

GOLDEN BRIDGE WELDING MATERIALS

INTRODUCTION



Tianjin Golden Bridge Welding Materials Group Co.,Ltd. is a leading professional manufacturer in welding industry of the world. The group established in 1986, owns 2 branch offices, 11 subsidiaries and 10 production bases. We offer innovative solutions and qualified products to serve the customers all around the world.

Our products are divided into seven categories including welding electrode, flux-cored welding wire, solid welding wire, submerged-arc welding wire, argon-arc welding wire, sintered flux and welding strip, covering over four hundred varieties.

Products are widely used in military industry, pressure vessels fabrication, shipbuilding, bridge construction, petrochemical industry, pipeline and transportation industry, machinery fabrication, large power plants construction and other important industries.

WELDING SOLUTION

Petroleum Industry

- Petroleum and chemical equipments
- Petroleum pipeline



Boiler Fabrication

- Pressure vessels
- Chemical tank
- Storage tank



Building & Bridge Construction

- Infrastructure construction
- Steel structure building construction

Electric Power Industry

- Nuclear power station
- Hydro power station
- Thermal power station

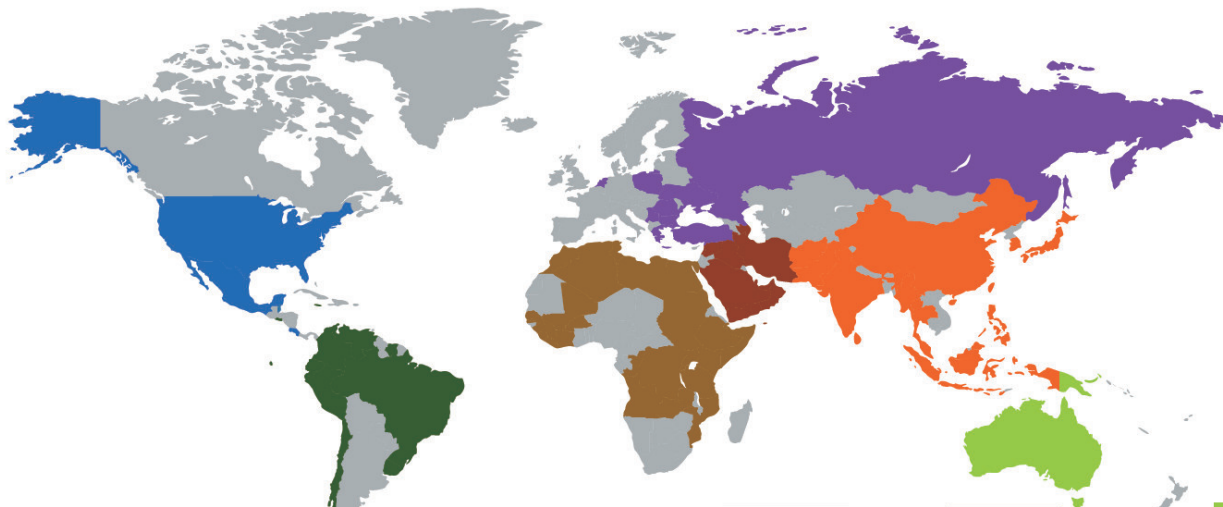


Offshore & Shipbuilding Industry

- Naval architecture and marine engineering
- Vehicle production and maintenance
- Transportation facility, railway, trailer, container fabrication



GLOBAL SALES NETWORK



Asia

China
Singapore
South Korea
Japan
Malaysia
Indonesia
Cambodia
Vietnam
Bangladesh
Maldives
Philippines
Thailand
Pakistan
Bengal
Brunei
Myanmar
Sri Lanka
India
Hong Kong

Africa

Egypt
Libya
Cote d'Ivoire
Kenya
Liberia
Burkina Faso
Congo
Mauritius
Angola
Mali
Rwanda
Sudan
Ethiopia
Tunisia
South Africa
Madagascar
Botswana
Benin
Malawi
Zambia
Mozambique
Senegal
Sierra Leone
Djibouti
Burundi
Uganda
Somalia
Guinea
Tanzania
Morocco
Algeria
Gambia
Eritrea
Niger
Zimbabwe
Gabon
Nigeria
Ghana

Middle East

United Arab Emirates
Kingdom of Saudi Arabia
Iraq
Syria
Yemen
Qatar
Oman
Lebanon
Afghanistan
Kuwait
Iran
Bahrain
Jordan
Israel

South America

Brazil
Uruguay
Colombia
Chile
Suriname
Peru
Venezuela
El Salvador
Ecuador

North America

United States
Jamaica
Argentina
Cuba
Costa Rica
Puerto Rico
Dominica
Mexico

Europe

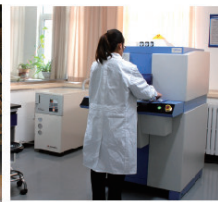
United Kingdom
Russia
Ukraine
Bosnia and Herzegovina
Turkey
Netherlands
Italy
Spain
Cyprus
Greece
Bulgaria
Romania
Poland
France
Moldova
Croatia

Oceania

Australia
Papua New Guinea
Fiji



Product Development Center & Production Facility



ANNUAL ACHIEVEMENTS

Total Sales Volume:

1.4

Million tons

Staff:

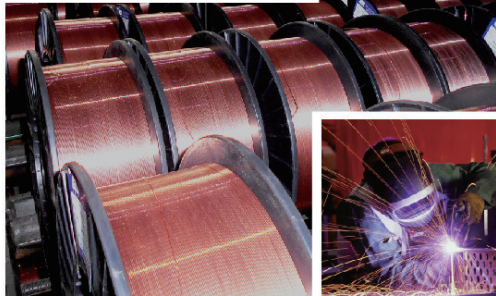
6000

Employees

Annual Gross Sales:

1

Billion USD



ELECTRODE



We produce all kinds of electrodes which include carbon steel electrode, low-alloy steel electrode, heat-resistant steel electrode, low temperature steel electrode, stainless steel electrode and casting iron electrode. All our product present excellent welding performance with smooth arc, high deposited efficiency and effortless slag removal ability.

