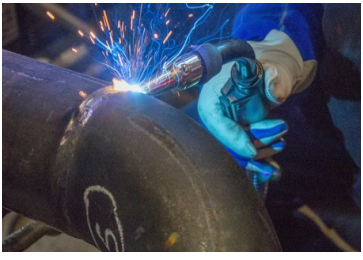
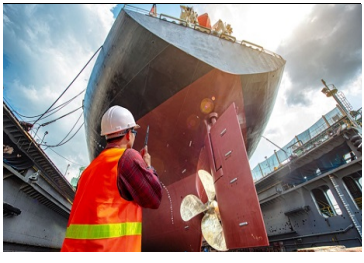
Applications



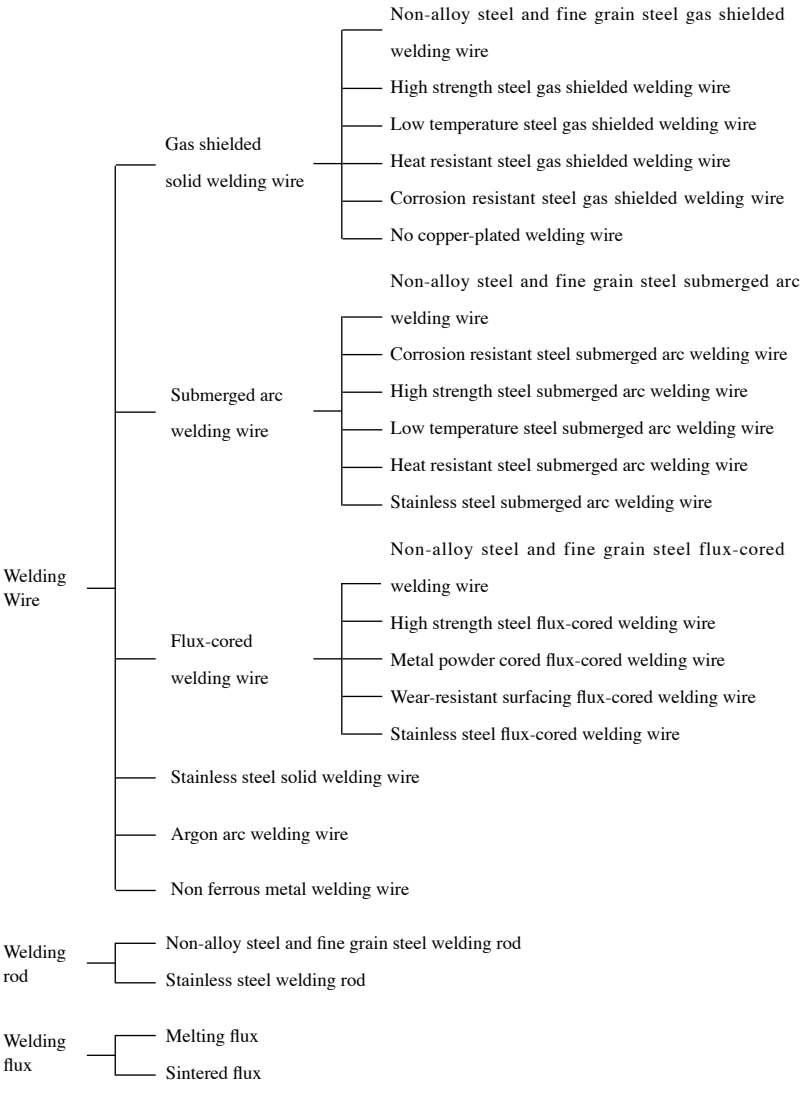


TOKO®

TOKO WELDING CONSUMABLES

Version 2024

Classification of TOKO Welding Consumables



Gas shielded welding wire

Non-alloy steel and fine grain steel gas shielded welding wire

High strength steel gas shielded welding wire

Low temperature steel gas shielded welding wire

Heat resistant steel gas shielded welding wire

Corrosion resistant steel gas shielded welding wire

No Copper-plated welding wire

Non-alloy steel and fine grain steel gas shielded welding wire Precautions and operating points

Product description:

The solid gas shielded welding wire produced by the company is suitable for all position welding and can adapt to large welding current Guarantee Value. During welding, the arc is stable, there is less splashing, the weld shape is beautiful, the deposition efficiency is high, and the sensitivity of the weld metal to gas pores is low.

Matters needing attention:

1. To ensure welding performance, the surface of the work piece should be cleaned of rust, oil stains, moisture, etc. before welding;

2. When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion: When the current is below 250A, the extension length of the welding wire is about (10-18) mm; When the current is greater than 250A, the extension length of the welding wire is about (20-25) mm;

3. When welding, when the wind speed is ≥ 1.8m/s or when welding in high-rise buildings, wind protection measures should be taken, and direct blowing of welding points such as fans should not be used;

4. It is best to control the flow rate of Shielding gas between (15-20) L/min;

5. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. They should be used as soon as possible to avoid affecting the use of welding wire;

6. The diameter of the welding wire should be consistent with the specifications of the conductive nozzle. Excessive welding can cause poor conductivity, affect the formation of the weld, and increase splashing;

7. Excessive or insufficient welding line energy will seriously affect the comprehensive performance of the weld seam and should be given more attention;

8.The above suggestions are for reference only. Users should conduct welding process qualification based on specific situations before use to better align with reality.

Welding wire handling and storage:

1. When transporting the welding wire into a coil, it should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 70S-2

Executive standard： GB/T 8110 G49A3C1S2
AWS A5.18 ER70S-2

Instruction： ER70S-2 is a kind of gas shielded copper plated welding wire that can be protected by CO_2 or argon rich gas during welding. It can be used for single pass welding of killed steel, semi killed steel, and boiling steel, as well as for multi-pass welding in certain situations. Due to the addition of deoxidizers, this filler metal can be used to weld steel with rust and dirt on the surface, but it may damage the quality of the weld seam, depending on the surface conditions.

Purpose： ER70S-2 is suitable for welding of corresponding grades of carbon steel and low alloy steel, filler metal is widely used for high-quality and high toughness welds produced by GTAW method. These filler metals are also well suited for single sided welding without the need for root gas protection on the opposite side of the joint.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Ti	Zr	Al	Cu
Guarantee Value	≤0.07	0.90-1.40	0.40-0.70	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.03	0.05-0.15	0.02-0.12	0.05-0.15	≤0.50
Measured Value	0.05	1.21	0.62	0.010	0.013	0.035	0.030	0.020	0.007	0.08	0.08	0.07	0.16

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	572	465	27	89	

TOKO 70S-3

Executive standard： GB/T 8110 G49A2C1S3
AWS A5.18 ER70S-3
EN ISO 14341-A-G 38 4 C1/M21 2Si1

Instruction： ER70S-3 is a copper-plated welding wire for gas protection, which can be protected by CO_2 or argon rich gas body during welding. It is suitable for single pass welding and multi-pass welding. It has excellent welding process performance, small splash, good weld formation and good crack resistance, especially suitable for high-speed welding of thin sheet with small current.

Purpose： For Bridges, vehicles, pipe fittings and other carbon steel (such a s Q195, Q215, etc.) and some low alloy steel (such as 12Mn) welding.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu
Guarantee Value	0.06-0.15	0.90-1.40	0.45-0.75	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.03	≤0.50
Measured Value	0.09	1.05	0.65	0.014	0.013	0.020	0.017	0.004	0.003	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	542	423	29	86	

TOKO 70S-4

Executive standard： GB/T 8110 G49A2C1S4
AWS A5.18 ER70S-4

Instruction： ER70S-4 is a copper plated welding wire for gasprotection, which can be protected by CO_2 or argon rich gas during welding. It is suitable for single pass and multi pass welding, with excellent weldingprocess performance, small spatter, good weld formation, good crack resistance, and is suitable for all position welding.

Purpose： Suitable for welding of coal mining machinery, engineering machinery, and other 500MPa low alloy steel, as well as high-speed welding of thin plates, pipeline steel, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu
Guarantee Value	0.06-0.15	1.00-1.50	0.65-0.85	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.03	≤0.50
Measured Value	0.09	1.15	0.75	0.014	0.013	0.020	0.016	0.006	0.004	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	532	413	28	84	

TOKO 70S-6

Executive standard： GB/T 8110 G49A3C1S6/G49A4UM21S6
AWS A5.18 ER70S-6
EN ISO 14341-A-G 42 4 C1/M21 3Si1

Instruction: ER70S-6 is a gas protected copper-plated welding wire, which can be protected by CO_2 or argon rich gas during welding. The welding wire feed is stable, the weld is beautiful, the welding smoke and splash are small, and the weld has high tensile resistance and low temperature impact resistance. Suitable for all position welding and large current range.

Purpose： It is suitable for welding of coal mining machinery, construction machinery and other 500MPa low alloy steel, and can also be used for high-speed welding of thin sheet and pipeline steel.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	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	0.08	1.51	0.89	0.015	0.013	0.016	0.020	0.006	0.003	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	546	456	29	89	

TOKO 80S-G

Executive standard： GB/T 8110 G55A4UM21SNCC1
AWS A5.28 ER80S-G

Instruction： ER80S-G is a high-strength weathering steel copper plated welding wire, protected by argon rich gas. The weld seam has strong toughness and atmospheric corrosion resistance, making it a special welding wire for railway locomotives.

Purpose： Mainly used for welding of 550-600MPa grade low alloy steel (such as Q450NQR1, Q500NQR1, 15MnCuCrQT, etc.) for railway locomotives, containers, bridges, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.10	1.20-1.60	≤0.60	≤0.025	≤0.020	0.20-0.60	0.30-0.90	0.20-0.50
Measured Value	0.07	1.42	0.47	0.014	0.010	0.40	0.67	0.31

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥60	80%Ar+20%CO_2
Measured Value	631	529	26	83	

TOKO 80S-Ni1

Executive standard： GB/T 8110 G55A4HUM21SN2
AWS A5.28 ER80S-Ni1

Instruction： ER80S-Ni1 is a 550MPa grade high toughness copper plated welding wire, with a shielding gas of rich argon. The high content of Ni element in welding wire can maintain good plasticity and toughness of the weld seam, and also has high corrosion resistance .

