a higher carbon level than 308L wire to give greater high temperature strength.

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

(	Weld Metal Composition (Wt.%)		All Weld Mechanical Pro	
	C Si	0.05 0.80	YS (N/mm²) UTS (N/mm²)	410 590
	Mn	1.10	Elongation (%)	43
	Cr Ni	18.60 10.00		

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.0 1.2	100-170 130-250	21-27 23-31
1.6	160-320	24-33



# SHIELD-BRIGHT 309L

# Flux cored wire for welding dissimilar steels

Classification AWS A5.22: E309LT1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 309L is a flux cored wire for welding steels of similar composition, stainless steel to carbon or low alloy steels and for the first layer cladding of carbon and low alloy steels.

APPROVALS: ABS, BV, CCS, DNV, KR, LR & NK

**WELDING CURRENT: DC+** 

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal Composition (Wt.%)		All Weld Mechanical Properties	
C Si Mn Cr Ni	0.03 0.80 1.10 22.70 12.30	YS (N/mm²) UTS (N/mm²) Elongation (%)	420 580 40

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.0	100-170	21-27
1.2	130-250	23-31
1.6	160-320	24-33

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5 kg.

# SHIELD-BRIGHT 309MoL

# Flux cored wire for welding dissimilar steels

Classification AWS A5.22: E309LMoT1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 309MoL is a flux cored wire for welding dissimilar metals such as molybdenum containing austenitic stainless steels to non alloyed or low alloyed steels. Applications of this kind include the welding of buffer layers for acid-resistant clad steels and surfacing. It is used in paper mills and in power plants to give greater corrosion resistance.

**APPROVALS: DNV & KR** 

WELDING CURRENT: DC+

SHIELDING GAS: 100%CO, or 75%Ar/25%CO,

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Cr Ni Mo	0.03 0.65 0.95 23.00 12.50 2.50	YS (N/mm²) UTS (N/mm²) Elongation (%)	550 700 33

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
0.9	100-200	21-30
1.2	130-270	23-31
1.6	160-350	24-33



# SHIELD-BRIGHT 316L

FCAW wire for low carbon 18Cr-12Ni-2.5Mo type stainless steels

Classification AWS A5.22: E316LT1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 316L is a flux cored wire for welding type 316 & 316L stainless steels. It contains molybdenum, which resists pitting corrosion induced by sulphuric and sulphurous acids, chlorides and cellulose solutions. It is used widely in the rayon, dye and paper making industries.

APPROVALS: ABS, BV, DNV, KR, LR & NK

**WELDING CURRENT: DC+** 

SHIELDING GAS: 100%CO, or 75%Ar/25%CO,

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Cr Ni Mo	0.03 0.80 1.10 18.40 11.80 2.40	YS (N/mm²) UTS (N/mm²) Elongation (%)	400 570 38

### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.0	100-170	21-27
1.2	130-250	23-31
1.6	160-320	24-33

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5 kg.

# SHIELD-BRIGHT 347

FCAW wire for 18Cr-8Ni and Stabilized stainless steels

Classification AWS A5.22: E347T1-1(4)

### **DESCRIPTION**

SHIELD-BRIGHT 347 is a flux cored wire for welding 304, 304L, 321 and 347 type stainless steels. The addition of niobium helps to minimize chromium carbide precipitation and thereby improve the intergranular corrosion resistance.

**WELDING CURRENT: DC+** 

SHIELDING GAS: 100%CO<sub>2</sub> or 75%Ar/25%CO<sub>2</sub>

### **TYPICAL PROPERTIES**

Weld Metal	All Weld	
Composition (Wt.%)	Mechanical Properties	
C 0.03 Si 0.90 Mn 1.10 Cr 19.00 Ni 9.60 Nb 0.45	YS (N/mm²) UTS (N/mm²) Elongation (%)	420 590 40

#### **CURRENT RANGE**

Size (mm)	Current (Amp)	Voltage (V)
1.0	100-170	21-27
1.2	130-250	23-31
1.6	160-320	24-33

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5 kg.

# ARCALOY T-409Ti

Metal type FCAW wire for 12Cr stainless steels

Classification AWS A5.22: E409T0-G

# **DESCRIPTION**

ARCALOY T-409Ti is a metal cored wire designed to match the corrosion resistance and mechanical properties of type 409Ti stainless steel. This material is widely used in automotive exhaust systems.

**WELDING CURRENT: DC+** 

SHIELDING GAS: 98%Ar/2%O

### **TYPICAL PROPERTIES**

Weld Metal		All Weld	
Composition (Wt.%)		Mechanical Properties	
C Si Mn Cr Ti	0.03 0.50 0.45 11.70 0.80	YS (N/mm²) UTS (N/mm²) Elongation (%)	370 500 20

# **CURRENT RANGE**

Size	Current	Voltage
(mm)	(Amp)	(V)
1.2	160-250	

**PACKING:** The wire can be supplied in plastic spool packed in a cardboard box weighing 12.5/15.0 kg or Marathon Pac weighing 100/200 kg.