SUBMERGED-ARC WELDING WIRE AND FLUX



Submerged arc welding wire provides high deposition efficiency with optimal welding quality which is widely used on petrochemical equipment fabrication, bridge construction, shipbuilding and vehicle production. Now we offer fluoride base flux, silicon calcium flux, manganese silicate flux, aluminum titanium flux and alkali flux which could paired with submerged arc welding wire to enhance stability of arc during operation. The welding flux will also increase the mechanical properties and chemical properties of deposited metal.

STAINLESS STEEL FLUX-CORED WELDING WIRE



Stainless steel flux cored welding wire present excellent mechanical properties with exceptional intergranular corrosion resistance. The products are designed for all positions welding work with carbon dioxide as shielding gas, which provide smooth arc and effortless slag removal ability.

SELF-SHIELDED FLUX-CORED WELDING WIRE

The most obvious advantage of self-shield welding wire is deposited metal provides high impact toughness under low temperature environment which is suitable for oil or gas pipelines and other outdoor welding work due to no shielding gas requirement during the operation. The products are designed for all positions welding work and also present excellent welding performance including smooth arc, low spatter level, effortless slag removal ability and crack resistance. Now this series of product are widely used in pipe line construction, tank and pressure vessels fabrication, machine production and offshore platform construction.



GAS-SHIELDED WELDING WIRE

The gas shielded welding wire is divided into solid welding wire and flux cored welding wire, all these products will increase deposit efficiency and welding quality during the operation and also will save energy and cost for production. Most of the solid welding wire are coated with copper film in 0.8mm, 1.0mm, 1.2mm and 1.6mm external diameter and packed in spool or drum. The solid welding wire is designed for gas shield welding work which is widely used for vehicle production, bridge construction, shipbuilding industry and petrochemical industry etc. The flux cored welding wire is designed with deep penetration and high deposition efficiency which is widely used for shipbuilding industry.



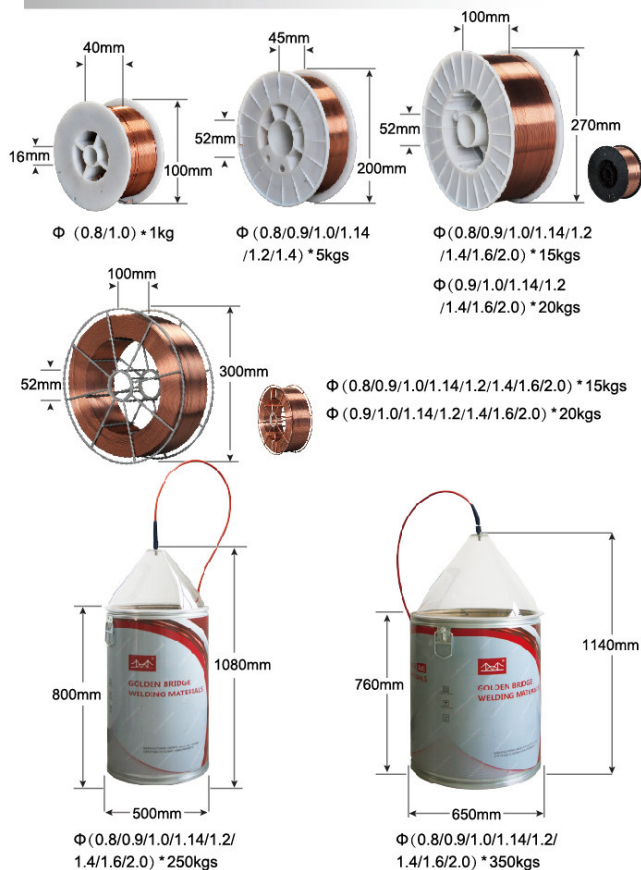
TIG ARGON-ARC WELDING WIRE

The argon arc welding wire is designed with 1m length which is widely applied for welding work on stainless steel, carbon steel and some of low alloy steel. The product present excellent plasticity during welding work and deposited metal has good toughness and anti-cracking ability.



PRODUCT SPECIFICATION

Gas-Shielded Solid Welding Wire



Gas-Shielded Flux-Cored Welding Wire



Self-Shielded Flux-Cored Welding Wire Carbon Steel



Gas-Shielded Flux-Cored Welding Wire Stainless Steel



TIG Argon-Arc Welding Wire



JQ-MG50-6

GB/T 8110-2008 ER50-6
ISO 14341-A-G42 4 C1 3Si1
AWS A5.18 ER70S-6
JIS Z3312 YGW12

Product Description: JQ-MG50-6 is carbon steel solid welding wire which is designed for high speed welding work with excellent welding performance including smooth arc, low spatter level and optimal bead appearance, the product is permitted for all position welding work. The deposited metal presents exceptional corrosion-resistant with good anti-porosity property. CO₂ gas or Ar + CO₂ gas is required as shielding gas during the operation.

Application: JQ-MG50-6 is used for all kinds of 500MPa steel welding work including structural parts, plates and pipes.

Wire Composition (%)

Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
Guarantee Value	0.06~0.15	1.40~1.85	0.80~1.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.03	≤0.50
Measured Value	0.077	1.45	0.87	0.013	0.012	0.017	0.031	0.002	0.004	0.125

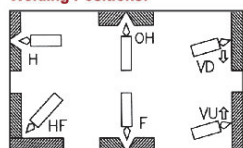
Deposit Mechanical Properties

Test Item	R _m (MPa)	R _{eH} or R _{eL} (MPa)	A(%)	KV ₂ (J) -40 °C
Guarantee Value	≥500	≥420	≥22	≥47
Measured Value	555	450	29	77、95、83

Reference Current (DC+)

Diameter(mm)	Current(A)	Flow Rate (L/min)
Φ0.8	50~100	15
Φ1.0	50~220	15~20
Φ1.2	80~350	15~25
Φ1.6	170~550	20~25

Welding Positions:



JQ-MG50-6N

GB/T8110-2008 ER50-6
ISO 14341-A-G42 4 C1 3Si1
AWS A5.18 ER70S-6
JIS Z3312 YGW12

Product Description: JQ-MG50-6N is a kind of non-copper coated solid welding wire which is designed as environment friendly welding material. Compared with regular copper coated welding wire, both of them achieved same technical standard with excellent welding performance on spatter level, smoke exhaust volume and nozzle wear resistance rate. The more important point is that non-copper coated solid welding wire has better performance on rust prevention capability than the copper coated welding wire. The welder's healthy also be protected due to there is no copper dust during operation.