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni	Cu
Guarantee Value	≤0.12	1.00-1.85	0.40-0.80	≤0.025	≤0.025	≤0.15	0.80-1.10	≤0.50
Measured Value	0.08	1.16	0.56	0.014	0.013	0.06	1.05	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-45℃)KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	80%Ar+20%CO_2
Measured Value	585	495	26	65	

High strength steel gas shielded welding wire Precautions and operating points

Product description:

The high-strength welding wire of600MPa, 700MPa, 800MPa, and 900MPa and above developed and produced by the company are welded using mixed gas protection, and can be welded in all directions. The product has the characteristics of high welding strength, excellent deposition performance, stable arc stability, stable wire feeding performance, good weld formation, and high deposition efficiency. In

response to the different needs of various users, the company has developed various high-strength welding wire suitable for different fields. Compared with foreign products, it has the characteristics of low

production cost, stable quality, and can replace imported products in many fields.

Matters needing attention:

1、To ensure welding performance, the surface of the work piece should be cleaned of rust, oil stains, moisture, etc. before welding;

2、When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion:

When the current is below 250A, the extension length of the welding wire is about (10-18) m m; When the current is greater than 250A, the extension length of the welding wire is about (20-25) mm;

3、When welding, when the wind speed is ≥ 1.8m/s or when welding in high-rise buildings, wind protection measures should be taken, and direct blowing of welding points such as fans should not be used;

4、It is best to control the flow rate of Shielding gas between (15-20) L/min;

5、After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. They should be used as soon as possible to avoid affecting the use of welding wire;

6、The diameter of the welding wire should be consistent with the specifications of the conductive nozzle. Excessive welding can cause poor conductivity, affect the formation of t he weld, and increase splashing;

7、Too large or too small welding line energy will seriously affect the overall

performance of the weld, which should cause more attention;

8、The above suggestions are for reference only. Users should conduct welding process qualification based on specific situations before use to better align with reality.

Welding wire handling and storage:

1、When transporting the welding wire into a coil, it should be handled with care to pr event damage;

2、Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3、Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than5 ℃ and a relative humidity of no more than 60%;

4、When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 80S-G

Executive standard： GB/T 39281 G59A3C1/M21Z
AWS A5.28 ER80S-G

Instruction: ER80S-G is a gas shielded copper plated welding wire for low alloy steel, protected by argon rich gas. The addition of titanium element in the welding wire refines the grain size of the deposited metal and achieves excellent comprehensive mechanical properties. This welding wire is more suitable for high current welding.

Purpose： Widely used for welding low alloy high-strength steel (such as X65, 16Mn, 18Nb) in boilers, pressure vessels, bridges, lifting and transportation equipment, construction machinery, ships, pipelines,containers, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Ti	Cu
Guarantee Value	≤0.12	1.40-1.90	0.60-1.00	≤0.025	≤0.025	≤0.15	≤0.15	0.10-0.30	≤0.50
Measured Value	0.07	1.48	0.82	0.015	0.012	0.05	0.04	0.18	0.16

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	590-790	≥490	≥16	≥27	80%Ar+20%CO_2
Measured Value	660	560	24	62	

TOKO 90S-G

Executive standard： GB/T 39281 G59A3UM21Z
AWS A5.28 ER90S-G
EN ISO 14341-A-G 46 2C1/M21 Z

Instruction: ER90S-G is a gas shielded copper plated low alloy welding wire that can be protected by argon rich gas. The welding arc is stable, with small splashes, and can be used for all-round welding.

Purpose： It is used for low-carbon steel (such as Q420, Q460, etc.) and 590-790MPa high-strength steel for industries such as coal mining machinery, engineering machinery, vehicles, petroleum, and power.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Mo	Ti	Cu
Guarantee Value	0.04-0.11	1.20-1.80	0.40-0.80	≤0.025	≤0.025	0.20-0.48	0.04-0.19	≤0.50
Measured Value	0.08	1.54	0.71	0.011	0.010	0.32	0.11	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	590-790	≥490	≥16	≥47	80%Ar+20%CO_2
Measured Value	653	525	27	95	

TOKO 100S-G

Executive standard： GB/T 39281 G69A4UM21Z
AWS A5.28 ER100S-G
EN ISO 16834-A-G 62 2 M21 Z

Instruction： 700MPa high-strength copper plated welding wire, with rich argon gas as the shielding gas. Due to the presence of appropriate amounts of Ni, Cr, and Mo elements in the welding wire and the refinement of grain size through Ti, during the welding process, the weld seam has a beautiful shape, good toughness, low spatter, and high welding efficiency, which can be used for all-round welding.

Purpose： Suitable for welding 700MPa grade high-strength steel and low alloy structural steel (Q500, Q550) in heavy machinery, coal mining machinery, vehicles, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cr	Ti	Cu
Guarantee Value	≤0.11	1.50-2.10	0.40-0.90	≤0.020	≤0.020	0.20-0.70	0.09-0.35	0.30-0.60	≤0.20	≤0.50
Measured Value	0.07	1.65	0.72	0.012	0.010	0.53	0.14	0.43	0.08	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	690-890	≥600	≥14	≥47	80%Ar+20%CO_2
Measured Value	756	670	20	95	

TOKO 110S-G

Executive standard： GB/T 39281 G76A4UM21Z
AWS A5.28 ER110S-G

Instruction: ER110S-G is a high-strength copper plated welding wire of 750MPa grade, and the shielding gas is rich argon gas. This welding wire has high strength and toughness by adding an appropriate amount of Mo and higher Ni elements, and has advantages such as stable arc, good forming, low splashing, and good comprehensive mechanical properties.

Purpose： Widely used for welding 750MPa grade high-strength steel and low alloy structural steel (such as Q620) in heavy machinery, coal mining machinery, large steel structures, special vehicles, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cr	Cu
Guarantee Value	≤0.11	1.20-1.80	0.40-0.80	≤0.020	≤0.020	0.50-1.00	0.25-0.50	≤0.50	≤0.50
Measured Value	0.07	1.60	0.50	0.015	0.013	0.65	0.30	0.28	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	760-960	≥680	≥13	≥47	80%Ar+20%CO_2
Measured Value	772	683	17	80	

TOKO 120S-G

Executive standard： GB/T 39281 G78A4UM21Z
AWS A5.28 ER120S-G
EN ISO 16834-A-G 69 2 M21 Z

Instruction： SLD-80 is a high-strength copper plated welding wire of 800MPa grade, and the shielding gas is rich argon gas. By adding an appropriate amount of alloy elements such as Ni and Mo to the welding wire for precipitation strengthening, solid solution strengthening, and grain refinement, the weld seam has high strength and toughness, and the arc is stable with small splashes, which can be used for all-round welding.

Purpose： Widely used for welding of 800MPa grade high-strength steel and low alloy structural steel (such as Q690) in lifting machinery, coal mining machinery, engineering machinery, vehicles, ships, pressure vessels, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cr	Cu
Guarantee Value	≤0.10	1.50-1.90	0.30-0.70	≤0.020	≤0.015	0.50-1.00	0.25-0.55	0.20-0.50	≤0.50
Measured Value	0.08	1.62	0.52	0.010	0.008	0.59	0.37	0.32	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	780-980	≥680	≥13	≥47	80%Ar+20%CO_2
Measured Value	865	770	16	80	

Low temperature steel gas shielded welding wire Precautions and operating points

Product description:

The low-temperature steel gas shielded welding wire produced by the company adopts rich argon gas protection, which has the advantages of small welding spatter, small smoke and dust, beautiful weld formation, and can be welded with high current. Moreover, the weld seam has strong corrosion resistance and low temperature resistance; Currently, it is widely used in welding in industries such as ships, bridges, pressure vessels, and railways

Matters needing attention:

1. To ensure welding performance, the surface of the work piece should be cleaned of rust, oil stains, moisture, etc. before welding;

2. When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion: When the current is below 250A, the extension length of the welding wire is about (10-18) mm; When the current is greater than 250A, the extension length of the welding wire is about (20-25) mm;

3. When welding, when the wind speed is ≥ 1.8m/s or when welding in high-rise buildings, wind protection measures should be taken, and direct blowing of welding points such as fans should not be used;

4. It is best to control the flow rate of Shielding gas between (15-20) L/min;

5. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. They should be used as soon as possible to avoid affecting the use of welding wire;

6. The diameter of the welding wire should be consistent with the specifications of the conductive nozzle. Excessive welding can cause poor conductivity, affect the formation of the weld, and increase splashing;

7. Excessive or insufficient welding line energy will seriously affect the comprehensive performance of the weld seam and should be given more attention;

8. The above suggestions are for reference only. Users should conduct welding process qualification based on specific situations before use to better align with reality.

Welding wire handling and storage:

1. When transporting the welding wire into a coil, it should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 70S-3

Executive standard： GB/T 8110 G49A4UM21S3
AWS A5.18 ER70S-3

Instruction： ER70S-3 for high toughness copper plated welding wire, the shielding gas is rich argon gas. The weld seam has good plasticity and low-temperature toughness, an d also has high corrosion resistance.

