GIANT WELDING

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GIANT WELDING

INTERNATIONAL
AGGRESSIVE
FUTURE

Jiangsu Giant welding Co.,Ltd

+ GIANT WELDING

Company Profile

Jiangsu Giant Welding Co.,Ltd. is located in Changzhou, Jiangsu Province, established in October, 2012, with a total investment of 50 million RMB, covers an area of 33000 square, and employs more than 80 people.

Main Products

ER70S-6 ,Co2 series gas shielded welding wire; drum packing welding wire; E71T-1, E71T-11,E71T-GS series flux-cored welding wire; minimum dia can achieve 0.6 mm.

Company Brand

River Giant + HULK

Company Certification

ISO9001 quality system certification , the products have CE , DB , TUV and so on .

Business Philosophy

The devil is in the details,
The details determine the future

Company Future

High quality and good price → **Follow the time and never stop** → **Based on the market and always change**

Scene of the factory









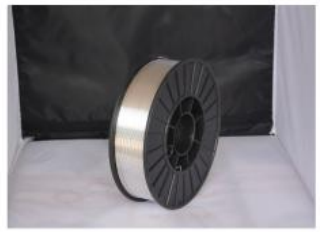
Forming

Fine pull

Product display





Jiangsu Giant Welding Co.,Ltd

ER70S-3

Standard: AWS A5.18 ER70S-3	Chemical Composition %								
	C	Mn	Si	Cu	S	P	Ni	Mo	Cr
Grade ER70S-3	0.06~0.15	0.90~1.40	0.45~0.75	≤ 0.50	≤ 0.035	≤ 0.025	≤ 0.15		

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 / 1kg S200 / 5kg S270,S300 / 15kg-20kg	5kg / box 10kg / box length :1000MM

Mechanical Properties	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation A (%)	Impact Value KV2 (J) -20℃
	≥ 480	≥ 400	≥ 22	≥ 27

	Diameter (MM)	0.8	1.0	1.2	1.6
MIG Welding	Welding Current A	50 – 100	50 – 220	80 – 350	170 – 550
	CO2 Gas-flow L/min	15	15-20	15 – 25	20 – 25

Performance characteristics	Carbon steel argon arc welding wire has excellent plasticity, toughness and crack resistance, especially high impact toughness at low temperature. Can be used for carbon steel and certain low-alloy steels.
Application	1、Welding of various 500 N / mm2 tensile strength grade structural steel components.
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.

ER70S-6

Standard: AWS A5.18 ER70S-6	Chemical Composition %								
	C	Mn	Si	Cu	S	P	Ni	Mo	Cr
Grade ER70S-6	0.06~0.15	1.40~1.85	0.80~1.15	≤ 0.50	≤ 0.035	≤ 0.025	≤ 0.15		

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 / 1kg S200 / 5kg S270,S300 / 15kg-20kg 100KG / Drum 250KG / Drum 350KG / Drum 500KG / Drum	5kg / box 10kg / box length :1000MM

Mechanical Properties	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation A (%)	Impact Value KV2 (J) -20℃
	≥ 480	≥ 400	≥ 22	≥ 27

	Diameter (MM)	0.8	1.0	1.2	1.6
MIG Welding	Welding Current A	50 – 100	50 – 220	80 – 350	170 – 550
	CO2 Gas-flow L/min	15	15-20	15 – 25	20 – 25

Performance characteristics	Carbon steel argon arc welding wire has excellent plasticity, toughness and crack resistance, especially low impact toughness at low temperature. Can be used for carbon steel and certain low-alloy steels.
Application	1、Welding of various 500 N / mm2 tensile strength grade structural steel components.
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.

ER70S-G

Standard: AWS A5.18 ER70S-G	Chemical Composition %					
	C	Mn	Si	Ti	S	P
Grade ER70S-G	0.07~0.10	1.51~1.80	0.65~1.00	0.15~0.20	≤ 0.035	≤ 0.035
	Actually: As agreed between supplier and purchaser （Normal ER70S-6 + Ti）					
Type	Spool (MIG)			Tube (TIG)		
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0			1.6、2.0、2.4、3.2、4.0、5.0		
Package	S100 / 1kg S200 / 5kg S270,S300 / 15kg-20kg			5kg / box 10kg / box length :1000MM		
Mechanical Properties	Tensile Strength (Mpa)	Yield Strength (Mpa)		A (%)	KV2 (J) -30℃	
	≥ 480	≥ 400		As agreed between supplier and purchaser		
MIG Welding	Diameter (MM)	0.8	1.0	1.2	1.6	
	Welding Current A	50 – 100	50 – 220	80 – 350	170 – 550	
	CO2 Gas-flow L/min	15	15-20	15 – 25	20 – 25	
Performance characteristics	The addition of trace Ti element ER70S-G on the basis of ER70S-6 can help to reduce the spatter in CO2 gas shielded welding. By optimizing the chemical composition of the welding wire, the welding spatter and the weld forming can be matched properly.					
Application	1、Welding of various 500 N / mm2 tensile strength grade structural steel components.					
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.					

E71T-1

Standard: AWS E71T-1	Chemical Composition %				
	C	Mn	Si	S	P
Grade E71T-1/E71T-1C	≤ 0.12	≤ 1.75	≤ 0.90	≤ 0.03	≤ 0.03
Type	Spool (MIG)				
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0		Package	S100/1kg S200/5kg S270,S300/15kg-20kg	
	X – ray detection requirements: Ⅱ			Deposited metal diffusible hydrogen (Chromatography or Mercury): ≤10ml/100g	
Mechanical Properties	Yield Strength (Mpa)	Tensile (Mpa)	Elongation (%)	AKV Impact Energy(J) -20℃	
	≥ 390	490 ~ 670	≥ 22	≥ 27	
MIG Welding Current - A	Diameter (MM)	1.0	1.2	1.4	1.6
	Downward welding	80 – 250	120 – 300	140 – 400	180 – 450
	Vertical upward welding		120 – 260	150 – 270	180 – 280
	Vertical down welding		200 – 300	220 – 300	250 – 300
	Horizontal welding		120 – 280	150 – 320	180 – 350
Performance characteristics	E71T-1 is titanium oxide type CO2 gas shielded flux cored wire with excellent welding performance and soft and stable arc. Small splash, easy slag removal, beautiful welding seam. Suitable for welding and welding, can all position of welding, the welding efficiency is high. The weld metal is treated with trace elements , and has good low - temperature toughness , good crack resistance and stable and reliable intrinsic quality .				
Application	The welding of structural parts of carbon steel and low alloy structural steel with tensile strength ≥ 490 MPA is the most widely used in the welding of important structures such as shipbuilding.				
Notice	1. Welding workpiece should be done oil removal, rust removal treatment. 2. During welding , the gas flow is generally between 20 and 25 L / min . 3. When flux-cored wire is welded, the dry elongation should be 15 ~ 25 mm. 4. Welding wire warehouse humidity should be maintained no more than 60%. 5. Non-vacuum packaging wire storage time should not exceed half a year, vacuum packaging wire storage time should not exceed one year.				

E71T-11

Standard: AWS E71T-11	Chemical Composition %					
	C	Mn	Si	S	P	A1
Grade E71T-11	≤ 0.30	≤ 1.75	≤ 0.60	≤ 0.03	≤ 0.03	≤ 1.80

Type	Spool (MIG)		
Specification (MM)	0.8、0.9、1.0、1.2、1.6	Package	S100/1kg S200/5kg S270,S300/15kg-20kg

Mechanical Properties	Yield Strength (Mpa)	Tensile Strength (Mpa)	Elongation (%)
	≥ 390	490 – 670	≥ 20

MIG Welding	Diameter (MM)	1.0	1.2	1.6
	Welding Current A	60 – 180	80 – 220	110 – 270
	Welding Voltage- V	12 – 20	13 – 22	14 – 26

Performance characteristics	E71T-11 is self-shielded flux-cored wire with excellent welding performance and soft and stable arc. Small splash, easy slag removal, beautiful welding seam. Suitable for welding and welding, can all position of welding, the welding efficiency is high. The weld metal is treated with trace elements , and has good low - temperature toughness , good crack resistance and stable and reliable intrinsic quality .
Application	The welding of structural parts of carbon steel and low alloy structural steel with tensile strength ≥ 490 MPA is the most widely used in the welding of important structures such as shipbuilding.
Notice	1. Welding workpiece should be done oil removal, rust removal treatment. 2. Welding wire warehouse humidity should be maintained no more than 60%. 3. Non-vacuum packaging wire storage time should not exceed half a year, vacuum packaging wire storage time should not exceed one year.