Application: This product is widely used for 500MPa parent metal welding work such as vehicle production, machine fabrication, bridge construction and pressure vessel fabrication.

Wire Composition (%)

Test Item	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
Guarantee Value	≤0.12	1.40~1.85	0.80~1.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.20
Measured Value	0.077	1.54	0.88	0.011	0.012	0.011	0.025	0.010	0.003

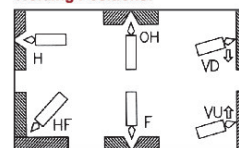
Deposit Mechanical Properties (80%Ar+20%CO₂ shielding gas)

Test Item	R _m (MPa)	R _{eH} or R _{eL} (MPa)	A(%)	KV ₂ (J) -40 °C
Guarantee Value	≥500	≥420	≥22	≥47
Measured Value	542	446	29	86、88、82

Reference Current (DC+)

Diameter(mm)	Current(A)	Flow Rate (L/min)
Φ0.8	50~100	15
Φ1.0	50~220	15~20
Φ1.2	80~350	15~25
Φ1.6	170~550	20~25

Welding Positions:



JQ-YJ501-1

GB/T 10045-2018 T492T1-1C1A
AWS A5.36 E71T-1C
JIS Z3313 T492T1-1CA-H10

Product Description: JQ-YJ501-1 is designed as titania type CO₂ gas shielded flux-cored welding wire which is applied for low carbon steel and 490MPa high strength steel welding work. The product present excellent welding performance with smooth arc, low spatter level and effortless slag removal ability with optimal bead appearance. JQ-YJ501-1 is permitted for all position welding work especially good at flat position or horizontal position welding. The deposited metal has excellent low temperature toughness, anti-crack capacity and exceptional welding quality due to toughening treatment by unique microelement flux formula.

Application: This product is used for carbon steel or low alloy structural steel welding which required tensile strength ≥ 490MPa. JQ-YJ501-1 is widely used for key structure welding work for shipbuilding industry, machine fabrication, etc.

Deposit Composition (%)

Test Item	C	Mn	Si	S	P
Guarantee Value	≤0.18	≤2.00	≤0.90	≤0.030	≤0.030
Measured Value	0.05	1.36	0.41	0.008	0.012

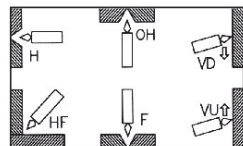
Deposit Mechanical Properties (100%CO₂ shielding gas)

Test Item	R _m (MPa)	R _e or R _m (MPa)	A(%)	KV ₂ (J) -20°C
Guarantee Value	490~670	≥390	≥18	≥27
Measured Value	560	480	27	145

Reference Current (DC⁺)

Diameter(mm)		Φ1.0	Φ1.2	Φ1.4	Φ1.6
Current(A)	F	120~250	120~300	150~400	180~450
	VU, OH	120~210	120~260	150~270	180~280
	VD	200~250	200~300	220~300	250~300
	H	120~230	120~280	150~320	180~350

Welding Positions:



JC-29Ni1

GB/T 10045-2018 T494T8-1NA-N2
AWS A5.29 E71T8-Ni1-J

Product Description: JC-29Ni1 is low alloy steel self-shielded flux cored welding wire which has no gas shielding requirement. Deposited metal present excellent low temperature toughness with 0.8-1.1% Ni element. The product provides preeminent welding performance with strong penetration, effortless slag removal ability with optimal bead appearance. JC-29Ni1 is permitted for all positions welding work, especially suitable for vertical down welding due to quick slag concreting ability.

Application: This product is mainly used for API X52 to X70 oil & gas pipe welding work which has stringent requirements on low temperature toughness.

Deposit Composition (%)

Test Item	C	Mn	Si	S	P	Ni	Al
Guarantee Value	≤0.12	≤1.75	≤0.80	≤0.030	≤0.030	0.80~1.10	≤1.80
Measured Value	0.038	1.15	0.20	0.003	0.006	0.99	0.81

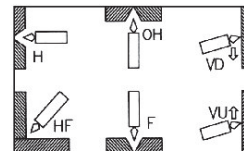
Deposit Mechanical Properties

Test Item	R _m (MPa)	R _e or R _m (MPa)	A(%)	KV ₂ (J)	
				-30°C	-40°C
Guarantee Value	490~670	≥390	≥18	≥27	≥27
Measured Value	515	420	27	175、180、178	135、145、150

Reference Current (DC⁺)

Diameter(mm)	Current(A)	Voltage(V)	Wire Feed Rate(inch/min)
Φ1.6	120~150	16~21	60~100
Φ2.0	150~230	17~22	60~110

Welding Positions:



J38-12

GB/T 5117-2012 E4313
AWS A5.1 E6013
ISO 2560-A-E35 0 R 12

Product Description: J38-12 is titania type carbon steel electrode which is designed for all positions welding work, AC/DC power source. Titania coating provides smooth arc transfer with high operator appeal, easy strike and re-strike during welding process with optimal bead appearance.

Application: J38-12 is widely used in low carbon steel structure welding work, particularly used in cosmetic welding which provides high standard roughness performance on weldment surface.

Deposit Composition (%)

Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
Guarantee Value	≤0.20	≤1.20	≤1.00	≤0.035	≤0.040	≤0.30	≤0.20	≤0.30	≤0.08
Measured Value	0.079	0.38	0.21	0.018	0.024	0.020	0.032	0.005	0.010

Deposit Mechanical Properties

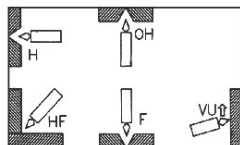
Test Item	R _m (MPa)	R _{0.2} (MPa)	A(%)	KV ₂ (J) 0°C
Guarantee Value	≥430	≥330	≥17	≥47
Measured Value	485	380	28.5	86

Reference Current (AC/DC)

Diameter(mm)	Φ2.0	Φ2.5	Φ3.2	Φ4.0	Φ5.0
Current(A)	40~70	50~90	90~130	130~210	170~230

X-ray destructive detection requirement: Level II

Welding Positions:



E7018

GB/T 5117-2012 E5018
AWS A5.1 E7018
ISO 2560-A-E42 3 B 32 H10

Product Description: E7018 is low hydrogen potassium type electrode which is designed for all positions welding work on carbon steel with AC/DC power source. The unique iron powder formula provides higher deposition rates with premium arc performance, minimal spatter level and effortless slag removal ability. Deposited metal presents stable and reliable mechanical properties.