Purpose： Widely used for welding of 550-600MPa grade high toughness steel in heavy machinery, lifting machinery, steel structures, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	V	Cu
Guarantee Value	≤0.12	0.80-1.50	0.50-0.90	≤0.025	≤0.025	≤0.30	≤0.30	≤0.03	≤0.50
Measured Value	0.08	1.15	0.55	0.011	0.010	0.06	0.04	0.004	0.21

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥47	80%Ar+20%CO_2
Measured Value	536	435	26	82	

TOKO 80S-Ni1

Executive standard： AWS A5.28 ER80S-Ni1

Instruction： ER80S-Ni1 is a 550MPa grade high toughness copper plated welding wire, with a shielding gas of rich argon. The high content of Ni element in welding wire can maintain good plasticity and toughness of the weld seam, and also has high corrosion resistance.

Purpose： Widely used for welding of 550-740MPa grade high toughness steel in heavy machinery, lifting machinery, steel structures, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni	Cu
Guarantee Value	≤0.12	≤1.25	0.40-0.80	≤0.025	≤0.025	≤0.15	0.80-1.10	≤0.50
Measured Value	0.08	1.06	0.56	0.014	0.013	0.06	1.05	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-45℃)KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	80%Ar+20%CO_2
Measured Value	590	496	27	105	

TOKO 80S-Ni2

Executive standard： GB/T 8110 G55A6UM21SN5
AWS A5.28 ER80S-Ni2

Instruction： ER80S-Ni2 is a copper plated gas shielded welding wire for low-temperature steel. This welding wire has good weldability and excellent welding process performance: stable arc combustion, small spatter, and beautiful weld formation. The weld metal has excellent low-temperature impact toughness

Purpose： Using argon rich shielding gas for welding steel with strength levels of 500MPa or 550MPa and corresponding high low-temperature toughness requirements. The usage temperature of weld metal can reach -60 ℃ .

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cu
Guarantee Value	≤0.12	≤1.25	0.40-0.80	≤0.025	≤0.025	2.00-2.75	≤0.35
Measured Value	0.09	1.12	0.71	0.010	0.010	2.34	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-60℃)KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	80%Ar+20%CO_2
Measured Value	680	590	23	120	

TOKO 80S-Ni3

Executive standard： GB/T 8110 G55P7HUM22SN71
AWS A5.28 ER80S-Ni3

Instruction： ER80S-Ni3 is a copper plated gas shielded welding wire for 3.5Ni low-temperature steel. This welding wire has excellent welding process performance: stable arc combustion, small spatter, and beautiful weld formation. The weld metal has excellent low-temperature impact toughness.。

Purpose： Using argon rich shielding gas for welding low alloy low-temperature steel with high requirements for low-temperature toughness (-75 ℃).

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cu
Guarantee Value	≤0.12	≤1.25	0.40-0.80	≤0.025	≤0.025	3.00-3.75	≤0.35
Measured Value	0.08	1.13	0.65	0.010	0.010	3.27	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-75℃)KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	Ar+(1%-5%)O_2
Measured Value	650	590	22	65	

Heat resistant steel gas shielded welding wire Precautions and operating points

Product description:

The heat resistant steel gas shielded welding wire produced by the company has characteristics such as resistance to high-temperature cracking and oxidation resistance, and is mostly used for welding of heat resistant steel pressure vessels and pipelines. It has the advantages of stable arc, good weld formation, high deposition efficiency, and fast welding speed, and the weld seam has excellent mechanical properties, making it easy to achieve mechanized and automated welding.

Matters needing attention:

1. To ensure welding performance, the surface of the work piece should be cleaned of rust, oil stains, moisture, etc. before welding;

2. When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion: When the current is below 250A, the extension length of the welding wire is about (10-18) mm; When the current is greater than 250A, the extension length of the welding wire is about (20-25) mm;

3. When welding, when the wind speed is ≥ 1.8m/s or when welding in high-rise buildings, wind protection measures should be taken, and direct blowing of welding points such as fans should not be used;

4. It is best to control the flow rate of Shielding gas between (15-20) L/min;

5. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. They should be used as soon as possible to avoid affecting the use of welding wire;

6. The diameter of the welding wire should be consistent with the specifications of the conductive nozzle. Excessive welding can cause poor conductivity, affect the formation of the weld, and increase splashing;

7. Excessive or insufficient welding line energy will seriously affect the comprehensive performance of the weld seam and should be given more attention;

8. The above suggestions are for reference only. Users should conduct welding process qualification based on specific situations before use to better align with reality

Welding wire handling and storage:

1. When transporting the welding wire into a coil, it should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 70S-A1

Executive standard： GB/T 39279 G49M221M3
AWS A5.28 ER70S-A1

Instruction： 500MPa grade pear lite heat-resistant steel gas shielded welding wire, using M22 gas protection, has excellent mechanical properties.

Purpose： Used for boiler pipelines with working temperatures below 510 ℃ , and can also be used for welding general low alloy steel structures.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cu
Guarantee Value	≤0.12	≤1.30	0.30-0.70	≤0.025	≤0.025	≤0.20	0.40-0.65	≤0.35
Measured Value	0.09	1.12	0.57	0.010	0.010	0.11	0.42	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	shielding gas
Guarantee Value	≥490	≥390	≥22	Ar+(1%-5%)O_2
Measured Value	566	435	26	

TOKO 70S-B2L

Executive standard： GB/T 39279 G49M221CML
AWS A5.28 ER70S-B2L

Instruction： 500MPa grade pear lite heat-resistant steel gas shielded welding wire, using M22 gas protection, has excellent mechanical properties and excellent crack resistance of low weld metal containing C.

Purpose： Suitable for welding heat-resistant steel with working temperatures below 520 ℃, commonly used for welding structures such as conventional thermal power plants and petrochemical equipment.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.05	0.40-0.70	0.40-0.70	≤0.025	≤0.025	≤0.20	1.20-1.50	0.40-0.65	≤0.35
Measured Value	0.03	0.57	0.57	0.010	0.010	0.11	1.32	0.42	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	shielding gas
Guarantee Value	≥490	≥390	≥22	Ar+(1%-5%)O_2
Measured Value	542	421	30	

TOKO 70S-B3L

Executive standard： GB/T 39279 G552C1ML
AWS A5.28 ER80S-B3L

Instruction： 550MPa grade pear lite heat-resistant steel gas shielded welding wire has excellent high-temperature creep resistance and crack resistance of low weld metal containing C

Purpose： Used for welding heat-resistant steel with a working temperature below 550 ℃.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cr	Cu
Guarantee Value	≤0.05	0.40-0.70	0.40-0.70	≤0.025	≤0.025	≤0.20	0.90-1.20	2.30-2.70	≤0.35
Measured Value	0.03	0.56	0.48	0.012	0.011	0.13	1.13	2.58	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	shielding gas
Guarantee Value	≥550	≥440	≥19	Ar+(1%-5%)O_2
Measured Value	625	523	23	

Copper free welding wire
Precautions and operating points

Product description:

The non plated copper welding wire developed by the company completely solves the problem of copper pollution during production and use. The surface of the welding wire adopts special passivation technology, with a smooth and clean surface, strong rust resistance, stable wire feeding, and is suitable for long-term continuous welding. The copper free welding wire adopts adjusted production process and strict production control, and all indicators of both appearance and deposited metal meet the user's usage requirements.

Matters needing attention:

1. To ensure the performance of the welding wire, the surface of the workpiece should be cleaned of rust, oil, moisture, etc. before welding;

2. When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion: When the current is below 250A, the extension length of the welding wire is about (10-18) mm; When the current is greater than 250A, the extension length of the welding wire is about (20-25) mm;

3. When welding, when the wind speed is ≥ 1.8m/s or when welding in high-rise buildings, wind protection measures should be taken, and direct blowing of welding points such as fans should not be used;

4. It is best to control the flow rate of Shielding gas between (15-20) L/min;

5. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. to avoid affecting the use of welding wire;

6. The diameter of the welding wire should be consistent with the specifications of the conductive nozzle. Excessive welding can cause poor conductivity, affect the formation of the weld, and increase splashing;

7. Excessive or insufficient welding line energy will seriously affect the comprehensive performance of the weld seam and should be given more attention;

8. The above suggestions are for reference only. Users should conduct welding process evaluation based on specific situations before use to better meet their own actual needs.

Welding wire handling and storage:

1. When transporting the welding wire into a coil, it should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 ℃ and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 70S-6

Executive standard： GB/T 8110 G49A3C1S6N/G49A4UM21S6N
AWS A5.18 ER70S-6
EN ISO 14341-A-G 42 4 C1/M21 3Si1

Instruction： Adopting advanced surface cleaning and treatment technology from Germany for production, the welding wire has characteristics such as stable arc, small spatter, good weld formation, good re arc performance, and low welding smoke during welding, suitable for all position welding and a large current range.

Purpose： Suitable for welding of coal mining machinery, engineering machinery, and other 500MPa low alloy steel, as well as high-speed welding of thin plates, pipeline steel, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V
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
Measured Value	0.08	1.47	0.87	0.016	0.012	0.014	0.013	0.005	0.003

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.5%)
Measured Value	556	453	28	84	

TOKO 90S-G

Executive standard： GB/T 39281 G59A3UM21ZN
AWS A5.28 ER90S-G
EN ISO 14341-A-G 46 2C1/M21 Z

Instruction： Adopting advanced surface cleaning and treatment processes from Germany for production, the welding wire has characteristics such as stable arc, small spatter, good weld formation, good re arc performance, and low welding smoke during welding, making it suitable for gas directional welding.

Purpose： Used for welding alloy steel (such as Q420, Q460, etc.) and 550-600MPa high-strength steel in industries such as coal mining machinery, engineering machinery, vehicles, petroleum, and power.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Mo	Ti
Guarantee Value	0.04-0.11	1.20-1.80	0.40-0.80	≤0.025	≤0.025	0.20-0.48	0.04-0.19
Measured Value	0.08	1.50	0.78	0.010	0.010	0.34	0.08

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	(-30℃)KV_2(J)	shielding gas
Guarantee Value	590-790	≥490	≥16	≥47	80%Ar+20%CO_2
Measured Value	639	463	27	103	

TOKO 100S-G

Executive standard： GB/T 39281 G69A4UM21ZN
AWS A5.28 ER100S-G
EN ISO 16834-A-G 62 2 M21 Z

Instruction： Adopting advanced surface cleaning and treatment processes from Germany for production, the welding wire has characteristics such as stable arc, small spatter, good weld formation, good re arc performance, and low welding dust during welding, and can be used for all-round welding.