E71T-GS

Standard: AWS E71T-GS		Chemical Composition %					
		C	Mn	Si	S	P	A1
Grade E71T-GS	Sample1	0.26	0.91	0.50	0.014	0.016	2.05
	Sample2	0.22	1.00	0.24	0.005	0.015	2.02

Type	Spool (MIG)		
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	Package	S100/1kg S200/5kg S270/15kg
X – ray detection requirements: Ⅱ		Deposited metal diffusible hydrogen (Chromatography or Mercury): –	

Mechanical Properties	Yield Strength (Mpa)	Tensile (Mpa)	Elongation (%)	AKV Impact Energy(J) -20℃
	– – –	≥ 490	– – –	– – –

MIG Welding Current - A	Diameter (MM)	1.0	1.2	1.4	1.6
	F	80 – 200	160 – 220	170 – 250	180 – 280
	V – up / OH	55-120	120 – 180	140 – 200	160 – 220

Performance characteristics	E71T-GS is a self-shielded flux-cored wire, with good arc stability, vertical direction and good shape of welding pipe. Perfect welding joint can also be obtained when the wind speed is about 10M/S.
Application	Light weight steel frame, Suitable for low impact value, plate thickness 1.0-4.5 mm welding.
Notice	1. Welding workpiece should be done oil removal, rust removal treatment. 2. Welding current should be used DCP; note-it is only necessary to change the polarity of the voltage detection line due to the variable-voltage source. 3. When flux-cored wire is welded, the dry elongation should be 10 ~ 20 mm. 4. Welding wire warehouse humidity should be maintained no more than 60%. 5. Non-vacuum packaging wire storage time should not exceed half a year, vacuum packaging wire storage time should not exceed one year.

ER1100

Standard: AWS A5.10 AWS ER1100	Chemical Composition %						
	Si	Fe	Cu	Mn	Zn	Ni	AL
Grade ER1100	≤ 0.95		0.05 – 0.2	≤ 0.05	≤ 0.10	≤ 0.01	≥ 99

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /0.5kg S200 / 2kg S270,S300 / 6-7kg S360 /20kg	5kg / box 10kg / box length :1000MM

Mechanical Properties	Fusion Temperature℃	Electrical IACS	Heat W/m.k	Tensile Mpa	Yield Mpa	Elongation %
	646 – 657	62%	210 –230	70 – 95	30 – 55	20 – 30

	Diameter (MM)	1.2	1.6	2.0
MIG Welding	Welding Current A	180 – 300	200 – 400	240 – 450
	Welding Voltage- V	18 – 26	20 – 28	22 – 32
TIG Welding	Diameter (MM)	2.0 – 2.4	2.4 – 4.0	4.0 – 5.0
	Welding Current A	150 – 250	200 – 320	220 – 400

Performance characteristics	Purity aluminium, Al ≥ 99.0% Excellent corrosion resistance, excellent thermal conductivity, electrical conductivity and excellent machinability. The welding seam is beautiful and bright, the arc is stable and the spatter is small. Good color matching after anodic treatment, recommended for welding 1000 series aluminum alloy.
Application	Filling material for pure aluminum welding. It is widely used in connection of aluminum busbar and guide bar in electrolytic aluminum factory and welding of related aluminum alloy such as electric power.
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.

ER4043

Standard: AWS A5.10 AWS ER4043	Chemical Composition %						
	Si	Fe	Cu	Mn	Zn	Other	AL
Grade ER4043	4.5 – 6.0	≤ 0.80	≤ 0.30	≤ 0.05	≤ 0.10	-	Rest

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /0.5kg S200 / 2kg S270,S300 / 6-7kg S360 /20kg	5kg / box 10kg / box length :1000MM

Mechanical Properties	Fusion Temperature℃	Electrical IACS	Density g/mm3	Tensile Mpa	Yield Mpa	Elongation %
	575 – 630	42%	2.68	130 – 160	70 – 120	10 – 18

	Diameter (MM)	1.2	1.6	2.0
MIG Welding	Welding Current A	180 – 300	200 – 400	240 – 450
	Welding Voltage- V	18 – 26	20 – 28	22 – 32
TIG Welding	Diameter (MM)	1.6 – 2.4	2.4 – 4.0	4.0 – 5.0
	Welding Current A	150 – 250	200 – 320	220 – 400

Performance characteristics	5% content of Si, aluminum silicon alloy welding wire, has good fluidity. It is used for welding forging and casting materials because of low sensitivity to hot cracking. It is easy to produce brittle Mg2Si in the weld seam during welding, which reduces the plasticity and corrosion resistance of the joint. The welding is beautiful and bright, the arc is stable, the spatter is small, but after anodizing, the color is different from the base metal.
Application	Recommended for welding 6061 ,6XXX series;3XXXand2XXX series aluminum alloy.
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.

ER5356

Standard: AWS A5.10 ER5356	Chemical Composition %						
	Si	Fe	Cu	Mn	Zn	Mg	AL
Grade ER5356	≤ 0.25	≤ 0.40	≤ 0.10	0.05 – 0.2	≤ 0.10	4.5 – 5.5	Rest

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /0.5kg S200 / 2kg S270,S300 / 6-7kg S360 /20kg	5kg / box 10kg / box length :1000MM

Mechanical Properties	Fusion Temperature℃	Electrical IACS	Density g/mm3	Tensile Mpa	Yield Mpa	Elongation %
	574 – 638	29%	2.64	250 – 300	120 – 160	15 – 25

MIG Welding	Diameter (MM)	1.2	1.6	2.0
	Welding Current A	180 – 300	200 – 400	240 – 450
	Welding Voltage- V	18 – 28	20 – 24	22 – 34
TIG Welding	Diameter (MM)	1.6 – 2.4	2.4 – 4.0	4.0 – 5.0
	Welding Current A	150 – 250	200 – 320	220 – 400

Performance characteristics	It is also called HS331, an aluminum alloy welding wire containing 5% magnesium. It has good corrosion resistance, thermal cracking resistance, high strength and good Forgability; The weld formation is beautiful and fine, the spatter is little, and the anodizing treatment is white; Can provide good color matching, is a widely used general purpose welding materials.
Application	It is also used in the welding of aluminum, silicon, magnesium, aluminum, zinc and magnesium alloy and the repair welding of aluminum and magnesium alloy castings.
Notice	1、The product can be kept for two years under the condition of factory packing and sealed, and the packing can be removed for three months under the usual atmospheric environment. 2、Products should be stored in a ventilated, dry and place. 3、After the wire is removed from the package, it is recommended that appropriate dust proof cover be applied over the wire.

ER304

Standard: AWS A 5.9 YB/T5092	Chemical Composition %						
	C	Mn	Si	Cr	Ni	P	S
Grade ER304	≤0.08	1.0 – 2.5	≤ 0.60	17 – 19	8 – 11	≤ 0.03	≤ 0.03

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM

Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 520	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application	ER304, also known as H0Cr18Ni9, is used in the welding of similar base materials, equipment and machine parts that require good comprehensive performance, furniture decoration and food medical industry.
Notice	1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss. 2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding, suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area . 3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to. 4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER307Si

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER307Si	0.04–0.14	6.5– 8.0	0.65 – 1.00	18.5– 22	8– 10.75	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 590	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER307Si welding wire, also known as H09Cr21Ni9Mn4Mo. it is a kind of austenitic stainless steel MIGG TIG welding wire. The weld metal has good ductility and crack resistance and low crack sensitivity due to its high manganese content. It is suitable for non-magnetic steel, high manganese steel and so on.