Application: E7018 is widely used in carbon steel or low alloy steel structure welding work, such as 16Mn etc.

Deposit Composition (%)

Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
Guarantee Value	≤0.15	≤1.60	≤0.75	≤0.035	≤0.035	≤0.30	≤0.20	≤0.30	≤0.08
Measured Value	0.077	1.07	0.54	0.005	0.014	0.011	0.028	0.007	0.016

Deposit Mechanical Properties

Test Item	R _m (MPa)	R _{0.2} Or R _{0.01} (MPa)	A(%)	KV ₂ (J) -30°C
Guarantee Value	≥490	≥400	≥22	≥27
Measured Value	550	455	32	156

Reference Current (AC/DC⁺)

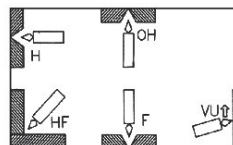
Diameter(mm)	Φ2.5	Φ3.2	Φ4.0	Φ5.0
Current(A)	60~100	80~140	110~210	160~230

X-ray destructive detection requirement: Level I

Notice:

- 1.350°C 1hour baking time is required before operation.
- 2.Rust, oil spots or moisture is strictly prohibited on weldment surface.
- 3.Designed for short arc with narrow bead welding manner.

Welding Positions:



JQ-SAI4043

GB/T 10858-2008 SAI4043
AWS A5.10 ER4043

Description: JQ-SAI4043 is a kind of aluminum silicon welding wire which has widely range of application. Deposited metal provides excellent anti-cracking ability with guaranteed mechanical properties. Welding bead will present different color compare with parent metal color during anodic treatment.

Application: This product is permitted for all kinds of aluminum alloy material and casting parts welding work, except aluminum magnesium alloy. JQ-SAI4043 is widely used in ship building industry, chemical industry, food industry, car industry, pressure vessel and container fabrication industry.

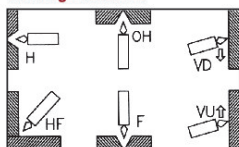
Wire Composition (%)

Test Item	Si	Fe	Cu	Mn	Mg	Zn	Ti	Be
Guarantee Value	4.50-6.00	≤0.80	≤0.30	≤0.05	≤0.05	≤0.10	≤0.20	≤0.0003
Measured Value	5.18	0.15	0.009	0.009	0.007	0.005	0.068	0.0001

Notice:

1. Oxidation film or oil dirt is strictly prohibited on welding point or welding wire before operation.
2. In order to have good bead appearance, welding liner is highly recommended.
3. Aluminum welding solvent must be paired during oxyacetylene gas welding.

Welding Positions:



JQ-SAI5356

GB/T 10858-2008 SAI5356
AWS A5.10 ER5356

Description: JQ-SAI5356 is a kind of aluminum-magnesium alloy welding wire which contains small amount of Ti element and 5% magnesium element. Deposited metal presents high strength properties and excellent anti-cracking ability with superior corrosion resistance capacity. Smooth arc, low spatter level with optimal bead appearance.

Application: This product is not only applicable for aluminum-magnesium alloy material welding work but also permitted for mending work on aluminum-zinc-magnesium casting part. As a kind of largest consumption aluminum alloy welding wire it could also used on aluminum-magnesium-Manganese alloy and aluminum-magnesium-silicon alloy welding work.

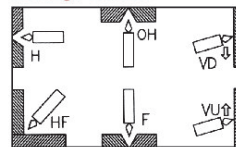
Wire Composition (%)

Test Item	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Be
Guarantee Value	≤0.25	≤0.40	≤0.10	0.05-0.20	4.50-5.50	0.05-0.20	≤0.10	0.06-0.20	≤0.0003
Measured Value	0.06	0.13	0.010	0.13	4.88	0.08	0.008	0.11	0.0001

Notice:

1. Oxidation film or oil dirt is strictly prohibited on welding point or welding wire before operation.
2. In order to have good bead appearance, welding liner is highly recommended.

Welding Positions:



JQ-M308L

GB/T 17853-2018 TS308L-FM211
AWS A5.22 E308LT1-4

Instructions: JQ-M308L is mixed gas shielded stainless steel flux-cored welding wire, characterized by soft and stable arc, the molten droplets appears as a jet transition, low spatter, beautiful appearance, easy slag removal, good welding performance and all-position welding. The deposited metal has good mechanical properties and intergranular corrosion resistance.

Purpose: It is used for welding corrosion resistant 06Cr19Ni10, 06Cr18Ni11Ti stainless steel structure with working temperature below 300 °C.

Chemical composition of deposited metal (%) (80%Ar+20%CO₂)

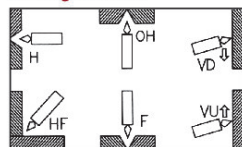
Test Item	C	Mn	Si	Ni	Cr	S	P	Mo	Cu
Guarantee Value	≤0.04	0.50-2.50	≤1.00	9.0-12.0	18.0-21.0	≤0.030	≤0.040	≤0.75	≤0.75
Measured Value	0.026	1.54	0.64	9.55	19.17	0.003	0.013	0.021	0.005

Mechanical properties of deposited metal (80%Ar+20%CO₂)

Test Item	R _m (MPa)	A(%)
Guarantee Value	≥520	≥25
Measured Value	542	40.5

Specifications of goods: Φ1.2mm

Welding Positions:



JQ-M309L

GB/T 17853-2018 TS309L-FM211
AWS A5.22 E309LT1-4

Instructions: JQ-M309L is mixed gas shielded stainless steel flux-cored welding wire, characterized by soft and stable arc, the molten droplets appears as a jet transition, low spatter, beautiful appearance, easy slag removal, good welding performance and all-position welding. The deposited metal has good crack resistance.

Purpose: It is used for welding of the same type of stainless steel structures, clad steel and dissimilar steel components manufactured by synthetic fiber and petrochemical equipment, as well as surfacing of the transition layer of the inner wall of nuclear reactor and pressure vessel and welding of components inside the tower.