Purpose： Suitable for welding 700MPa grade high-strength steel and low alloy structural steel (Q500, Q550) in heavy machinery, coal mining machinery, vehicles, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Ti
Guarantee Value	≤0.11	1.40-2.00	0.40-0.90	≤0.020	≤0.020	≤0.20	0.50-1.00	0.20-0.55	≤0.20
Measured Value	0.07	1.63	0.68	0.013	0.011	0.03	0.56	0.33	0.07

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	690-890	≥600	≥14	≥47	80%Ar+20%CO_2
Measured Value	750	660	21	81	

TOKO 120S-G

Executive standard： GB/T 39281 G78A4UM21ZN
AWS A5.28 ER120S-G
EN ISO 16834-A-G 69 2 M21 Z

Instruction： Adopting advanced surface cleaning and treatment processes from Germany for production, the welding wire has characteristics such as stable arc, small spatter, good weld formation, good re arc performance, and low welding dust during welding, and can be used for all-round welding.

Purpose： Suitable for welding of 800MPa grade high-strength steel and low alloy structural steel in heavy machinery, coal mining machinery, vehicles, ships, etc.。

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo	Cr
Guarantee Value	≤0.10	1.50-1.90	0.30-0.70	≤0.015	≤0.010	0.50-1.00	0.25-0.55	0.20-0.50
Measured Value	0.07	1.72	0.58	0.012	0.008	0.70	0.35	0.32

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	shielding gas
Guarantee Value	780-980	≥680	≥13	≥47	80%Ar+20%CO_2
Measured Value	825	740	15	70	

Submerged arc welding wire

Non-alloy steel and fine grain steel submerged arc welding wire

Corrosion resistant steel submerged arc welding wire

High strength steel submerged arc welding wire

Low temperature steel submerged arc welding wire

Heat resistant steel submerged arc welding wire

Stainless steel submerged arc welding wire

TOKO H08A

Executive standard： GB/T 5293 SU08A
AWS A5.17 EL8

Instruction： H08A is a carbon steel copper plated submerged arc welding wire, which is welded with melted welding fluxes HJ431, HJ433, HJ434, sintered welding fluxes SJ301, SJ302, SJ501, SJ502, SJ503, SJ522, etc. The arc combustion is stable, the weld shape is beautiful, easy to remove slag, and the weld has good impact toughness.

Purpose： Widely used for welding carbon steel (such as Q195, Q215, etc.) and certain low alloy steels (such as 09Mn2, 16 MnCu, 16Mn, 15MnTi) in industries such as boilers, ships, pressure vessels, and pipelines.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.10	0.40-0.65	≤0.03	≤0.030	≤0.030	≤0.30	≤0.20	≤0.35
Measured Value	0.07	0.45	0.02	0.021	0.014	0.015	0.006	0.30

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	430-600	≥330	≥20	≥27	SJ301
Measured Value	480	380	29	80	

TOKO EL12

Executive standard： GB/T 5293 SU11
AWS A5.17 EL12

Instruction： EL12 is a copper plated submerged arc welding wire for carbon structural steel, combined with melted fluxes HJ230, HJ330, HJ433, HJ434, sintered fluxes SJ101, SJ107, SJ201, SJ301, SJ302, SJ501, SJ503, etc. for welding. It has excellent welding process performance, stable arc combustion, beautiful weld formation, and easy slag removal, which can meet the welding methods and process requirements of high energy multi-layer and multi-pass, double-sided and single-pass, and high-speed welding.

Purpose： Widely used for welding carbon steel (such as Q195, Q215, Q235, etc.) and alloy steel with lower strength levels (such as 16 Mn, 16 Mn Cu, etc.) in boilers, pressure vessels, bridges, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.15	0.20-0.90	≤0.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.35
Measured Value	0.010	0.75	0.10	0.015	0.015	0.005	0.02	0.009	0.28

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) (-20℃)KV2(J)	Combination welding flux
Guarantee Value	430-600	≥330	≥20	≥27	SJ101
Measured Value	490	390	27	70	

TOKO EM12K

Executive standard： GB/T 5293 SU21
AWS A5.17 EM12K
ISO 14171 SU21

Instruction： EM12K is a copper plated welding wire for carbon structural steel, combined with welding fluxes such as SJ301, which can achieve excellent weld performance, beautiful shape, and easy slag removal. It can meet the welding methods and processes of high line energy, multi-layer and multi-channel, double-sided and multi-channel.

Purpose： Used for high-speed welding of carbon steel (such as Q195, Q215) and some low alloy steel (such as 16Mn, 16MnCu, etc.) in boilers and pressure vessels.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	0.05-0.15	0.80-1.25	0.10-0.35	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.40
Measured Value	0.09	1.15	0.20	0.018	0.017	0.009	0.027	0.004	0.22

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	490-670	≥390	≥18	≥27	SJ301
Measured Value	536	423	25	90	

TOKO H08MnA

Executive standard： GB/T 5293 SU26

Instruction： H08MnA is a copper plated submerged arc welding wire for carbon structural steel, which is welded with melted flux HJ230, HJ330, HJ433, HJ434, sintered flux SJ101, SJ107, SJ201, SJ301, SJ302, SJ501, SJ503, etc. It has excellent welding process performance, stable arc combustion, beautiful weld shape, and easy slag removal, and can meet the welding methods and process requirements of high energy multi-layer and multi pass, double-sided and single pass, and high-speed welding.

Purpose： Widely used for welding carbon steel (such as Q195, Q215, Q235, etc.) and alloy steel with lower strength levels (such as 16 Mn, 16 Mn Cu, etc.) in boilers, pressure vessels, bridges, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.10	0.80-1.10	≤0.07	≤0.030	≤0.030	≤0.30	≤0.20	≤0.35
Measured Value	0.07	0.91	0.04	0.018	0.012	0.013	0.006	0.27

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	430-600	≥330	≥20	≥27	SJ101
Measured Value	470	380	29	100	

TOKO EM12

Executive standard： GB/T 5293 SU22

Instruction： EM12 is a copper plated submerged arc welding wire for carbon structural steel, which is welded with melted fluxes HJ230, HJ330, HJ433, HJ434, sintered fluxes SJ101, SJ107, SJ201, SJ301, SJ302, SJ501, SJ503, etc. It has excellent welding process performance, stable arc combustion, beautiful weld formation, and easy slag removal, and can meet the welding methods and process requirements of high energy multi-layer and multi pass, double-sided and single pass, and high-speed welding.

Purpose： Widely used for welding carbon steel (such as Q195, Q235, Q215, etc.) and alloy steel with lower strength levels (such as 16 Mn, 16 Mn Cu, etc.) in boilers, pressure vessels, bridges, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.15	0.80-1.40	≤0.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.40
Measured Value	0.07	0.91	0.04	0.018	0.012	0.013	0.006	0.27

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	430-600	≥330	≥20	≥27	SJ101
Measured Value	500	410	27	80	

TOKO H10MnSi

Executive standard： GB/T 5293 SU28

Instruction： H10MnSi is a carbon structural steel submerged arc welding wire, combined with melted welding fluxes HJ360, HJ433, HJ431, HJ434, sintered welding fluxes SJ101, SJ201, SJ501, etc., which can obtain welds with good mechanical properties and have good low-temperature impact toughness and strong resistance to porosity.

Purpose： Widely used for welding carbon steel (Q195, Q235, etc.) and certain low alloy steels (such as 16Mn, 15 MnV, 14 MnMoV, 18MnMoNb, etc.), as well as large structures (such as steel rolling frames, large columns or shafts), chemical vessels, nuclear power plant vessels, bridges, ships, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.14	0.80-1.10	0.60-0.90	≤0.030	≤0.030	≤0.30	≤0.20	≤0.35
Measured Value	0.05	0.95	0.76	0.018	0.013	0.012	0.010	0.24

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	490-670	≥390	≥18	≥27	SJ101
Measured Value	540	440	27	85	

TOKO H10Mn2

Executive standard： GB/T 5293 SU34

Instruction： H10Mn2 is a copper plated submerged arc welding wire for carbon structural steel. Combined with melted welding fluxes HJ130, HJ230, HJ252, HJ330, HJ350, HJ360, and sintered welding fluxes SJ101, SJ107, SJ201 for welding, it has excellent welding wire process performance, easy slag removal, strong gas resistance, stable arc combustion, and beautiful weld formation.

Purpose： Widely used for welding carbon steel (such as Q215, Q235, etc.) and some low alloy steel (such as Q295, etc.) in engineering machinery, vehicles, petrochemical boilers, pressure vessels, ships, transportation machinery, lifting machinery, steel structures, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.12	1.50-1.90	≤0.07	≤0.030	≤0.030	≤0.30	≤0.20	≤0.35
Measured Value	0.07	1.61	0.03	0.020	0.014	0.014	0.010	0.27

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	Combination welding flux
Guarantee Value	490-670	≥390	≥18	≥47	SJ101
Measured Value	530	430	29	100	

TOKO EH14

Executive standard： GB/T 5293 SU41
AWS A5.17 EH14

Instruction： EH14 is a carbon structural steel submerged arc welding wire. Combined with flux SJ101, SJ201, SJ501, HJ431, etc., excellent weld performance can be achieved, with easy slag removal and strong resistance to porosity.