It is used for welding of high strength steel, different kinds of steel, such as H617 steel.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface around 10mm of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2.
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER308

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER308	≤0.08	1.0 – 2.5	0.3 – 0.65	19.5 – 22	9 – 11	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 550	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER308 welding wire is also called H08Cr21Ni10Si, the main component is 18Cr-8Ni. the weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance.
For welding 18-8、18-12 and 20-10 austenitic stainless steels, it is often used in the welding of similar parent metals, especially Type 304, such as 0Cr19Ni9. 00Cr19Ni10 steel.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; Length of the tungsten pole is about 3~5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER308L

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER308L	≤0.03	1.0 – 2.5	0.3 – 0.65	19.5 – 22	9 – 11	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 520	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER308L welding wire is also called H03Cr21Ni10Si. it is a welding wire for ultra-low carbon stainless steel. The welding process is excellent and the weld metal is of ultra-low carbon type, which reduces the precipitation of intergranular carbides. The intergranular corrosion resistance is excellent.
Used for welding ultra-low carbon 00Cr19Ni10 stainless steel structures or corrosion resistance below 300 ℃ steel 0Cr18Ni10Ti. Mainly used for synthetic fiber, welding 18Cr-8Ni stainless steel, arc stable, due to the increase of Si content, welding operation and fluidity better.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER308LSi

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER308LSi	≤0.03	1.0 – 2.5	0.65 – 1.00	19.5 – 22	9 – 11	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 580	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER308LSi wire, also called H03Cr21Ni10Si1, is an ultra-low carbon stainless steel MIG welding material, and its deposited metal is ultra low carbon type. Because of the addition of Si, the fluidity is better, the shape is more beautiful, the arc is stable, the spatter is little, and the excellent comprehensive mechanical properties are obtained.
Widely used in railway locomotives,such as welding ultra-low carbon 18Cr-8Ni stainless steel, welding arc stability, beautiful welding, strong crack resistance. Due to the increase of Si content, welding operation and fluidity of molten gold are better.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the Vwelding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding ara .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER309

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER309	≤0.12	1.0 – 2.5	0.3 – 0.65	23 – 25	12 – 14	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 530	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER309, also known as H12Cr24Ni13Si. is used to weld the same type of stainless steel, stainless steel lining, dissimilar steel Cr19Ni10 and low carbon steel) and high chromium steel, high manganese steel, etc. The weld metal has good mechanical properties, crack resistance and oxidation resistance, as well as excellent heat and corrosion resistance.

It can be used in 22Cr-12Ni steel welding, good heat resistance and corrosion resistance, stable arc, beautiful weld.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1 ~ 3 mm; Length of the tungsten pole is about 3 ~ 5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding

ER309L

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER309L	≤0.03	1.0 – 2.5	0.3 – 0.65	23 – 25	12 – 14	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 520	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER309L, also known as H03Cr24Ni13Si, is the welding wire for ultra-low carbon stainless steel. Its weld metal is super low carbon. Because of low carbon content, it does not cause carbide precipitation in intergranular, and has excellent intergranular corrosion resistance. The same type of stainless steel structure, composite steel and dissimilar steel are used in synthetic fiber, petrochemical equipment and so on. They can also be used in nuclear reactor, pressure vessel inner wall transition layer surfacing welding and tower inner member welding.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1 ~ 3 mm; Length of the tungsten pole is about 3 ~ 5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER309LSi

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER309LSi	≤0.03	1.0 – 2.5	0.65 – 1.0	23 – 25	12 – 14	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 550	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER309LSi, also known as H03Cr24Ni13Si1, is mainly composed of ultra-low C-23Cr-13Ni. It is a stainless steel MIG wire, which can be welded in all position. Good fluidity of molten iron, thus more beautiful shape, smooth wire feeding, stable arc, few spatter, because of low carbon content, good corrosion resistance.

It is often used in welding carbon steel and stainless steel, surfacing transition metal on the inner wall of reaction vessel in petrochemical industry, or in martensite and ferrite stainless steel with poor toughness.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER310

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER310	0.08– 0.15	1.0 – 2.5	0.3 – 0.65	25 – 28	20 – 22.5	≤0.03	≤0.03	≤0.75	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 550	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER310 is also known as H12Cr26Ni21Si.The melting gold contains 25Cr-20Ni. it is mostly used in the welding ratio KMS of 310S stainless steel. 309 is more suitable for dissimilar metal welding and high self-hardening alloy steel and high carbon steel welding; It can be used for welding stainless steel and stainless steel lining, as well as dissimilar steel, high chromium steel, high manganese steel and so on.
The weld metal has good mechanical properties, crack resistance and oxidation resistance, as well as excellent heat resistance and corrosion resistance.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER316

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER316	≤ 0.08	1.0 – 2.5	0.3 – 0.65	18 – 20	11 – 14	≤0.03	≤0.03	2 – 3	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 520	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER316 is also referred to as 2H08Cr19Ni12MoSi stainless steel welding wire.
The weld metal is an austenite structure containing 19Cr - 12Ni - 2Mo . The corrosion resistance , heat resistance and crack resistance are good . The corrosion resistance of Mo to acetic acid , sulfurous acid , phosphoric acid and salt is good , especially against the pitting corrosion of chloride ions .
It is mainly used in the chemical industry and power engineering structure, such as AIS316、SUS316、C18Cr-12Ni-2.5Mo（SUS316）steel. Stable arc, beautiful welding pass; It can also be used for welding high chromium steel and dissimilar steel without heat treatment after welding.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s， argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER316L

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER316L	≤ 0.03	1.0 – 2.5	0.3 – 0.65	18 – 20	11 – 14	≤0.03	≤0.03	2 – 3	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 490	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER316L is also called H03Cr19Ni12Mo2Si stainless steel wire. The weld metal is austenitic structure containing 19Cr-12Ni-Mo, which has good corrosion resistance, heat resistance and crack resistance because of the good corrosion resistance of Mo to acetic acid, sulfurous acid, phosphoric acid and salts. In particular, resistance to chloride pitting is beneficial.
Mainly used in the welding of stainless steel in chemical industry,such as AIS316、SUS316. It can also be used for welding of high chromium steel and dissimilar steel without heat treatment after welding. The welding of 18Cr-12Ni-Mo2 ultra-low carbon stainless steel has good welding process and good resistance to intergranular corrosion.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding.Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s， argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER316LSi

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER316LSi	≤ 0.03	1.0 – 2.5	0.65 – 1.0	18 – 20	11 – 14	≤0.03	≤0.03	2 – 3	≤0.75

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 530	≥ 30

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER316LSi, also known as H03Cr19Ni12Mo2Si1 stainless steel wire, is an ultra-low carbon stainless steel MIG welding material, and its deposited metal is ultra low carbon type. Because of the addition of Si, the fluidity is better, the shape is more beautiful, the arc is stable, the spatter is little, and the excellent comprehensive mechanical properties are obtained.

Welding 18Cr-12Ni-Mo2 ultra-low carbon stainless steel has good welding process and good resistance to intergranular corrosion. Because of the increase of Si content, welding operation and fluidity of molten gold are better.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER321

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Ti
Grade ER321	≤0.08	1.0 – 2.5	0.3 – 0.65	18.5 – 20.5	9 – 10.5	≤0.03	≤0.03	≤0.75	9×C–1.00

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15-20kg	5kg / box 10kg / box length :1000MM
Mechanical Properties	Tensile Strength Mpa	Elongation after fracture A (%)
	≥ 530	≥ 35

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER321 is also known as H08Cr19Ni10Ti.The weld metal of H08Cr19Ni10Tihas good mechanical properties by adding titanium to sequester carbon to prevent the intergranular precipitation of chromium carbide and to improve the intergranular corrosion resistance of the weld.

For the welding of 1Cr18Ni9Ti austenitic stainless steel and 20Cr-10Ni-Ti steel, the resistance to intergranular corrosion is greatly improved due to the addition of Ti.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER347

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Nb
Grade ER347	≤0.08	1.0–2.5	0.3 – 0.65	19 – 21.5	9 – 11	≤0.03	≤0.03	≤0.75	10×C–1.0

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER347 is also known as H08Cr20Ni10Nb.The main composition is 19Cr-11Ni-Nb, which can be welded in full position. NB is added on the basis of SUS308. It can effectively improve the corrosion resistance, especially the resistance to grain boundary corrosion, the resistance to intergranular corrosion of welding pass can be enhanced, and has excellent high temperature strength. Especially suitable for heat resistant steel welding. Excellent welding performance-smooth wire feeding, stable arc, beautiful shape, few spatter.