Chemical composition of deposited metal (%) (80%Ar+20%CO₂)

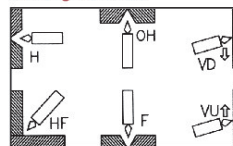
Test Item	C	Mn	Si	Ni	Cr	S	P	Mo	Cu
Guarantee Value	≤0.04	0.50-2.50	≤1.00	12.0-14.0	22.0-25.0	≤0.030	≤0.040	≤0.75	≤0.75
Measured Value	0.027	1.15	0.76	12.30	23.71	0.002	0.014	0.005	0.008

Mechanical properties of deposited metal (80%Ar+20%CO₂)

Test Item	R _m (MPa)	A(%)
Guarantee Value	≥520	≥25
Measured Value	547	41.0

Specifications of goods: Φ1.2mm

Welding Positions:



JQ-M316L

GB/T 17853-2018 TS316L-FM211
AWS A5.22 E316LT1-4

Instructions: JQ-M316L is mixed gas shielded stainless steel flux-cored welding wire, characterized by soft and stable arc, the molten droplets appears as a jet transition, low spatter, beautiful appearance, easy slag removal, good welding performance and all-position welding. The deposited metal has good heat, corrosion and crack resistance.

Purpose: It is used for welding of ultra-low carbon 022Cr17Ni12Mo2 stainless steel, as well as welding of chromium stainless steel, clad steel and dissimilar steel that cannot accept heat treatment after welding.

Chemical composition of deposited metal (%) (80%Ar+20%CO₂)

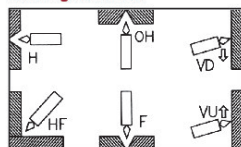
Test Item	C	Mn	Si	Ni	Cr	S	P	Mo	Cu
Guarantee Value	≤0.04	0.50-2.50	≤1.00	11.0-14.0	17.0-20.0	≤0.030	≤0.040	2.0-3.0	≤0.75
Measured Value	0.023	1.53	0.65	11.84	18.87	0.004	0.018	2.51	0.021

Mechanical properties of deposited metal (80%Ar+20%CO₂)

Test Item	R _m (MPa)	A(%)
Guarantee Value	≥485	≥25
Measured Value	571	34.5

Specifications of goods: Φ1.2mm

Welding Positions:



JC-26

GB/T 10045-2018 T49ZT11-1NA
AWS A5.36 E71T11-AZ-CS3

Instructions: JC-26 is a fine-diameter self-shielded flux-cored welding wire, which adopts DCSP. It is characterized by soft and stable arc, low spatter, beautiful appearance, easy slag removal, small amount of smoke, simple operation and good operative weldability.

Purpose: It is used for all-position semi-automatic welding of various carbon steel base metal (mainly thin and galvanized plates), and is applicable to convenient operation at home.

Chemical composition of deposited metal (%)

Test Item	C	Mn	Si	S	P	Al
Guarantee Value	≤0.30	≤2.00	≤0.80	≤0.030	≤0.030	≤2.00
Measured Value	0.22	0.62	0.23	0.007	0.008	1.42

Mechanical properties of deposited metal (80%Ar+20%CO₂)

Test Item	R _m (MPa)	R _e or R _m (MPa)	A(%)
Guarantee Value	490-670	≥390	≥18
Measured Value	620	450	23

Reference Current (DC-)

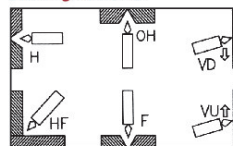
Diameter(mm)	Current(A)	Voltage(V)
Φ0.8	60-130	14-21
Φ0.9	60-150	15-22
Φ1.0	60-150	15-22

Specifications of goods: Φ0.8mm, Φ0.9mm, Φ1.0mm

Packaging of supplied goods:

1. Plastic spool, net weight 1kg/spool, 10 spools/carton.
2. Other packaging agreements.

Welding Positions:



CARBON STEEL ELECTRODE

Model	AWS	Description
J38-12	E6013	J38-12 has excellent welding performance on low carbon steel fabrication process which present superior roughness bead appearance for plate or structure welding work.
J422(J40-50)	(GB)E4303	J422 is Lime-titania type carbon steel electrode designed for all positions welding work. The product is widely used in key structure fabrication work such for vehicle manufacture, mechanical fabrication and building industry, etc. AC/DC power source.
J501Fe18	E7024	High effective titanium type carbon steel electrode which has unique iron powder formula coating and provides 150% deposition rates than other products. Permitted for down hand welding and flat fillet welding. AC/DC power source.
J506(J48-56)	E7016	J506 is low hydrogen potassium type electrode which presents deposited metal with excellent mechanical properties. The product is widely use on medium carbon steel and low alloy steel structure welding work, such as pressure container fabrication, bridge construction industry, shipbuilding industry. AC/DCEP power source.
J506Fe	E7018	Low hydrogen potassium type carbon steel electrode which has higher deposition rates due to iron powder formula coating. Permitted for all positions welding with AC/DCEP power source.
J506Fe-1	E7018-1	The character of low temperature impact toughness of E7018-1 is higher than E7018 due to higher percentage of alloying element is added. E7018-1 is design for key structure welding work such for offshore oil platforms construction and ocean carrier fabrication.
J507(J48-57)	E7015	E7015 is low hydrogen sodium type carbon steel electrode. The product is designed for all positions welding work which present excellent welding performance with smooth arc, low spatter level and effortless slag removal ability. The deposited metal has superior mechanical properties including good anti-cracking ability and high impact toughness under low temperature. DCEP power source.
E6010	E6010	E6010 is a kind of cellulose type electrode which is design for vertical down welding work. The product is widely use in pipe connection work due to excellent vertical-up and overhead welding performance.
E7010	E7010-P1	Low alloy steel electrode for all positions welding work, especially suitable for pipe connection work.