Purpose： Used for welding carbon structural steel (such as Q235) and low alloy steel (such as 16 Mn, 15 MnV) in industries such as boilers, ships, and pressure vessels.。

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.20	1.60-2.30	≤0.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.40
Measured Value	0.08	1.90	0.07	0.014	0.011	0.008	0.018	0.010	0.25

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-40℃)KV_2(J)	Combination welding flux
Guarantee Value	490-670	≥390	≥18	≥47	SJ101
Measured Value	566	448	25	102	

TOKO H08Mn2SiA

Executive standard： GB/T 5293 SU45

Instruction： H08Mn2SiA is a carbon structural steel submerged arc welding wire. Combined with flux SJ101, SJ201, SJ501, HJ431, etc., excellent weld performance can be achieved, with easy slag removal and strong resistance to porosity.

Purpose： Used for welding carbon structural steel (such as Q235) and low alloy steel (such as 16 Mn, 15 MnV) in industries such as boilers, ships, and pressure vessels.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Cu
Guarantee Value	≤0.11	1.80-2.10	0.65-0.95	≤0.030	≤0.030	≤0.30	≤0.20	≤0.35
Measured Value	0.08	1.90	0.75	0.014	0.011	0.008	0.018	0.25

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	490-670	≥390	≥18	≥27	SJ101
Measured Value	520	425	25	80	

TOKO H08MnMoTiB

Executive standard： GB/T 5293 SUG

Instruction： H08MnMoTiB is a low alloy high-strength copper plated submerged arc welding wire, which, when combined with sintered fluxes such as SJ101, SJ107, and SJ201, can achieve excellent weld performance. It has stable arc combustion, good crack resistance, low temperature impact resistance, and good resistance to porosity.

Purpose： Widely used in mechanical manufacturing, vehicles, engineering machinery, ships, pressure vessels, bridges, steel structures, etc., welding of corresponding grades of low alloy high-strength steel.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Ti	B	Cu
Guarantee Value	≤0.10	1.20-1.60	≤0.25	≤0.030	≤0.030	≤0.30	≤0.20	0.30-0.50	0.05-0.15	0.002-0.006	≤0.35
Measured Value	0.09	1.47	0.18	0.016	0.014	0.031	0.060	0.58	0.13	0.005	0.21

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	550-740	≥460	≥17	≥27	专用焊剂
Measured Value	586	525	26	73	

TOKO H08MnMoA

Executive standard： GB/T 5293 SUM3
AWS A5.23 EA4

Instruction： H08MnMoA is a low alloy high-strength steel copper plated submerged arc welding wire. Combined with sintered flux SJ101, SJ107, SJ301, SJ501, melted flux HJ250, HJ350, HJ431, etc., excellent weld performance can be obtained, and the arc combustion is stable, slag removal is easy, and the weld has good crack resistance and excellent low-temperature impact toughness.

Purpose： Widely used for welding low-alloy high-strength steel (such as Q390, Q420, Q460) of corresponding grades in vehicles, lifting machinery, transportation machinery, engineering machinery, ships, power plants, petrochemical industry, bridges, pressure vessels, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Ti	Cu
Guarantee Value	≤0.10	1.20-1.60	≤0.25	≤0.030	≤0.030	≤0.30	≤0.20	0.30-0.50	0.05-0.15	≤0.35
Measured Value	0.08	1.34	0.14	0.015	0.013	0.011	0.021	0.38	0.06	0.20

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	550-740	≥460	≥17	≥27	SJ101
Measured Value	580	490	24	93	

TOKO H08Mn2MoA

Executive standard： GB/T 36034 SUM31
AWS A5.23 EA3

Instruction： H08Mn2MoA is a low alloy high-strength copper plated submerged arc welding wire, which can achieve excellent weld performance when combined with melted welding fluxes HJ250, HJ252, HJ350, sintered welding fluxes SJ101, SJ107, SJ201, etc. It has stable arc combustion, good crack resistance, low temperature impact resistance, and good resistance to porosity.

Purpose： Widely used in mechanical manufacturing, vehicles, engineering machinery, ships, pressure vessels, bridges, steel structures, etc., welding of corresponding grades of low alloy high-strength steel (such as 12MnNiVR, 14MnMoVB, 18MnMoNb).

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Ti	Cu
Guarantee Value	0.06-0.11	1.60-1.90	≤0.25	≤0.030	≤0.030	≤0.30	≤0.20	0.50-0.70	0.05-0.15	≤0.35
Measured Value	0.09	1.71	0.18	0.016	0.014	0.011	0.020	0.58	0.07	0.21

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-20℃)KV_2(J)	Combination welding flux
Guarantee Value	620-820	≥500	≥15	≥27	SJ101
Measured Value	705	597	21	87	

Heat resistant steel submerged arc welding wire Precautions and operating points

Product description:

The thermal strength steel submerged arc welding wire produced by the company has characteristics such as resistance to high-temperature cracking and oxidation resistance, and is mostly used for welding of thermal strength steel pressure vessels and pipelines. It has the advantages of stable arc, good weld formation, high deposition efficiency, and excellent mechanical properties of the weld.

Matters needing attention:

1. The size of the welding current should be selected based on the actual situation. If it is too small, it can lead to defects such as poor welding formation, incomplete welding, slag inclusion, etc; Excessive wear can lead to deterioration of the physical and chemical properties and crack resistance of welded joints, burning through, and rough weld formation;

2. The diameter of the welding wire and the specification of the conductive nozzle should be consistent. If the diameter of the conductive nozzle is too large, it can cause poor conductivity, deterioration of weld formation, and even arc breakage;

3. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. to avoid affecting the use of welding wire;

4. Before using the flux, it must be baked at 300 °C -350 °C for 1-2 hours;

5. The welding line energy will directly affect the performance of the weld seam, and special attention should be paid when using it;

6. Due to the different fluxes used by users, there are differences in welding components and processes. It is recommended to conduct welding process evaluation on the selected fluxes and welding wire before use, in order to better meet one's actual needs.

Welding wire handling and storage:

1. When handling welding wire, they should be handled with care to prevent damage or deformation;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO H08CrMoA

Executive standard： GB/T 12470 S550FB-SU1CM2

Instruction： H08CrMoA is a copper plated welding wire for heat-resistant steel, combined with welding flux SJ101, etc. It can be used for welding heat-resistant steel and has excellent weld performance. The weld shape is beautiful, with characteristics such as resistance to thermal cracking and oxidation resistance.

Purpose： Used for welding heat-resistant steel (such as 12CrMo) in thermal power plants, pressure vessels, synthetic chemicals, pipelines, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.10	0.40-0.70	0.15-0.35	≤0.030	≤0.030	≤0.30	0.80-1.10	0.40-0.60	≤0.35
Measured Value	0.08	0.60	0.25	0.018	0.012	0.03	0.95	0.48	0.24

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	(0℃)KV_2(J)	Combination welding flux
Guarantee Value	550–700	⩾ 470	⩾ 18	⩾ 27	SJ101
Measured Value	576	482	22	61	

TOKO H08CrMoVA

Executive standard： GB/T 12470 S55ZFB-SU1CMV

Instruction： H08CrMoVA is a copper plated welding wire for heat-resistant steel, combined with welding flux SJ101, etc. It can be used for welding heat-resistant steel and has excellent weld performance. The weld shape is beautiful, with characteristics such as resistance to thermal cracking and oxidation resistance.

Purpose： Used for welding heat-resistant steel such as 12CrMoV, 15CrMoV, etc. in thermal power plants, pressure vessels, synthetic chemicals, pipelines, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu
Guarantee Value	≤0.10	0.40-0.70	0.15-0.35	≤0.030	≤0.030	≤0.30	1.00-1.30	0.50-0.70	0.15-0.35	≤0.35
Measured Value	0.08	0.60	0.25	0.018	0.012	0.03	1.10	0.58	0.17	0.24

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(0℃)KV_2(J)	Combination welding flux
Guarantee Value	550–700	⩾ 470	⩾ 18	⩾ 27	SJ101
Measured Value	582	492	23	68	

TOKO H13CrMoA

Executive standard： GB/T 12470 S552FB-SU1CM3

Instruction： H13CrMoA is a low alloy copper plated welding wire that belongs to heat-resistant steel. It can be used for welding heat-resistant steel with welding fluxes such as SJ101, SJ104, HJ250, HJ350, etc., and has excellent weld performance. Moreover, the weld shape is beautiful and easy to remove slag

Purpose： Used for welding of corresponding alloy steels (such as 15CrMo, 12CrMo, etc.) in boilers, pressure vessels, petroleum containers, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	0.11-0.16	0.40-0.70	0.15-0.35	≤0.030	≤0.030	≤0.30	0.80-1.10	0.40-0.60	≤0.35
Measured Value	0.13	0.56	0.27	0.015	0.014	0.04	0.94	0.50	0.23

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(0℃)KV_2(J)	Combination welding flux
Guarantee Value	550-700	≥470	≥18	≥27	SJ101
Measured Value	580	490	21	60	

Stainless steel submerged arc welding wire Precautions and operating points

Product description:

The stainless steel submerged arc welding wire produced by the company has over 2.0-5.0 specifications, combined with specialized welding flux. It has stable arc combustion, beautiful weld formation, easy slag removal, low flux consumption, high deposition metal efficiency, and good weld crack resistance. It can be customized with different types of packaging ranging from 25kg to 350kg. The product is commonly used for welding equipment such as pipeline steel, bridges, oil pipelines, containers, and railway locomotives.

Matters needing attention:

1. The size of the welding current should be selected based on the actual situation. If it is too small, it can lead to defects such as poor welding formation, incomplete welding, slag inclusion, etc; Excessive wear can lead to deterioration of the physical and chemical properties and crack resistance of welded joints, burning through, and rough weld formation;

2. The diameter of the welding wire and the specification of the conductive nozzle should be consistent. If the diameter of the conductive nozzle is too large, it can cause poor conductivity, deterioration of weld formation, and even arc breakage;

3. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. to avoid affecting the use of welding wire;

4. Before using the welding flux, it must be baked at 300 ℃ -350 ℃ for 1-2 hours;

5. The welding line energy will directly affect the performance of the weld seam, and special attention should be paid when using it;

6.Due to the different fluxes used by users, there are differences in welding components and processes. It is recommended to conduct welding process evaluation on the selected fluxes and welding wire before use, in order to better meet one's actual needs.