Often used in food machinery, such as 07Cr19Ni11Ti（SUS321). 07Cr18Ni11Nb（SUS347）.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER410

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER410	≤0.12	≤ 0.6	≤ 0.5	11.5 – 13.5	≤ 0.6	≤0.03	≤0.03	≤0.75	9×C–1.00

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER410 is also called H12Cr13.The main component is 13Cr. it is martensitic stainless steel MIG wire, which can be welded in all position. There was little splash.

It is often used in water power station and valve, such as 12Cr13SUS41010. It can be used to weld 410 or 420 series stainless steel. It has high hardening property and high temperature oxidation resistance. Corrosion resistance, used in oil scouring and chemical industry and surfacing repair.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1～3 mm; Length of the tungsten pole is about 3～5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER430

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	Cu
Grade ER430	≤0.10	≤ 0.6	≤ 0.5	15.5 – 17.0	≤ 0.60	≤0.03	≤0.03	≤0.75	10×C–1.0

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER430, also known as H10Cr17, is mainly composed of 17Cr. it is a ferrite stainless steel MIG wire, which can be welded in all position. The welding performance is excellent, the wire feeding is smooth, the arc is stable, and the shape is beautiful. There was little splash.

It is suitable for welding 13Cr or 17Cr martensitic stainless steel,especially for nitric acid vessels, and is often used for welding of wear-resistant and corrosion-resistant components. Such as 10Cr17 (SUS430) material device, guardrail, golf head.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; Length of the tungsten pole is about 3~5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

ER2209

Standard: AWS A 5.9 YB/T5092	Chemical Composition %								
	C	Mn	Si	Cr	Ni	P	S	Mo	N
Grade ER2209	≤0.03	0.5 – 2.0	≤ 0.90	21.5 – 23.5	7.5 – 9.5	≤0.03	≤0.03	≤0.75	0.08 – 0.2

Type	Spool (MIG)	Tube (TIG)
Specification (MM)	0.8、0.9、1.0、1.2、1.6、2.0	1.6、2.0、2.4、3.2、4.0、5.0
Package	S100 /1kg S200 / 5kg S270,S300 / 15–20kg	5kg / box 10kg / box length :1000MM

Diameter (MM)	0.8	1.0	1.2	1.6	2.0	2.5	3.2
Current (A)	70 ~ 150	100 ~ 200	140 ~ 220	50 ~ 100	100 ~ 200	200 ~ 300	300 ~ 400

Application

ER2209 is also called H03Cr22Ni8Mo3N.The main composition is 22Cr-9Ni-3Mo-N. it is an austenitic ferrite dual phase stainless steel MIG wire. Full-position welding. Because the deposited metal contains about 40% ferrite, the deposited metal has both the comprehensive properties of austenitic stainless steel and the stress corrosion resistance of ferrite stainless steel. Thus it has become a new material in petrochemical industry.
It has excellent welding workability, such as smooth wire feeding, stable arc, beautiful shape and few spatter.
It is often used in petrochemical, shipbuilding and other industries, corresponding to the welding of steel 022Cr22Ni5Mo3N (SUS2205). Also suitable for 22Cr-9Ni-Mo3 duplex stainless steel such as UNS31803.

Notice

1. Oil, dirt and rust on the welding wire surface should be removed before welding. Surface impurities such as oil, rust and water should be thoroughly removed in the welding place, so as to prevent blowhole, crack and so on during welding. The surface of the groove and its surroundings should be polished with metallic gloss.
2. In order to obtain good mechanical properties of welding seam, suggest protect gas Ar+2%O2 and shield gas flow rate 20-25 L/min for MIG welding. For TIG welding,suggest protect gas pure Ar and shield gas flow rate 8-15 L/min ,Arc length 1~3 mm; Length of the tungsten pole is about 3~5 mm; wind speed limit ≤ 1.0 m/s, argon protection at the back of welding area .
3. In the welding process, the welding line energy directly affects the mechanical properties and crack resistance of weld metal, and should be paid more attention to.
4. The above welding methods, conditions and specifications are for reference only. Users should evaluate the welding process according to their own welding characteristics before using the welding wire for the formal product welding.

E6013

Standard: AWS A5.1 AWS A5.1M	Chemical Composition %								
		C	Mn	Si	S	P	Ni	Cr	Mo	V
Grade E6013	Spec	≤0.2	≤1.2	≤1.0	≤0.035	≤0.04	≤ 0.3	≤0.2	≤0.3	≤0.08
	Typical	0.065	0.39	0.22	0.016	0.022	0.022	0.03	0.003	0.01
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0					X ray detection grade: Ⅱ				
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet									

Mechanical Properties		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	KV2(J) 0℃
	Specification	≥ 430	≥ 330	≥ 16	≥ 47
	Typical	480	390	28	90
Diameter(MM)	2.0	2.5	3.2	4.0	5.0
Length(MM)	300	300	350	400	400
Current (A)	40~70	50~90	80~130	130~210	180~230

Specification	It is a kind of carbon steel electrode with titania type coating. AC/DC. All-position welding. It has excellent welding performance, excellent operating performance, easy reignition, stable arc and beautiful appearance of weld.
Application	Used for welding low-carbon steel structures, especially suitable for welding on thin plates and cosmetic welding which requires the weld beads to be beautiful and glossy.

E7018

Standard: AWS A5.1 AWS A5.1M	Chemical Composition %									
		C	Mn	Si	Cr	Ni	Mo	V	S	P
Grade E7018	Spec	≤0.15	≤1.6	≤0.9	≤0.2	≤0.3	≤ 0.3	≤0.08	≤0.035	≤0.035
	Typical	0.075	1.12	0.48	0.03	0.012	0.006	0.015	0.009	0.019
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0					X ray detection grade: Ⅰ				
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet									

Mechanical Properties		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	KV2(J) -30℃
	Specification	≥ 490	≥ 400	≥ 20	≥ 20
	Typical	580	490	32	150
Diameter(MM)	2.0	2.5	3.2	4.0	5.0
Length(MM)	300	300	350	400	400
Current (A)	40~70	60~100	80~120	110~190	180~230

Specification	It is a kind of carbon steel electrode with iron powder low-hydrogen potassium type coating. The deposition efficiency can be improved due to the iron powder in the coating.
Application	1. The electrodes must be baked under 300~350℃ for an hour before welding and used as soon as baking is completed. 2. The stains on the weldments, such as rust, etc, must be cleared away before welding. 3. When welding, short arc must be used and stringer bead is suitable. 4. Used for welding carbon steel and low-alloy steel structures, such as 16Mn, etc.

E6011

Standard: AWS A5.1 AWS A5.1M	Chemical Composition %									
		C	Mn	Si	Cr	Ni	Mo	V	S	P
Grade E6011	Spec	≤0.20	≤1.2	≤1.0	≤0.2	≤0.3	≤0.3	≤0.08	- - -	- - -
	Typical	0.075	1.12	0.48	0.03	0.012	0.006	0.015	0.009	0.019
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0					X ray detection grade： II				
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet									

Mechanical Properties		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	KV2(J) -30℃
	Specification	≥ 430	≥ 330	≥ 22	≥ 27
	Typical	580	490	32	150
Diameter(MM)	2.0	2.5	3.2	4.0	5.0
Length(MM)	300	300	350	400	400
Current (A)	40~70	40~80	75~125	110~170	140~215

Specification	It is a kind of carbon steel electrode with iron powder low-hydrogen potassium type coating. The deposition efficiency can be improved due to the iron powder in the coating.
Application	1. The electrodes must be baked under 300~350℃ for an hour before welding and used as soon as baking is completed. 2. The stains on the weldments, such as rust, etc, must be cleared away before welding. 3. When welding, short arc must be used and stringer bead is suitable. 4. Used for welding carbon steel and low-alloy steel structures, such as 16Mn, etc.