STRUCTURAL STEEL ELECTRODE

Model	AWS	Description
J506RH	E7016-G	E7016-G is ultra-low hydrogen electrode which is designed for low alloy steel welding work. The deposited metal present high toughness with excellent plastic property and anti-cracking ability. E7016-G is widely used in key structure welding work such for offshore oil platforms, pressure vessel fabrication etc.
J507RH	E7015-G	E7015-G is a kind of low hydrogen sodium type electrode which present ultra-low hydrogen content in deposited metal, the product is mainly applied with low alloy steel welding work.
J507FeNi	E7018-G	Low hydrogen electrode designed for low alloy steel welding work. The unique iron powder formula provides higher deposition rates with lower diffusible hydrogen content and high impact toughness under low temperature environment. DCEP power source.
J556RH	E8016-G	Low hydrogen potassium type electrode which is designed for all positions welding work. The deposited metal presents excellent toughness, plastic property and good anti-cracking ability. AC/DCEP power source.
J557	E8015-G	Low hydrogen sodium type electrode which is designed for all positions welding work, mainly applied to low alloy steel welding work. DCEP power source.
J606	E9016-D1	E9016-D1 is a kind of low hydrogen potassium electrode which is designed for structure welding work with the parent metal like high strength low alloy steel or medium carbon steel with corresponding strength, such as 15MnVn, etc. AC/DCEP power source.
J606RH	E9016-G	Ultra-low hydrogen potassium type electrode which is designed for all positions welding work. The deposited metal presents excellent notch impact toughness and anti-cracking ability. Particularly useful for pressure vessel fabrication work with 590MPa flow steel. AC/DCEP power source.
J707	E10015-D2	Low hydrogen sodium type electrode which is permitted for all positions welding with high strength low alloy steel. Preheat treatment and thermal refining treatment is required during welding process. DCEP power source.
J707RH	E10015-G	Ultra-low hydrogen electrode which is designed for low alloy steel and corresponding grade high strength steel welding work.
J757	E11015-G	Low hydrogen sodium type electrode for high strength low alloy steel welding work. DCEP power source required with all positions welding ability.

STAINLESS STEEL ELECTRODE

Model	AWS	Description
A002	E308L-16	Ultra-low carbon Cr19Ni10 stainless steel electrode with lime-titania type coating. Carbon content $\leq 0.04\%$ in deposited metal which is presenting excellent intergranular corrosion resistance and superior welding performance, high strength and good anti-cracking ability. AC/DCEP power source.
A042	E309LMo-16	Lime-titania type ultra-low carbon Cr23Ni13Mo2 stainless steel electrode. The deposited metal present excellent anti-cracking ability and anti-corrosion capability due to unique Mo element formula. AC/DCEP power source.
A062	E309L-16	A062 is a kind of lime-titania type ultra-low carbon Cr23Ni13 stainless steel electrode. The deposited metal maintaining its intergranular corrosion resistance due to low carbon content. AC/DCEP power source.
A102	E308-16	Lime-titania type Cr19Ni10 stainless steel electrode. The deposited metal present excellent intergranular corrosion resistance and superior welding performance, high strength and good anti-cracking ability. AC/DCEP power source.
A107	E308-15	A107 is a kind of basic type Cr19Ni10 stainless steel electrode which is permitted for all positions welding work. The deposited metal present excellent mechanical properties with intergranular corrosion resistance. DCEP power source.
A132	E347-16	Lime-titania type Cr19Ni10Nb stainless steel electrode with Nb stabilizer coating. Deposited metal present excellent mechanical properties with intergranular corrosion resistance. Superior welding performance, good porosity resistance ability and anti-cracking ability. AC/DCEP power source.
A202	E316-16	A202 is designed as low carbon lime-titania type Cr18Ni12-Mo2 stainless steel electrode. The deposited metal present excellent anti-cracking ability and anti-corrosion capability due to unique Mo element formula, especially has good performance on chloride ion corrosion resistance. AC/DCEP power source.
A207	E316-15	A207 is a kind of low carbon basic type Cr18Ni12Mo2 stainless steel electrode which is permitted for all position welding work. The deposited metal present excellent anti-cracking ability and anti-corrosion capability due to unique Mo element formula, especially has good performance on chloride ion corrosion resistance. DCEP power source.

STAINLESS STEEL ELECTRODE

Model	AWS	Description
A212	E318-16	Lime-titania type Cr18Ni12Mo2Nb stainless steel electrode with Nb stabilizer coating. This product presents super excellent welding performance with AC/DCEP power source. The deposited metal provides superior intergranular corrosion resistance than A202 and A207.
A302	E309-16	A302 is a kind of lime-titania type Cr23Ni13 stainless steel electrode which has superior welding performance. The deposited metal present excellent anti-cracking ability and oxidation resistance. AC/DCEP power source.
A307	E309-15	Basic type Cr23Ni13 stainless steel electrode which present superior welding performance in all position welding work. The deposited metal has excellent anti-cracking ability and oxidation resistance. DCEP power source.
A312	E309Mo-16	A312 is a kind of lime-titania type Cr23Ni13Mo2 stainless steel electrode which has superior welding performance. The deposited metal present excellent anti-cracking ability and oxidation resistance due to the proportion of Mo element is higher than A302 in formula. AC/DCEP power source.
A402	E310-16	Lime-titania type Cr26Ni21 super pure austenitic stainless steel electrode. The product has excellent welding performance with AC/DCEP power source. The deposited metal present excellent oxidation resistance under 900-1100°C environment.
A412	E310Mo-16	Lime-titania type Cr26Ni21Mo2 super pure austenitic stainless steel electrode which present superior welding performance. The deposited metal has excellent anti-cracking ability, oxidation resistance and heat resistance than A402 and A407 due to Mo element in formula. AC/DCEP power source.
JQ-S2209	E2209-16	Lime-titania type ultra-low carbon dual-phase steel electrode with superior welding performance. 40%-50% ferrites content in deposited metal provides excellent mechanical properties and corrosion resistance ability. Particularly it has reliable performance on chloride or pitting corrosion resistant. AC/DCEP power source.

HEAT-RESISTANT & LOW-TEMPERATURE ELECTRODE

Model	AWS	Description
R107	E7015-A1	This product is used for boiler pipes (such as 15Mo) and general high strength low-alloy steel welding work with working condition <510℃.
R207	— — —	This product is designed for chemical vessels fabrication work which has high temperature and pressure requirement, also used for CrMo pearlite heat-resistance steel structures (such as 12CrMo) welding work. Working condition is <510℃.
R307	E8015-B2	R307 is designed for Cr1%Mo0.5% heat-resistance steel welding work which has widely range application on boiler pipes, high pressure vessels, petroleum equipment and 30CrMnSi cast steel parts fabrication work. Working condition is <520℃.
R407	E9015-B3	This product can be applied for welding work of Cr2.5Mo pearlite heat-resistance steel structure, such as high temperature and pressure pipes (working condition is <550℃), chemical synthesis equipments and petroleum cracking equipments.
W707Ni	— — —	Low temperature steel electrode containing Ni with low-hydrogen sodium type coating. This product is applied for low temperature steel structure (The working condition is -70℃) welding work, such as 09Mn2V, 06MnVAl and 3.5Ni steel. It is suitable for all position welding with DCEP power source.