Welding wire handling and storage:

1. When handling welding wire, they should be handled with care to prevent damage or deformation;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5℃ and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO S308

Executive standard: GB/T 17854 F308

Instruction: TOKO S308 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance.

Purpose: Used for welding ordinary stainless steel equipment such as petroleum and chemical industries.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.08	0.5-2.5	≤1.00	≤0.040	≤0.030	18.0-21.0	9.0-11.0
Measured Value	0.06	1.65	0.40	0.020	0.015	19.8	10.2

Mechanical properties of deposited metal:

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥520	---	≥30	---	SJ601
Measured Value	585	---	40	---	

TOKO S308L

Executive standard： GB/T 17854 F308L

Instruction: TOKO S308L is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for welding ordinary stainless steel equipment such as petroleum and chemical industries.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.04	0.5-2.5	≤1.00	≤0.040	≤0.030	18.0-21.0	9.0-12.0
Measured Value	0.060	1.76	0.33	0.016	0.018	19.85	9.90

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	⩾ 480	——	⩾ 30	——	SJ601
Measured Value	570	——	40	——	

TOKO S309

Executive standard： GB/T 17854 F309

Instruction: TOKO S309 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for welding 22% Cr-12% Ni stainless steel, commonly used for welding stainless steel equipment in petroleum, chemical, and other industries.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.15	0.5-2.5	≤1.00	≤0.040	≤0.030	22.0-25.0	12.0-14.0
Measured Value	0.08	1.92	0.52	0.025	0.018	23.5	12.9

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	⩾ 520	——	⩾ 25	——	SJ601
Measured Value	585	——	40	——	

TOKO S309L

Executive standard： GB/T 17854 F309L

Instruction： TOKO S309L is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for welding 22% Cr-12% Ni stainless steel, commonly used for welding stainless steel equipment in petroleum, chemical, and other industries

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.04	0.5–2.5	≤1.00	≤0.040	≤0.030	22.0–25.0	12.0–14.0
Measured Value	0.027	1.96	0.51	0.021	0.017	22.1	12.9

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥510	---	≥25	---	SJ601
Measured Value	552	---	36	---	

TOKO S310

Executive standard： GB/T 17854 F310

Instruction： TOKO S310 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance.

Purpose： Used for submerged arc welding of stainless steel in chemical operations and power engineering structures.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.20	0.5-2.5	≤1.00	≤0.030	≤0.030	28.0-32.0	8.0-10.5
Measured Value	0.05	1.71	0.48	0.013	0.010	18.86	12.43

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	⩾ 520	——	⩾ 25	——	SJ601
Measured Value	565	——	35	——	

TOKO S312

Executive standard： GB/T 17854 F312

Instruction： TOKO S312 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for submerged arc welding of stainless steel in chemical operations and power engineering structures

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.15	0.5-2.5	≤1.00	≤0.040	≤0.030	28.0-32.0	8.0-10.5
Measured Value	0.08	1.12	0.39	0.019	0.013	29.0	9.72

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥660	---	≥17	---	SJ601
Measured Value	690	---	22	---	

TOKO S316

Executive standard：GB/T 17854 F316

Instruction：TOKO S316 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance.

Purpose：Used for welding 07Cr17Ni12Mo2 stainless steel, commonly used for submerged arc welding of stainless steel in chemical operations.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni	Mo
Guarantee Value	≤0.08	0.50-2.50	≤1.00	≤0.040	≤0.030	17.0-20.0	11.0-14.0	2.0-3.0
Measured Value	0.05	1.71	0.48	0.013	0. 010	18.86	12.43	2.35

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥520	---	≥25	---	SJ601
Measured Value	610	---	37	---	

TOKO S316L

Executive standard： GB/T 17854 F316L

Instruction： TOKO S316L is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for welding 022Cr17Ni12Mo2 stainless steel, commonly used for submerged arc welding of stainless steel in the chemical industry.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni	Mo
Guarantee Value	≤0.04	0.50-2.50	≤1.00	≤0.040	≤0.030	17.0-20.0	11.0-16.0	2.0-3.0
Measured Value	0.02	1.80	0.45	0.013	0.008	18.99	12.60	2.40

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥480	---	≥30	---	SJ601
Measured Value	570	---	37	---	

TOKO S410

Executive standard： GB/T 17854 F410

Instruction： TOKO S410 is a stainless steel submerged arc welding wire, combined with SJ601 flux. The weld metal has good mechanical properties and intergranular corrosion resistance, and the weld seam has good crack resistance

Purpose： Used for welding Cr13 stainless steel or for surfacing welding on carbon steel surfaces.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Cr	Ni
Guarantee Value	≤0.12	≤1.20	≤1.00	≤0.040	≤0.030	11.0-13.5	≤0.60
Measured Value	0.05	0.71	0.48	0.013	0.010	11.86	0.43

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	Combination welding flux
Guarantee Value	≥440	---	≥15	---	SJ601
Measured Value	500	---	20	---	

Flux-cored welding wire

Non-alloy steel and fine grain steel flux-cored welding wire

High strength steel flux-cored welding wire

Metal powder cored flux-cored welding wire

Wear-resistant surfacing flux-cored welding wire

Stainless steel flux-cored welding wire

Non-alloy steel and fine grain steel flux cored welding wire Precautions and operating points

Matters needing attention:

1. To ensure the performance of the welding wire and prevent defects such as air holes, the surface of the workpiece should be cleaned of rust, oil, moisture, etc. before welding;

2. When welding, special attention should be paid to the extended length of the welding wire. Although it can improve the welding deposition rate, it can deteriorate the welding process and weld performance, such as increased spatter and rough formation. Suggestion: Within 15-25mm Guaranteed Value;

3. It is best to control the flow rate of Shielding gas between (20-25) L/min;

4. After opening the packaging, welding wire directly exposed to the air should avoid contact with water, paint, oil stains, etc. It is recommended to use them within 8 hours after opening the packaging to avoid affecting the use of welding wire. If not used up, it is necessary to cover it with plastic film or other items to prevent moisture. Welding wire that have not been used up for a long time need to be sealed and returned to a warehouse with good storage conditions;

5. If CO_2 gas protection is used, the purity should be above 99.98%;

6. The above suggestions are for reference only. Users should conduct welding process qualification based on their own usage situation before use, in order to better meet their actual needs.

Welding wire handling and storage:

1. When transporting the welding wire into a coil, it should be handled with care to prevent damage;

2. Welding wire are afraid of water, and to prevent moisture, vacuum packaging should be used. Do not approach fire and do not withstand high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO E71T-1C

Executive standard： GB/T 10045 T492T1-1C1A
AWS A5.36 E71T1-C1A0-CS1

Instruction: TOKO501T is a titanium oxide type CO_2 gas shielded flux cored welding wire with excellent welding process performance, stable arc, low splashing, easy slag removal, and beautiful weld formation. It can be used for all position welding.

Purpose： Widely used in ships, machinery manufacturing, boilers, pressure vessels, petrochemical industry, bridges, and welding of 490MPa grade low alloy structural steel.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S
Guarantee Value	≤0.18	≤2.00	≤0.90	≤0.030	≤0.030
Measured Value	0.050	1.28	0.65	0.015	0.006

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	540	440	26	105	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

Diffusion hydrogen content of deposited metal(Measured Value)： 5.6ml/100g

TOKO E71T-5C

Executive standard： GB/T 10045 T492T1-1C1AH5
AWS A5.36 E71T1-C1A0-CS1

Instruction： TOKO501T is a titanium oxide type CO_2 low hydrogen gas shielded flux cored welding wire with excellent welding process performance, stable arc, small splashing, easy slag removal, and beautiful weld shape. It can be used for all position welding.

Purpose： Widely used in ships, machinery manufacturing, boilers, pressure vessels, petrochemical industry, bridges, and welding of 490MPa grade low alloy structural steel.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni
Guarantee Value	≤0.18	≤2.00	≤0.90	≤0.030	≤0.030	≤0.50
Measured Value	0.051	1.24	0.54	0.015	0.016	0.30

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	565	489	28	98	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 3.5ml/100g

TOKO E71T-1

Executive standard： GB/T 10045 T492T1-1C1A
AWS A5.36 E71T1-C1A0-CS1

Instruction： E71T-1 is a titanium oxide type CO_2 gas shielded flux cored welding wire with excellent welding process performance, stable arc, low splashing, easy slag removal, and beautiful weld formation. It can be used for all position welding.

Purpose： Widely used in ships, machinery manufacturing, boilers, pressure vessels, petrochemical industry, bridges, and welding of 490MPa grade low alloy structural steel.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S
Guarantee Value	≤0.18	≤2.00	≤0.90	≤0.030	≤0.030
Measured Value	0.050	1.21	0.63	0.015	0.006

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	567	460	27	110	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.6ml/100g

TOKO 501T-GS

Executive standard： GB/T 10045 T49TG-1NS
AWS A5.20 E71T-GS

Instruction: TOKO 501T-GS is a self-protection flux cored welding wire that does not require additional Shielding gas. It has excellent all position vertical down welding process performance, good operating process performance, and excellent wind res istance and rust resistance.