E7016

Standard: AWS A5.1 AWS A5.1M	Chemical Composition %									
		C	Mn	Si	Cr	Ni	Mo	V	S	P
Grade E7016	Spec	≤0.15	≤1.6	≤0.75	≤0.2	≤0.3	≤ 0.3	≤0.08	≤0.035	≤0.035
	Typical	0.075	1.12	0.48	0.03	0.012	0.006	0.015	0.009	0.019
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0					X ray detection grade： I				
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet									

Mechanical Properties		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	KV2(J) -30℃
	Specification	≥ 490	≥ 400	≥ 22	≥ 27
	Typical	580	490	32	150
Diameter(MM)	2.0	2.5	3.2	4.0	5.0
Length(MM)	300	300	350	400	400
Current (A)	40~70	60~100	80~120	110~190	180~230

Specification	It is a kind of carbon steel electrode with iron powder low-hydrogen potassium type coating. The deposition efficiency can be improved due to the iron powder in the coating.
Application	1. The electrodes must be baked under 300~350℃ for an hour before welding and used as soon as baking is completed. 2. The stains on the weldments, such as rust, etc, must be cleared away before welding. 3. When welding, short arc must be used and stringer bead is suitable. 4. Used for welding carbon steel and low-alloy steel structures, such as 16Mn, etc.

E308L-16

Standard: AWS A5.4 AWS A5.4M	Chemical Composition %								
	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Grade E308L-16	≤0.04	0.50~2.50	≤1.0	≤0.04	≤0.03	9.0~11.0	18.0~21.0	≤0.75	≤0.75
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0								
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet								
Mechanical Properties		Tensile Strength Mpa			Elongation %				
	Specification	≥ 520			≥ 30				
Specification	E308L-16 welding electrode is used for welding ultra-low-carbon 022Cr19Ni10 and Cr19Ni10 stainless steel structures, and also used for 06Cr18Ni11Ti corrosion-resistant stainless steel structures whose working temperature is lower than 300°C. Mainly used in the manufacture of synthetic fiber, chemical fertilizer, oil and other equipments.								
Application	E308L-16 welding electrode is a kind of Titanium calcium type coating with ultra-low carbon Cr19Ni10 stainless steel electrode. Carbon content of deposited metal is less than or equal to 0.04%. The intergranular corrosion resistance is good. Excellent welding performance and heat resistance, high strength coating, the porosity resistance is good. AC/DC both can be applied.								

E309L-16

Standard: AWS A5.4 AWS A5.4M	Chemical Composition %								
	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Grade E308L-16	≤0.04	0.50~2.50	≤1.0	≤0.04	≤0.03	12.0~14.0	22.0~25.0	≤0.75	≤0.75
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0								
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet								
Mechanical Properties		Tensile Strength Mpa			Elongation %				
	Specification	≥ 520			≥ 30				
Specification	E309L-16 is a kind of Cr23Ni13 stainless steel electrode. The deposited metal has good mechanical properties and intergranular corrosion resistance. It has good welding performance and porosity resistance. Heat resistance coating and crack resistance. AC/DC both can be applied.								
Application	Used for welding the corrosion resistant stainless steel structure.								

E316L-16

Standard: AWS A5.4 AWS A5.4M	Chemical Composition %								
	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Grade E316L-16	≤0.04	0.50~2.50	≤1.0	≤0.04	≤0.03	11.0~14.0	17.0~20.0	2.0~3.0	≤0.75
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0								
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet								
Mechanical Properties		Tensile Strength Mpa			Elongation %				
	Specification	≥ 490			≥ 30				
Specification	E316L-16 is a kind of Titanium calcium type coating with ultra-low carbon Cr18Ni12Mo2 stainless steel electrode. Carbon content of deposited metal is less than or equal to 0.04%. It has excellent heat resistance, the corrosion resistance, the crack resistance and the porosity resistance. Good operation performance and high strength coating. AC/DC both can be applied.								
Application	Used for welding of synthetic fiber and other equipments and the same type of stainless steel structure, In addition, it is applied to weld the steel that cannot be processed with thermal treatment, such as Chromium stainless steel, clad steel, dissimilar steel, etc.								

E312L-16

Standard: AWS A5.4 AWS A5.4M	Chemical Composition %								
	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Grade E312L-16	≤0.15	0.50~2.50	≤1.0	≤0.04	≤0.03	8.0~10.5	28.0~32.0	≤0.75	≤0.75
Specification (MM)	1.6、2.0、2.4、3.2、4.0、5.0								
Package	5 kgs/plastic bag in a color box, 20kgs/carton, 1 ton in a pallet								
Mechanical Properties		Tensile Strength Mpa			Elongation %				
	Specification	≥ 660			≥ 22				
Specification	E312-16 is a lime titanium type duplex stainless steel welding rod. It deposits a ferritic-austenitic duplex weld metal with around 40% ferrite so it has excellent crack resistance. It is suitable for welding Cr29Ni9 cast steels, high carbon steels, tool steels, problem steels, as well as dissimilar metals.								
Application	Used for welding high-carbon steel, tool steel, high temperature steel, armor steel, dissimilar steel, etc.								

Jiangsu Giant Welding Co.,Ltd

Type		Chemical Composition									
AWS A5.18	GBT8110 /2008	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu
ER70S-6	ER50-6	0.06 ~ 0.15	1.40 ~ 1.85	0.80 ~ 1.15	≤ 0.025	≤ 0.035	≤ 0.15	≤ 0.15	≤ 0.15	≤ 0.03	≤ 0.50
ER50-6						≤ 0.025					
SG2 / G3Si1	EN440 G46-3 ISO14341	0.06 ~ 0.14	1.30 ~ 1.60	0.70 ~ 1.00	≤ 0.025	≤ 0.025	≤ 0.15	Al≤0.02	≤ 0.15	Ti + Zr ≤ 0.15	
SG3 / G4Si1		0.06 ~ 0.14	1.60 ~ 1.90	0.80 ~ 1.20	≤ 0.025	≤ 0.025	≤ 0.15	Al≤0.02	≤ 0.15	Ti + Zr ≤ 0.15	
ER70S-3		0.06 ~ 0.15	0.90 ~ 1.40	0.45 ~ 0.75	≤ 0.025	≤ 0.035	≤ 0.15	≤ 0.15	≤ 0.15	≤ 0.03	≤ 0.50
ER70S-G	Sample	0.07 ~ 0.10	1.51 ~ 1.80	0.65 ~ 1.00	≤ 0.035	≤ 0.035	Ti 0.15 ~ 0.20			Actually: As agreed between suppleand buyer (Normal ER70S-6 + Ti)	

Note: AWS A5.18: Any copper plating layer on the filler wire, plus the copper with the metal itself, shall not exceed the maximum of 0.50% (including copper plating).

EN440 : If Cr ≤ 0.15, Cu ≤ 0.35 and V ≤ 0.03 are not specified. The residual copper content in the steel plus the total coating should not exceed 0.35% (m/m).

Type		Mechanical Properties			
AWS A5.18	GBT8110	Tensile Strength Mpa	Yield Strength Mpa	Elongation A (%)	Impact Value KV2 (J) -30°C
ER70S-6	ER50-6	≥ 480	≥ 400	≥ 22	≥ 27
ER50-6		≥ 500	≥ 420		
SG2 / G3Si1	EN440 G46-3 ISO14341	530 ~ 680	≥ 460	≥ 20	≥ 47
SG3 / G4Si1					KV2 (J) -40°C ≥ 47
ER70S-3		≥ 480	≥ 400	≥ 22	-20°C ≥ 27
ER70S-G	ER50-G	≥ 480	≥ 400	≥ 22	Actually: As agreed between suppleand buyer (Normal ER70S-6 + Ti)

Note:For ER50-3 / ER50-6 wire, tensile resistance and yield may be reduced by every 10 Mpas when elongation past the minimum value every 1%,, but the minimum tensile resistance value shall not be less than 480 Mpa and the yield shall not be less than 400 Mpa.

Type		Chemical Composition									
AWS A5.20	GBT 10045 /2001	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu
E71T-1 E71T-1C E71T-1M		≤ 0.12	≤ 1.75	≤ 0.90	≤ 0.03	≤ 0.03	≤ 0.50	≤ 0.20	≤ 0.30	≤ 0.08	≤ 0.35
E71T-G E71T-GS											
	E500T-1 E500T-1M E501T-1 E501T-1M	≤ 0.18									
	E500T-G E501T-G										
E71T-11		≤ 0.30		≤ 0.60							
E71T-11	E500T-11 E501T-11	. . .									

Note: symbols
The third number X after E, indicates the welding position, where "0" means Flat and transverse welding,"1" means all position,and the letter C indicates is CO2 or of a self-protective type;M indicates that the protective gas is 75~80% ar and rest CO2; Aluminum composition requirement is limited to self-shielded flux-cored wire (E71T-G / E71T-GS / E71T-11---Al ≤ 1.80).