CAST IRON ELECTRODE

Model	AWS	Description
Z208	— — —	Graphitization type low carbon steel cast iron electrode which is designed for AC/DCEP power source. The deposited metal will transit to gray cast iron under suitable temperature condition; it shows common crack-resistance ability with lower price than other cast iron electrode.
Z308	ENi-CI	Z308 is a sort of reducibility graphite type pure nickel cast iron electrode. No preheating process required on the weldments. The deposited metal has excellent crack-resistance ability and processing property. Due to the cost of raw material, the price of this product is higher than other cast iron electrode. It is suitable for AC/DCEP power source.
Z408	ENiFe-CI	Reducibility graphite type Ni-Fe alloy cast iron electrode. This product is mainly applied for maintenance work of high strength gray casting parts and spherulitic graphite casting parts.

HARDFACING ELECTRODE

Model	AWS	Description
D256	— — —	Low hydrogen potassium type high manganese steel hardfacing electrode. The deposited metal is austenite high-manganese steel which presents high hardness, good toughness and excellent wear-resistance. D256 is widely used for hardfacing work on quick-wearing parts of crushers, high Mn steel rails and bulldozers. AC/DCEP power source.
D266	EFMn-B	D266 is low hydrogen potassium type high manganese steel hardfacing electrode. The crack resistance and wear resistance of deposited metal are highly improved by unique Mo formula. This product is widely applied for austenite high-manganese steel hardfacing work of crushers, high Mn rails and bulldozers which need to enhance the hardness on quick-wearing parts.
D667	— — —	D667 is low hydrogen potassium type high chrome cast iron hardfacing electrode. The hardfacing layers have excellent wear-resistance, corrosion resistance and atmospheric corrosion resistance below 500℃, the hardness will be maintained in this very temperature condition. The product is designed for hardfacing work of petroleum industry and mining machinery instrument parts. DCEP power source.

SOLID WELDING WIRE

Model	AWS	Description
JQ-MG50-3	ER70S-3	JQ-MG50-3 is a kind of solid welding wire which has excellent welding performance with low spatter level and optimal bead appearance.
JQ-MG50-4	ER70S-4	This kind of solid welding wire shielded by 100%CO ₂ or 5%-19% CO ₂ /Balance Argon. It has excellent welding performance, especially on one-time forming welding. Delicate and smooth bead appearance required with the rich-argon mixed gas.
JQ-MG50-6	ER70S-6	JQ-MG50-6 is solid welding wire which has excellent anti-porosity ability on deposited metal. The welding result will not be affected by oxidation film and oil stain on the base metal. This product is applied for 500MPa tensile strength steel structure, steel parts, steel plates and pipelines welding work.
JQ-MG50-6N	ER70S-6	JQ-MG50-6N is a kind of no copper coated solid welding wire which presents excellent anti-porosity ability on deposited metal. The welding result will not be affected by oxidation film and oil stain on the base metal. The product is applied for structural steel welding work of automobile industry, construction machine fabrication, bridges construction and pressure vessel fabrication.
JQ-MG50-6A	ER70S-6	JQ-MG50-6A has excellent welding performance, the deposited metal presents excellent oxidation resistance, oil stain resistance and anti-porosity ability. The welding result will not be affected by oxidation film and oil stain on the base metal. The product is widely applied for 500MPa grade steel structure parts, steel plate and pipelines welding work.
JQ-MG50-Ti	ER70S-G	JQ-MG50-Ti is designed for high speed welding work on sheet metal. The welding efficiency could be improved by current adjustment. The product is widely applied for 500MPa grade steel welding work of structure parts, steel plate and pipelines.

SOLID WELDING WIRE

Model	AWS	Description
JQ·TH550-NQ-Ⅱ	ER80S-G	JQ·TH550-NQ-Ⅱ is a sort of solid welding wire which is shielded by rich-argon gas. It presents excellent welding performance with superior bead forming. The deposited metal has good ability of atmospheric corrosion resistance, crack resistance, superior plasticity and toughness.
JQ·MG60-G	ER90S-G	JQ·MG60-G is 620MPa grade high toughness low alloy steel solid welding wire which is shielded by rich-argon gas. It has excellent welding performance which is permitted for all position welding work.
JQ·MG70-G	ER100S-G	JQ·MG70-G is 690MPa grade high toughness low alloy steel solid welding wire which is shielded by rich-argon gas. It has excellent welding performance with smooth arc and low spatter level which is permitted for all position welding work.
JQ·MG80-G	ER110S-G	JQ·MG80-G is a sort of high strength solid welding wire which is shielded by 80%Ar /balance CO ₂ mixed gas. The product presents excellent welding performance with smooth welding arc, low spatter level with stable combustion. The deposited metal has excellent impact toughness in low temperature environment.

FLUX-CORED WELDING WIRE

Model	AWS	Description
JQ·YJ501-1	E71T1-C	A titania type CO ₂ gas-shielded flux-cored welding wire which is suitable for all position welding. The mechanic properties of the welding bead are strengthened by microelements toughening treatments; it also has excellent low temperature toughness, good crack resistance and superior quality.