Purpose： Widely used for welding small structural components, it is easy to operate when paired with household portable welding machines.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V	Al
Guarantee Value	≤0.30	≤1.75	≤0.60	≤0.030	≤0.030	≤0.50	≤0.20	≤0.30	≤0.08	≤1.8
Measured Value	0.17	1.00	0.35	0.015	0.006	0.15	0.02	0.01	0.01	1.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥490	--	≥18	--	自保护
Measured Value	565	--	24	--	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)：6.5ml/100g

TOKO 501T-Ni1

Executive standard： GB/T 10045 T494T1-1C1A-N2
AWS A5.20 E71T1-C1A4-Ni1

Instruction： TOKO 501T-Ni1 titanium calcium oxide type CO_2 gas shielded welding wire. It can be welded in all positions, with excellent welding process, beautiful weld shape, easy slag removal, and low splashing. It has good impact toughness at -40 ℃ , as well as high deposition speed and excellent comprehensive mechanical properties.

Purpose： The product is suitable for welding 500MPa grade low alloy high-strength steel and is widely used for welding steel structures such as lifting machinery, ships, bridges, vehicles, construction, and offshore platforms.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo
Guarantee Value	≤0.12	≤1.75	≤0.80	≤0.030	≤0.030	0.80-1.20	≤0.35
Measured Value	0.045	1.25	0.45	0.015	0.012	0.95	--

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-40℃ KV_2(J)	shielding gas
Guarantee Value	490-670	≥390	≥18	≥27	CO_2(purity≥99.8%)
Measured Value	560	475	26	120	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 4.5ml/100g

TOKO E81T1-K2C

Executive standard： GB/T 10045 T554T1-1C1A-N3 U
AWS A5.29 E81T1-C1A4-K2

Instruction: TOKO E81T1-K2C belongs to the CO_2 gas shielded flux cored welding wire of the rutile slag system. It can be welded in all positions with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition rate of metal, and excellent comprehensive mechanical properties. The weld metal has good plasticity and low-temperature toughness.

Purpose： The product is used for welding 550MPa high-strength steel structural components, and is mainly used for welding low alloy high-strength steel and corresponding steel structures in mechanical manufacturing, ships, bridges, vehicles, construction, offshore platforms, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni
Guarantee Value	≤0.10	≤1.75	≤0.90	≤0.030	≤0.030	1.00-2.00
Measured Value	0.045	1.35	0.40	0.015	0.018	1.35

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-40℃ KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	CO_2(purity≥99.8%)
Measured Value	605	555	27	100	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)：4.8ml/100g

TOKO 601T

Executive standard： GB/T 10045 T553T1-1C1A-N2
AWS A5.29 E81T1-C1A2-Ni1

Instruction： TOKO 601T titanium calcium oxide CO_2 gas shielded welding wire. It can be welded in all positions, with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition speed of metal, and excellent comprehensive mechanical properties.

Purpose： The product is suitable for welding 550MPa grade low alloy high-strength steel and is widely used for welding steel structures such as lifting machinery, ships, bridges, vehicles, construction, and offshore platforms.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo
Guarantee Value	≤0.12	≤1.75	≤0.80	≤0.030	≤0.030	0.80-1.20	≤0.35
Measured Value	0.050	1.45	0.40	0.015	0.010	0.98	--

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-30℃ KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥27	CO_2(purity≥99.8%)
Measured Value	620	550	24	100	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.5ml/100g

TOKO 601Ni-2

Executive standard： GB/T 10045 T554T1-1C1A-N5 U
AWS A5.29 E81T1-C1A4-Ni2

Instruction: TOKO 601Ni-2 titanium calcium oxide CO_2 gas shielded welding wire. It can be welded in all positions with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition speed of metal, and excellent comprehensive mechanical properties.

Purpose： The product is used for welding low alloy high-strength steel and corresponding steel structures in heavy machinery, lifting machinery, ships, bridges, vehicles, construction, offshore platforms, etc. It can be used for welding low alloy steel above 550MPa.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Mo
Guarantee Value	≤0.12	≤1.75	≤0.80	≤0.030	≤0.030	1.75-2.75	--
Measured Value	0.050	1.20	0.40	0.015	0.010	2.25	--

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-40℃ KV_2(J)	shielding gas
Guarantee Value	550-740	≥460	≥17	≥47	CO_2(purity≥99.8%)
Measured Value	620	550	26	110	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.5ml/100g

TOKO E91T1-1C

Executive standard： GB/T 36233 T593T1-1C1A-GX
AWS A5.29 E91T1-C1A3-G

Instruction: TOKO E91T1-1C belongs to the CO_2 gas shielded flux cored welding wire of the rutile slag system. It can be welded in all positions with excellent welding pro cess, beautiful weld formation, easy slag removal, small splashing, high deposition rate of metal, and excellent comprehensive mechanical properties. The weld metal has good plasticity and low-temperature toughness.

Purpose： The product is used for welding 550MPa high-strength steel structural components, and is mainly used for welding low alloy high-strength steel and corresponding steel structures in mechanical manufacturing, ships, bridges, vehicles, construction, offshore platforms, etc.

Chemical composition of deposited metal (mass percent)%

	C	Mn	Si	P	S	Ni	Cr
Guarantee Value	≤0.12	0.50-1.30	0.20-0.80	≤0.030	≤0.030	0.30-0.80	0.45-0.75
Measured Value	0.05	0.92	0.54	0.016	0.011	0.58	0.56

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	-30℃ KV_2(J)	shielding gas
Guarantee Value	590-790	≥490	≥16	≥27	CO_2(purity≥99.8%)
Measured Value	632	568	25	88	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.8ml/100g

TOKO 701Ni-1

Executive standard： GB/T 36233 T692T1-1C1A-N2M2
AWS A5.29 E101T1-C1A0-K3

Instruction: TOKO 701Ni-1 titanium calcium oxide CO_2 gas shielded welding wire can be used for welding 70 kg high-strength structural steel. Welding wire can be used for all position welding, with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition speed of metal, and excellent comprehensive mechanical properties.

Purpose： The product is used for welding high-strength steel and corresponding steel structures of 700MPa grade heavy machinery, lifting machinery, ships, bridges, vehicles, construction, offshore platforms, etc.

Chemical composition of deposited metal (mass percent)%

Item	C	Mn	Si	P	S	Ni	Mo	Cr
Guarantee Value	≤0.15	≤2.25	≤0.80	≤0.030	≤0.030	0.40-1.50	0.25-0.65	≤0.20
Measured Value	0.046	1.39	0.69	0.014	0.013	1.10	0.38	0.02

Mechanical properties of deposited metal：

Item	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	690-890	≥600	≥14	≥27	CO_2(purity≥99.8%)
Measured Value	728	663	18	69	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.6ml/100g

TOKO 701Ni-2

Executive standard： GB/T 36233 T692T1-1C1A-N3M2
AWS A5.29 E101T1-C1A0-K3

Instruction： TOKO 701Ni-2 titanium calcium oxide CO_2 gas shielded welding wire can be used for welding high-strength structural steel of 70kg grade. Welding wire can be used for all position welding, with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition speed of metal, and excellent comprehensive mechanical properties

Purpose： The product is used for welding high-strength steel and corresponding steel structures of 700MPa grade heavy machinery, lifting machinery, ships, bridges, vehicles, construction, offshore platforms, etc

Chemical composition of deposited metal (mass percent)%

Item	C	Mn	Si	P	S	Ni	Mo	Cr
Guarantee Value	≤0.15	0.75-2.25	≤0.80	≤0.030	≤0.030	1.25-2.60	0.25-0.65	≤0.15
Measured Value	0.050	1.36	0.59	0.015	0.010	2.14	0.40	0. 05

Mechanical properties of deposited metal：

Item	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	690-890	≥600	≥14	≥27	CO_2(purity≥99.8%)
Measured Value	710	650	18	60	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)： 5.6ml/100g

TOKO 801T

Executive standard： GB/T 36233 T782T1-1C1A-N3M2
AWS A5.29 E111T1-C1A0-K3

Instruction: TOKO 801T is a titanium oxide calcium low alloy high-strength steel flux cored welding wire, which can be used for welding high-strength structural steel of 80 kg grade using CO_2 gas protection. Welding wire is suitable for all position welding, with excellent welding process, beautiful weld formation, easy slag removal, small splashing, high deposition speed of metal, and excellent comprehensive mechanical properties

Purpose： The product is used for welding high-strength steel and corresponding steel structures in 800MPa heavy machinery, lifting machinery, ships, bridges, vehicles, construction, offshore platforms, and other related fields

Chemical composition of deposited metal (Mass percentage)%

Item	C	Mn	Si	P	S	Ni	Mo	Cr	V
Guarantee Value	≤0.15	0.75-2.25	≤0.80	≤0.030	≤0.030	1.25-2.60	0.25-0.65	≤0.30	≤0.05
Measured Value	0.05	1.36	0.59	0.015	0.011	2.05	0.45	0.15	0.018

Mechanical properties of deposited metal：(CO_2 gas shielding)

Item	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	-20℃ KV_2(J)	shielding gas
Guarantee Value	780-980	≥680	≥13	≥27	CO_2(purity≥99.8%)
Measured Value	830	780	18	68	

Reference current(DC+)

diameter(mm)	1.0	1.2	1.4	1.6
Welding current(A)	100-170	180-280	200-280	240-300

The content of diffused hydrogen in deposited metal(Measured Value)：4.9ml/100g

Stainless steel flux cored welding wire
Precautions and operating points

Matters needing attention:

1. To ensure the performance of the welding wire, the surface of the workpiece should be cleaned of rust, oil, moisture, etc. before welding;

2.Users should conduct welding process evaluation based on their own usage situation before use, in order to better meet their actual needs.

Welding wire handling and storage:

1. When handling welding wire, they should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 ℃ and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO 308T1-1

Executive standard： GB/T 17853 TS308-FC11
AWS A5.22 E308T1-1

Instruction: TOKO308T1-1 is austenitic stainless steel welding wire, protected by pure CO_2 gas with stable arc, smooth wire feeding, beautiful forming, and good corros ion resistance and crack resistance.