Type		Mechanical Properties			
AWS A5.20	GBT 10045 /2001	Tensile Strength Mpa	Yield Strength Mpa	Elongation A (%)	Impact Value KV2 (J) -30°C
E71T-1 E71T-1C E71T-1M	E500T-1 E500T-1M E501T-1 E501T-1M E500T-G E501T-G	490 ~ 670	≥ 390	≥ 22	≥ 27
E71T-GS		≥ 490	.....		.....
E71T-11	E500T-11 E501T-11	490 ~ 670	≥ 390	≥ 20	.....

Type		Chemical Composition								
AWS A5.1	AWS A5.1M	C	Mn	Si	P	S	Ni	Cr	Mo	V
E6011 E6013	E4311 E4313	≤ 0.20	≤ 1.20	≤ 1.00	---	---	≤ 0.30	≤ 0.20	≤ 0.30	≤ 0.08
E7016 E7018	E4916 E4918	≤ 0.15	≤ 1.60	≤ 0.75	≤ 0.035	≤ 0.035	≤ 0.30	≤0.20	≤ 0.30	≤ 0.08
E7018M	E4918M	≤ 0.12	0.40 ~ 1.60	≤ 0.80	≤ 0.030	≤ 0.020	≤ 0.25	≤0.15	≤ 0.35	≤ 0.05
E308 -16 E308L-16	E308 -17 E308L-17	≤ 0.08 ≤ 0.04	0.50 ~ 2.50	≤ 1.00	≤ 0.04	≤ 0.03	9.0 ~ 11.0	18.0 ~ 21.0	≤ 0.75	Cu ≤ 0.75
E309 -16 E309L-16	E309 -17 E309L-17	≤ 0.15 ≤ 0.04	0.50 ~ 2.50	≤ 1.00	≤ 0.04	≤ 0.03	12.0 ~ 14.0	22.0 ~ 25.0	≤ 0.75	Cu ≤ 0.75
E316 -16 E316L-16	E316 -17 E316L-17	≤ 0.08 ≤ 0.04	0.50 ~ 2.50	≤ 1.00	≤ 0.04	≤ 0.03	11.0 ~ 14.0	17.0 ~ 20.0	2.0 ~ 3.0	Cu ≤ 0.75
E312-16	E312-17	≤ 0.15	0.50 ~ 2.50	≤ 1.00	≤ 0.04	≤ 0.03	8.0 ~ 10.5	28.0 ~ 32.0	≤ 0.75	Cu ≤ 0.75

Note: E7016 and E7018 components of Mn+Ni+Cr+Mo+V ≤ 1.75; stainless steel electrode code interpretation - example E308-XX (E308-15/E308-16/E308-17/E308-26.....), the prefix code is divided into -1/-2/-4, representing the welding position; the suffix code is divided into -5/-6/-7, in which 5 represents the alkalinity, 6 represents rutile, and 7 represents the titanic acid type.

Type		Mechanical Properties					
AWS A5.1	AWS A5.1M	Tensile Strength Mpa	Yield Strength Mpa	Elongation A (%)	Impact Value KV2 (J) -45℃	Impact Value KV2 (J)-30℃	Radio graphics
E6011	E4311	≥ 430	≥ 330	≥ 22	---	≥ 27	Grade II
E6013	E4313	≥ 430	≥ 330	≥ 17	---	---	
E7016	E4916	≥ 490	≥ 400	≥ 22	≥ 27	≥ 27	Grade I
E7018	E4918	≥ 490	≥ 400	≥ 22	≥ 27	≥ 27	
E7018M	E4918M	Normal ≥ 490	370 ~ 500 2.4MM / 370 ~ 630	≥ 24	---	≥ 67	
E308- XX		≥ 550					
E308L-XX		≥ 520					
E309- XX		≥ 550		≥ 30			
E309L-XX		≥ 520					
E316- XX		≥ 520					
E316L-XX		≥ 490					
E312- XX		≥ 660		≥ 22			

Note:
E6011 has no special requirements for heat preservation furnace and drying; Environmental temperature: 20 ~ 40 ℃;The requirement of E6013 heat preservation furnace is higher than the ambient temperature [10℃~20℃]; Drying requires drying at least 1 hour at 120 ℃ 150 ℃; E7016/E7018/E7018M requirements for heat preservation furnace and drying; Environmental temperature: [30℃~140℃]; Drying requires drying at least 1~2 hours at 260 ℃~425 ℃;

Type		Chemical Composition									
AWS A5.10 /2012	GBT10858 /2008	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Other Single	Other Total
ER1070		≤ 0.20	≤ 0.25	≤ 0.04 ≤ 0.03	≤ 0.03	≤ 0.03	----	≤ 0.04 ≤ 0.07	≤ 0.03	≥ 99.70	≤ 0.03	
	Sal1070											
ER1100	ER1100	Si + Fe ≤ 0.95		0.05 ~ 0.20	≤ 0.05	Be ≤ 0.0003		≤ 0.10	----	≥ 99.00	≤0.05	≤0.15
ER4043	E4043 Sal4043	4.5 ~ 6.0	≤ 0.80	≤ 0.30	≤ 0.05	≤ 0.05	Be ≤ 0.0003	≤ 0.10	≤ 0.20	余量Rest	≤0.05	≤0.15
ER5356	5356	≤ 0.25	≤ 0.40	≤ 0.10	0.05 ~ 0.20	4.5 ~ 5.5	0.05 ~ 0.20 Be ≤ 0.0003	≤ 0.10	0.06 ~ 0.20	余量Rest	≤0.05	≤0.15
ER5183	Sal5183	≤ 0.40	≤ 0.40	≤ 0.10	0.05 ~ 1.00	4.3 ~ 5.2	0.05 ~ 0.25 Be ≤ 0.0003	≤ 0.25	≤ 0.15	余量Rest	≤0.05	≤0.15

Note: The content of Be ≤ 0.0008 in the AWS 1999 edition, Be ≤ 0.0003 in the AWS 2012 edition, AWS ER1188 Al ≥ 99.88. American standard, there are ER (E- electrode wire) and R (filler wire), example: ER1070 and R1070. In fact, they are divided into two categories: filler wire and both. As to ER5356,when Cr--0.05 ~ 0.20, Be ≤ 0.0005;when Cr≤0.30, Be ≤ 0.0003.ISO18273-2004 is the same chemical as American standard,Be of ER5356 and ER5183 can choose ≤ 0.0003 or ≤ 0.0005.

Type	Chemical Composition								
AWS A5.9M 2012	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
ER308	≤ 0.08	19.5 ~ 22.0	9.0 ~ 11.0	≤ 0.75	1.0 ~ 2.5	0.30 ~ 0.65	≤ 0.03	≤ 0.03	≤ 0.75
ER308Si						0.65 ~ 1.00			
ER308L	≤ 0.03					0.30 ~ 0.65			
ER308LSi						0.65 ~ 1.00			
ER309	≤ 0.12	23.0 ~ 25.0	12.0 ~ 14.0			0.30 ~ 0.65			
ER309Si						0.65 ~ 1.00			
ER309L	≤ 0.03					0.30 ~ 0.65			
ER309LSi						0.65 ~ 1.00			
ER316	≤ 0.08	18.0 ~ 20.0	11.0 ~ 14.0	2.0 ~ 3.0		0.30 ~ 0.65			
ER316Si						0.65 ~ 1.00			
ER316L	≤ 0.03					0.30 ~ 0.65			
ER316LSi						0.65 ~ 1.00			
ER312	≤ 0.15	28.0 ~ 32.0	8.0 ~ 10.5	≤ 0.75		0.30 ~ 0.65			
ER347	≤ 0.08	19.0 ~ 21.5	9.0 ~ 11.0			0.30 ~ 0.65			
ER2209	≤ 0.03	21.5 ~ 23.5	7.5 ~ 9.5	2.5 ~ 3.5	0.5 ~ 2.0 N-0.5 ~ 2.0	≤ 0.90			
ER430	≤ 0.10	15.5 ~ 17.0	≤ 0.60	≤ 0.75	≤ 0.60	≤ 0.50			