FLUX-CORED WELDING WIRE

Model	AWS	Description
JQ·YJ501-1L	E71T1-C1A4-CS1	A titania type CO ₂ gas-shielded flux-cored welding wire which is permitted for all position welding work especially good at flat position or horizontal position welding. It presents excellent welding performance with superior bead forming, smooth arc, low spatter level and good slag detachability. The deposit metal are strengthened by microelements toughening treatments; it also has excellent low temperature toughness and good crack resistance on the working condition of -40 °C.
JQ·YJ507-1	E70T-5C	This product is a sort of gas shielded flux-cored welding wire which is designed for 490MPa grade low carbon steel and low alloy steel. The deposited metal has excellent crack resistance ability and low temperature toughness (above -30 °C).
JQ·YJ601Ni-1	E81T1-C1A4-Ni1	Flux-cored welding wire which has excellent impact toughness in low temperature environment. This product is designed for 550MPa grade steel welding work, especially suitable for key position welding work in hoisting machinery fabrication, bridge construction and storage tank fabrication, etc.
JQ-308L	E308LT1-1	CO ₂ gas shielded flux-cored stainless steel welding wire. JQ-308L is designed for welding work in stainless steel structures of 06Cr19Ni10 and 07Cr19Ni11Ti which required excellent corrosion resistance in deposited metal, such as stainless steel code of 301, 302, 304, 304L, 308 and 308L. The working condition is < 300 °C.

SELF-SHIELDED FLUX-CORED WELDING WIRE

Model	AWS	Description
JC-29	E71T8-K6	JC-29 is a kind of low alloy steel self-shield flux-cored welding wire. The welding bead has excellent low temperature toughness. This product is mainly designed for site welding work of gas and oil pipe (API from X52 to X65) which required high impact toughness in low temperature.

SELF-SHIELDED FLUX-CORED WELDING WIRE

Model	AWS	Description
JC-29 Ni1	E71T8-Ni1-J	Low-alloy steel self-shielded flux-cored welding wire. The contents of 0.80%-1.10% nickel are in the deposited metal which presents excellent low temperature toughness and good crack-resistance. This product is widely applied for welding work which required high toughness with nickel addition in the welding bead, site welding work of gas and oil pipe (API from X52 to X70) which required high impact toughness in low temperature, auto and half-auto welding work on common steel, anti-atmosphere corrosion steel and high strength steel. The application area includes pipelines fabrication, marine platform construction, storage tank fabrication, etc.
JC-30	(GB) T553T8-1NA-N3	This product is mainly designed for site welding work of gas and oil pipe (API from X65 to X80) which required high impact toughness in low temperature.

SUBMERGED-ARC WELDING WIRE

Model	AWS	Description
JQ-H08A	EL8	Low-manganese and low-silicon type submerged arc welding wire matching with high-manganese and silicon sintered flux, the welding result will not be affected by the rust on the basic metal. Combining with sintered flux SJ101 or SJ501, this product is widely applied for 420MPa grade of high speed welding work and filling metal welding work.
JQ-H08MnA	EM12	JQ-H08MnA is a sort of medium-manganese and medium-silicon type submerged arc welding wire. Combining with sintered flux SJ101, this product is widely applied for 420MPa grade of high speed welding work and filling metal welding work.
JQ-H10Mn2	EH14	High manganese type submerged arc welding wire matching with low manganese and silicon type sintered flux. It has excellent welding performance on delicate welding bead appearance and good slag detachability. The welding result will not be affected by the rust on the basic metal. It could work under single or dual electrode with AC/DC power source. Combining with sintered flux SJ101, this product is widely applied for 490MPa grade of high speed welding work and filling metal welding work. The mechanic properties of deposited metal are very stable.
JQ-EM12K	EM12K	JQ-EM12K is a kind of medium-manganese and low-silicon type submerged arc welding wire matching with medium manganese and silicon type sintered flux. The product shows superior welding bead and good slag detachability. The welding result will not be affected by the rust on the basic metal. It could work under single or dual electrode with AC/DC power source.
JQ-H10MnSi	EM13K	Combining with sintered flux SJ101, this product is widely applied for 420MPa grade of high speed welding work and filling metal welding work, such as boilers fabrication, pressure vessels construction, ships fabrication and nuclear power station construction, bridges fabrication, etc.

SINTERED FLUX

Model	AWS	Description
JQ-SJ101	F6A0-EM12	Fluoride-basic type sintered flux shaped in gray round grains. The granularity is 2.0-0.28mm (10-60 meshes/inch) and the alkalinity is near 1.8. This product mainly cooperates with EL8 and EM12 on welding work of low-alloy structural steel, working industry such as vessels fabrication, pressure boilers construction and pipelines construction, etc.
JQ-SJ301	F6A0-EL8	Calcium-silicate type sintered flux shaped in black round grains. The granularity is 2.0-0.28mm (10-60 meshes/inch) and the alkalinity is near 1.8. This product is mainly applied for welding common structure steel cooperating with submerged arc wire of EM12 and EH14, such as boilers and pipelines with dual side single run welding, multi-pass welding and multi-wire welding.
JQ-SJ402	F7AZ-EL8	Silicon manganese type sintered flux shaped in round grains. The granularity is 2.0-0.28mm (10-60 meshes/inch) and the alkalinity is near 0.7. This product mainly cooperates with JQ-H08A on welding work of mild steel and low alloy steel, especially high speed welding in structures of sheet metal and medium thickness steel, such as vehicle fabrication and mining industry, etc.
JQ-SJ501	F6AZ-EL8	JQ-SJ501 is a kind of aluminum-titanium type acidic sintered flux shaped in round grains. The granularity is 2.0-0.28mm (10-60 meshes/inch) and the alkalinity is around 0.5 to 0.8. Cooperating with submerged arc welding wire as H08A, H08MnA and H08MnMoA, this product is designed for mild steel and low alloy steel welding work, such as ships fabrication, pressure boilers/vessels fabrication. Especially this product is also suitable for high speed welding on sheet metal.

ARGON-ARC WELDING WIRE

Model	AWS	Description
JQ-ER50-3	ER70S-3	JQ-ER50-3 is a carbon steel argon arc welding wire. The deposited metal has excellent mechanic properties in plasticity, crack resistance and impact toughness in low temperature environment.
JQ-TG50	ER70S-6	JQ-TG50 is a carbon steel argon arc welding wire. The deposited metal has excellent mechanic properties in plasticity, crack resistance and impact toughness in low temperature environment.
JQ-TG308	ER308	JQ-TG308 is a type of stainless steel argon arc welding wire which contains 18%Cr-8%Ni as main chemical composition. It presents smooth welding without spatters and superior welding bead comes out both sides with only one side welding. The deposited metal has excellent crack resistance and corrosion resistance. This product is widely applied to the same chemical composition of austenite stainless steel welding work, especially working on sheet metal.