Type	Mechanical Properties	
AWS A5.4 / A5.4M	Tensile Strength Mpa	Elongation A (%)
E308- XX	≥ 550	≥ 30
E308L- XX	≥ 520	
E309- XX	≥ 550	
E309L- XX	≥ 520	
E316- XX	≥ 520	
E316L- XX	≥ 490	
E312- XX	≥ 660	≥ 22
E347- XX	≥ 520	≥ 30
E2209- XX	≥ 690	≥ 20
E430- XX	≥ 450	≥ 20

Aluminum Filler Alloy Chart

Base Alloy	Filler	1060, 1070 1080, 1350					1100					2014 2036					2219					3003 ALCLAD3003					3004				
Characteristics		J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T
319.0, 333.0 354.0, 355.0 C355.0, 380.0	2319													B	A	A	A	A	A	B	A	A	A	A	A					
	4043	B	A	A	A	A	A	B	A	A	A	A	A	C	C	B	C	A	A	C	C	B	C	A	A	B	B	A	A	A	A	B	B	A	A	A
	4145	A	A	B	A	A	A	A	A	B	A	A	A	A	B	C	B	A	A	A	B	C	B	A	A	A	A	B	A	A	A	A	B	A	A	A
413.0, 443.0 444.0, 356.0 A356.0, 359.0 A357.0	4043	A	A	A	A	A	A	A	A	A	A	A	A	B	B	A	A	A	A	B	B	A	A	A	A	A	A	B	B	A	A	A	A	A	A	A
	4145	A	A	B	B	A		A	A	B	B	A		A	A	B	A	A		A	A	B	A	A		A	A	B	B	A						
7005, 7021 7039, 7046 7146, 710.0 711.0	4043	A	A	C	A	A		A	A	C	A	A		B	B	A	A	A		B	B	A	A	A		A	B	C	A	A		A	D	C	B	A
	4145													A	A	B	A	A		A	A	B	A	A												
	5183	B	A	B	A		A	B	A	B	A		A													B	A	B	A							
	5356	B	A	A	A		A	B	A	A	A		A													B	A	A	A							
	5554																																			
	5556	B	A	B	A		A	B	A	B	A		A													B	A	B	A							
	5654																																			
6061 6070	4043	A	A	C	A	A		A	A	C	A	A		B	B	A	A	A		B	B	A	A	A		A	B	C	A	A		A	D	C	A	A
	4145	A	A	D	B	A		A	A	D	B	A		A	A	B	A	A		A	A	D	B	A		A	B	C	D	B		A	D	C	B	A
	5183	B	A	B		A		B	A	B		A														B	A	B		A						
	5356	B	A	A		A		B	A	A		A														B	A	A		A						
	5556	B	A	B		A		B	A	B		A														B	A	B		A						
6005, 6063 6101, 6151 6201, 6351 6951	4043	A	A	C	A	A		A	A	C	A	A		B	B	A	A	A		B	B	A	A	A		A	B	C	A	A		A	D	C	A	A
	4145	A	A	D	B	A		A	A	D	B	A		A	A	B	A	A		A	A	D	B	A		A	B	C	D	B		A	D	C	B	A
	5183	B	A	B		A		B	A	B		A														B	A	B		A						
	5356	B	A	A		A		B	A	A		A														B	A	A		A						
	5556	B	A	B		A		B	A	B		A														B	A	B		A						
5454	4043	A	B	C	C	A		A	B	C	C	A														A	B	C	C	A		A	D	C	C	A
	5183	B	A	B	B		A	B	A	B	B		A													B	A	B	B		A						
	5356	B	A	A	B		A	B	A	A	B		A													B	A	A	B		A						
	5554	C	A	A	A	A	A	C	A	A	A	A	A													C	A	A	A	A	A					
	5556	B	A	B	B		A	B	A	B	B		A													B	A	B	B		A						
511.0, 512.0 513.0, 514.0 5154, 5254 535.0	4043	A	B	C	C			A	B	C	C															A	B	C	C			A	D	C	C	
	5183	B	A	B	B		A	B	A	B	B		A													B	A	B	B		A						
	5356	B	A	A	B		A	B	A	A	B		A													B	A	A	B		A						
	5554	C	A	A	A		A	C	A	A	A		A													C	A	A	A		A						
	5556	B	A	B	B		A	B	A	B	B		A													B	A	B	B		A						
	5654	C	A	A	A		B	C	A	A	A		B													C	A	A	A		B						

Aluminum Filler Alloy Chart

Base Alloy	Filler	ALCLAD 3004					5005 5050					5052 5652					5083 5456					5086 5056					511.0, 512.0 513.0, 514.0 5154, 5254 535.0				
Characteristics		J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M
319.0, 333.0 354.0, 355.0 C355.0, 380.0	4043	B	B	A	A	A	A	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A		A	A	A	A	A		A
	4145	A	A	B	A	A	A	A	A	B	A	A	A																		
413.0, 443.0 444.0, 356.0 A356.0, 359.0 A357.0	4043	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A	A	A	B	B	A	A	A	A	B	B	A	A	A
	5356													B	A	B	B		A	A	A	A		A	A	A	A		A	A	B	
7005, 7021 7039, 7046 7146, 710.0 711.0	4043	A	D	C	B	A		A	B	C	B	A		B	D	C	B	A													
	5183	B	A	B	A		A	B	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A
	5356	B	B	A	A		A	B	A	A	A		A	A	B	A	A		A	A	B	A	A		A	A	B	A	A		A
	5554	C	C	A	A	A	A	C	A	A	A	A	A	B	C	A	A	A	A										B	C	A	A
	5556	B	A	B	A		A	B	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A
	5654	C	C	A	A		B	C	A	A	A		B	B	C	A	A		A										B	C	A	A
6061 6070	4043	A	D	C	A	A		A	B	C	A	A		A	D	C	A	A		A	D	C	A			A	D	C	A		
	4145	B	C	D	B	A		A	B	D	B	A																			
	5183	B	A	B		A		B	A	B		A		B	A	B	C		B	A	A	B	A		A	A	A	B	A	B	C	
	5356	B	B	A		A		B	A	A		A		B	B	A	C		A	A	A	B	A		A	A	A	B	A	B	C	
	5554													C	C	A	B	A	B	B	C	A	A	B	C	A	A	B	C	A	B	C	B
	5556	B	A	B		A		B	A	B		A		B	A	B	C		B	A	A	B	A		A	A	A	B	A	B	C	
	5654													C	C	A	B		A	B	C	A	A	B	B	C	A	A	B	C	A	B	A
6005, 6063 6101, 6151 6201, 6351 6951	4043	A	D	C	A	A		A	B	C	A	A		A	D	C	A	A		A	B	C	A			A	B	C	A		
	4145	B	C	D	B	A		A	B	D	B	A																			
	5183	B	A	B		A		B	A	B		A		B	A	B	C		B	A	A	B	A		A	A	A	B	A	B	C	
	5356	B	B	A		A		B	A	A		A		B	B	A	C		A	A	A	A	A		A	A	A	A	A	A	C	
	5554													C	C	A	B	A	B	B	A	A	A	B	A	A	A	B	A	A	C	A	B
	5556	B	A	B		A		B	A	B		A		B	A	B	C		B	A	A	B	A		A	A	A	B	A	B	C	
	5654													C	C	A	B		A	B	A	A	A	B	B	A	A	B	A	A	B	A	A
5454	4043	A	D	C	C	A		A	B	C	C	A		A	D	C	C	A													
	5183	B	A	B	B		A	B	A	B	B		A	A	A	A	B		A	A	A	B	B		A	A	A	B	B		A
	5356	B	B	A	B		A	B	A	A	B		A	A	B	A	B		A	A	A	B	B		A	A	A	B	B		A
	5554	C	C	A	A	A	A	C	A	A	A	A	A	C	C	A	A	A	A	B	C	A	A		A	B	C	A	A		A
	5556	B	A	B	B		A	B	A	B	B		A	A	A	B	B		A	A	A	B	B		A	A	A	B	B		A
	5654													B	C	A	B		B										B	C	A	A
511.0, 512.0 513.0, 514.0 5154, 5254 535.0	4043	A	D	C	C			A	B	C	C			A	D	C	C														
	5183	B	A	B	B		A	B	A	B	B		A	A	A	B	B		A	A	A	B	A		A	A	A	B	B		B
	5356	B	B	A	B		A	B	A	A	B		A	A	B	A	B		A	A	A	B	A		A	A	A	B	A		A
	5554	C	C	A	A		A	C	A	A	A		A	C	C	A	A		B	B	C	A	A		B	C	A	A		A	
	5556	B	A	B	B		A	B	A	B	B		A	A	A	B	B		A	A	A	B	A		A	A	A	B	B		A
	5654	C	C	A	A		B	C	A	A	A		B	B	C	A	A		B	B	C	A	A		B	B	C	A	A		A

Aluminum Filler Alloy Chart

Base Alloy	Filler	5454	6005, 6063 6101, 6151 6201, 6351 6951	6061 6070	7005, 7021 7039, 7046 710.0, 711.0 7146	413.0, 443.0 444.0, 356.0 A356.0, A357.0 359.0	319.0, 333.0 354.0, 355.0 C355.0, 380.0
Characteristics		J R D C T M	J R D C T M	J R D C T M	J R D C T M	J R D C T M	J R D C T M
319.0, 333.0 354.0, 355.0 C355.0, 380.0	2319						B A A A A A
	4043	A A A A A A	B B A A A A	B B A A A A	B B A A A A	B B A A A A	
	4145		A A B A A A	A A B A A A	A A B A A A	A A B A A A	A B B B A A
413.0, 443.0 444.0, 356.0 A356.0, 359.0 A357.0	4043	A B B A A A	A B A A A A	A B A A A A	A B B A A A	A B A A A A	
	4145		A A B B A	A A B B A	A A B B A	A A B B A B	
	A356.0					A A A A A A	
	A357.0					A A A A A A	
	5356	A A A B A			A A A A B		
7005, 7021 7039, 7046 7146, 710.0 711.0	4043		A D C B A	A D C B A	B D C B A		
	5183	A A B A A	A A B A A	A A B A A	A A B A A		
	5356	A B A A A	A B A A A	A B A A A	A B A A A		
	5554	B C A A A A	B C A A A A	B C A A A A	B C A A A A		
	5556	A A B A A	A A B A A	A A B A A	A A B A A		
	5654	B C A A A	B C A A A	B C A A A	B C A A A		
6061 6070	4043	A D C B A	A C B A A	A C B A A			
	4643(1)		A C B A A	A C B A A			
	5183	B A B C A	B A A C A	B A A C B			
	5356	B B A C A	B A A C A	B B A C A			
	5554	C C A A A A	C B A B B A	C B A B B B			
	5556	B A B C A	B A A C A	B A A C B			
	5654	C C A B B	C B A B B	C B A B B			
6005, 6063 6101, 6151 6201, 6351 6951	4043	A B C B A	A C B A A				
	4643(1)		A C B A A				
	5183	B A B C A	B A A C A				
	5356	B A A C A	B A A C A				
	5554	C A A A A A	C B A B B A				
	5556	B A B C A	B A A C A				
	5654	C A A B B	C B A B B				
5454	5183	A A B B A					
	5356	A B A B A					
	5554	B C A A A A					
	5556	A A B B A					
	5654	B C A B B					

Aluminum Filler Alloy Chart

Base Alloy	Filler	1060, 1070 1080, 1350	1100	2014 2036	2219	3003 ALCLAD3003	3004
Characteristics		J R D C T M	J R D C T M	J R D C T M	J R D C T M	J R D C T M	J R D C T M
5086 5056	4043	A B C B	A B C B			A B C B	A C C B
	5183	A A B A A	A A B A A			A A B A A	A A B A A
	5356	A A A A A	A A A A A			A A A A A	A B A A A
	5556	A A B A A	A A B A A			A A B A A	A A B A A
5083 5456	4043	A B C B	A B C B			A B C B	A C C B
	5183	A A B A A	A A B A A			A A B A A	A A B A A
	5356	A A A A A	A A A A A			A A A A A	A B A A A
	5556	A A B A A	A A B A A			A A B A A	A A B A A
5052 5652	4043	A B C A A	A B C A A			A B C A A	A B C A A
	5183	B A B A	B A B A			B A B A	B A B A
	5356	B A A A	B A A A			B A A A	B A A A
	5556	B A B A	B A B A			B A B A	B A B A
5005 5050	1100	C B A A A A	C B A A A A			C C A A A A	
	4043	A A C A A	A A C A A			A B C A A	A B C A A
	4145	B A D B A	B A D B A			B B D B A	
	5183	C A B B	C A B B			C A B C B	B A B A
	5356	C A B B	C A B B			C A B C B	B A A A
	5556	C A B B	C A B B			C A B C B	B A B A
ALCLAD 3004	1100	D B A A A A	D B A A A A			C C A A A A	
	4043	A A C A A	A A C A A			A B C A A	A D D A A
	4145	B A D B A	B A D B A			B B D B A	
	5183	C A B C B	C A B C B			C A B C A	B A C C A
	5356	C A B C B	C A B C B			C A B C A	B B B C A
	5554						C C A B A A
	5556	C A B C B	C A B C B			C A B C A	B A C C A
3004	1100	D B A A A A	D B A A A A			C C A A A A	
	4043	A A C A A	A A C A A			A B C A A	A B D A A
	4145	B A D B A	B A D B A			B B D B A	
	5183	C A B B	C A B B			C B C A	B A C C A
	5356	C A B B	C A B B			C A B C A	B B B C A
	5554						C C A B A A
	5556	C A B B	C A B B			C B C A	B A C C A
3003 ALCLAD 3003	1100	B B A A A A	B B A A A A			B B A A A A	
	4043	A A B A A	A A B A A	B A A A A	B A A A A	A A B A A	
	4145	A A C B A	A A C B A	A A B A A	A A B A A	A A C B A	
2219	2319			B A A A A A	A A A A A A		
	4043	B A A A A	B A A A A	B C B C A	B C B C A		
	4145	A A B A A	A A B A A	A B C B A	A B C B A		
2014 2036	2319			C A A A A A			
	4043	B A A A A	B A A A A	B C B C A			
	4145	A A B A A	A A B A A	A B C B A			
1100	1100	B B A A A A	B B A A A A				
	4043	A A B A A	A A B A A				
1060, 1070 1080, 1350	1100	B B A A A B					
	1188	C C A A A A					
	4043	A A B A A					

Jiangsu Giant Welding Co.,Ltd

Aluminum Filler Alloy Chart

Base Alloy	Filler	ALCLAD 3004						5005 5050						5052 5652						5083 5456						5086 5056					
Characteristics		J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M	J	R	D	C	T	M
5086 5056	4043	A	C	C	B			A	B	C	B																				
	5183	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A
	5356	A	B	A	A		A	A	A	A	A		A	A	B	A	A		A	A	B	A	A		A	A	B	A	A		A
	5554													C	C	A	A		A												
	5556	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A
	5654													B	C	A	A		B												
5083 5456	4043	A	C	C	B			A	B	C	B																				
	5183	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A		B	A		A						
	5356	A	B	A	A		A	A	A	A	A		A	A	B	A	A		A	A		A	A		A						
	5554													C	C	A	A		A												
	5556	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A	A	A	B	A		A						
	5654													B	C	A	A		B												
5052 5652	4043	A	C	C	A	A		A	B	C	A	A		A	D	C	B	A													
	5183	B	A	B			A	B	A	B			A	A	A	B	C		B												
	5356	B	B	A			A	B	A	A			A	A	B	A	C		A												
	5554													C	C	A	A	A	B												
	5556	B	A	B			A	B	A	B			A	A	A	B	C		B												
	5654													B	C	A	B		A												
5005 5050	1100							B		A	A	A	A																		
	4043	A	B	C	A	A		A	B	D	A	A																			
	5183	B	A	B	B		A	B	A	C			B																		
	5356	B	A	A	B		A	B	A	B			B																		
	5556	B	A	B	B		A	B	A	C			B																		
ALCLAD 3004	4043	A	D	D	A	A																									
	5183	B	A	C	C		A																								
	5356	B	B	B	C		A																								
	5554	C	C	A	B	A	A																								
	5556	B	A	C	C		A																								

Note: Yellow means base alloy; Blue means welding wire; Gray means characteristic.
Note:

J: Ease of welding
R: Strength of welding joint
D: Ductility
C: Corrosion resistance
T: Service at sustained temperatures above 150(℉)≈65.5(℃).
M: Color match after anodizing.

Characteristics—A: best; B: good; C: normal; D: poor; (blank means can't choose)

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