Purpose： Widely used for welding in industries such as petrochemical, pressure vessels, medical devices, food machinery, fertilizers, etc., such as 0Cr19Ni10, 00 Cr19Ni10, etc.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.08	0.5-2.5	≤1.0	≤0.04	≤0.03	9.0-11.0	18.0-21.0	≤0.75	≤0.75
Measured Value	0.06	1.75	0.75	0.007	0.008	9.60	19.50	0.15	0.30

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥550	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	605	---	39	---	

TOKO 308LT1-1

Executive standard： GB/T 17853 TS308L-FC11
AWS A5.22 E308LT1-1

Instruction: TOKO 308LT1-1 belongs to ultra-low carbon stainless steel flux cored welding wire, and the deposited metal has good resistance to intergranular corrosion with ca rbon content less than or equal to 0.04%. Adopting pure CO_2 gas protection, the a rc is stable, the wire feeding is smooth, the splashing is small, the weld formati on is beautiful, and it has good corrosion resistance and crack resistance.

Purpose： Used for corrosion-resistant stainless steel structures with working temperatures below 300 ℃ , such as welding 18% Cr-8% Ni stainless steel, widely used for welding in industries such as petrochemical, pressure vessels, medical equipment, food machinery, and fertilizers.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.0	≤0.04	≤0.03	9.0-12.0	18.0-21.0	≤0.75	≤0.75
Measured Value	0.03	1.70	0.54	0.015	0.012	10.05	19.80	0.04	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥520	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	570	---	40	---	

TOKO 309T1-1

Executive standard： GB/T 17853 TS309-FC11
AWS A5.22 E309T1-1

Instruction: TOKO 309T1-1 is a titanium slag based ultra low carbon stainless steel flux cored welding wire, protected by pure CO_2 gas, with stable arc, smooth wire fee ding, low splashing, and beautiful weld formation. It can be used for all position we lding with good crack resistance.

Purpose： Widely used for welding carbon steel and stainless steel dissimilar materials, welding transition metals on the inner wall of reaction vessels in the petrochemical industry, or welding martensitic and ferritic stainless steel with poor toughness.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤1.0	0.5-2.5	≤1.0	≤0.04	≤0.03	12.0-14.0	22.0-25.0	≤0.75	≤0.75
Measured Value	0.046	1.62	0.57	0.012	0.010	12.48	23.50	0.11	0.23

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥550	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	595	---	40	---	

TOKO 309LT1-1

Executive standard： GB/T 17853 TS309L-FC11
AWS A5.22 E309LT1-1

Instruction: TOKO E309LT1-1 belongs to ultra-low carbon stainless steel flux cored welding wire and the deposited metal has good resistance to intergranular corrosion with ca rbon content less than or equal to 0.04%. Adopting pure CO_2 gas protection, th e arc is stable, the wire feeding is smooth, the spatter is small, and the weld form ation is beautiful, which can be used for all position welding. Due to its low ca rbon content, it has good crack resistance.

Purpose： Widely used for welding carbon steel and stainless steel dissimilar materials, welding transition metals on the inner wall of reaction vessels in the petrochemical industry, or welding martensitic and ferritic stainless steel with poor toughness

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.0	≤0.04	≤0.03	12.0-14.0	22.0-25.0	≤0.75	≤0.75
Measured Value	0.026	1.60	0.65	0.012	0.010	12.25	24.50	0.040	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥520	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	600	---	41	---	

TOKO 310T1-1

Executive standard： GB/T 17853 TS310-FC11
AWS A5.22 E310T1-1

Instruction: TOKO E310T1-1 is a titanium slag based ultra low carbon stainless steel flux cored welding wire, protected by pure CO_2 gas, with stable arc, smooth wire fee ding, low splashing, and beautiful weld formation. It can be used for all position we lding with good crack resistance.

Purpose： Welding of high-temperature resistant equipment. Such as high-temperature furnaces, coking equipment, etc.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.20	1.0-2.5	≤1.0	≤0.03	≤0.03	20.0-22.5	25.0-28.0	≤0.75	≤0.75
Measured Value	0.05	1.60	0.55	0.019	0.015	21.0	26.5	0.23	0.09

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥550	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	595	---	40	---	

TOKO 316LT1-1

Executive standard： GB/T 17853 TS316L-FC11
AWS A5.22 E316LT1-1

Instruction： TOKO 316LT1-1 belongs to ultra-low carbon stainless steel flux cored welding wire and the deposited metal has good resistance to intergranular corrosion with ca rbon content less than or equal to 0.04%. The main component is 18Cr-12Ni-2 Mo, protected by pure CO_2 gas, with stable arc, smooth wire feeding, low splash ing, high X-ray pass rate, beautiful weld formation, and good corrosion resistance.

Purpose： Widely used for welding in fertilizer, urea, petrochemical production or storage equipment, 00Cr17Ni14Mo2, etc.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.0	≤0.04	≤0.03	11.0-14.0	17.0-20.0	2.0-3.0	≤0.75
Measured Value	0.023	1.60	0.56	0.010	0.010	12.35	18.30	2.60	0.09

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	≥485	---	≥25	---	CO_2(purity≥99.98%)
Measured Value	565	---	38	---	

Stainless steel solid welding wire

Stainless steel solid welding wire
Precautions and operating points

Matters needing attention:

1. To ensure the performance of the welding wire, the surface of the workpiece should be cleaned of rust, oil, moisture, etc. before welding;

2.The above suggestions are for reference only. Users should conduct welding process qualification based on their own usage situation before use, in order to better meet their actual needs.

Welding wire handling and storage:

1. When handling welding wire, they should be handled with care to prevent damage;

2. Welding wire are afraid of water, should not be near fire, and are not resistant to high temperatures;

3. Welding wire should be stored in a closed, dry, and clean room, with a room temperature of no less than 5 °C and a relative humidity of no more than 60%;

4. When storing in the warehouse, welding wire should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall, and placed separately according to specifications, models, etc. to prevent mixing. When using, the principle of "first in, first out" should be followed.

TOKO S304

Executive standard： contract

Instruction： The main component of TOKO S304 is welding wire, the main component is 18Cr-8Ni. Welding wire welding is smooth, with shallow fusion depth, no spatter, and smooth and flat weld beads, which can achieve single sided welding and double sided forming. The deposited metal has excellent crack resistance and corrosion resistance.

Purpose： Widely used in components such as food machinery, medical equipment, fertilizer equipment, textile machinery, and tank containers, pipelines, etc.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	P	S
Guarantee Value	≤0.08	≤2.00	≤1.00	18.00-20.00	8.00-10.50	≤0.045	≤0.030
Measured Value	0.065	1.85	0.60	19.45	9.75	0.025	0.018

TOKO S307Si

Executive standard： GB/T 29713 S307Si
ISO 14343 A-G15 8Mn

Instruction: Main component of TOKO S307Si is 18Cr-8Ni-6Mn, which is austenitic stainless steel welding wire protected by 98% Ar+2% O_2 gas. The arc is stable, the wire feeding is smooth, the spatter is small, the X-ray pass rate is high, the weld shape is beautiful, and it can be used for all position welding.

Purpose： Widely used for stainless steel welding in non magnetic special occasions such as nuclear submarines and bulletproof steel plates, as well as for welding of dissimilar steels, such as austenitic manganese steel and carbon steel forgings or castings.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	0.04-0.14	6.5-8.0	0.65-1.00	18.5-22.0	8.0-10.7	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.08	7.10	0.75	19.00	9.65	0.15	0.010	0.010	0.20

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	605	---	38	---	

TOKO S308

Executive standard： GB/T 29713 S308
AWS A5.9 ER308
ISO 14343 B-SS308

Instruction: Main component of TOKO S308 is 21Cr-10Ni, which is austenitic stainless steel welding wire protected by 98% Ar+2% O_2 gas. The arc is stable, the wire feeding is smooth, the spatter is small, the X-ray pass rate is high, and the weld formation is beautiful

Purpose： Widely used for welding in industries such as pressure vessels, petrochemical, medical equipment, food machinery, fertilizers, etc., such as 0Cr18Ni9, 1Cr18Ni9, etc.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.08	1.0-2.5	≤0.65	19.5-22.0	9.0-11.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.06	1.85	0.48	20.05	10.15	0.14	0.010	0.010	0.20

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	585	---	39	---	

TOKO S308L

Executive standard： GB/T 29713 S308L
AWS A5.9 ER308L
ISO 14343 B-SS308L

Instruction: Main component of TOKO S308L is low C-21Cr-10Ni, which is austenitic stainless steel welding wire protected by 98% Ar+2% O_2 gas. The arc is stable, the wire feeding is smooth, the splash is small, the X-RaY qualification rate is high, and the weld formation is beautiful..

Purpose： Widely used for welding in industries such as pressure vessels, petrochemical, medical equipment, food machinery, fertilizers, etc., such as 00Cr19Ni10.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	≤0.65	19.5-22.0	9.0-11.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.015	2.00	0.45	20.15	9.85	0.10	0.013	0.009	0.16

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	565	---	40	---	

TOKO S308LSi

Executive standard： GB/T 29713 S308LSi
AWS A5.9 ER308LSi
ISO 14343 B-SS308LSi

Instruction: Main component of TOKO S308LSi is low C-21Cr-10Ni, which is austenitic stainless steel welding wire protected by 98% Ar+2% O_2 gas. The arc is stable, the wire feeding is smooth, the splash is small, the X-Ray qualification rate is high, and the weld formation is more beautiful.

Purpose： Widely used for welding in industries such as pressure vessels, petrochemical, medical equipment, food machinery, fertilizers, etc., such as 00Cr19Ni10.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	0.65-1.00	19.5-22.0	9.0-11.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.013	1.85	0.75	20.05	9.75	0.10	0.012	0.008	0.16

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	590	---	40	---	

TOKO S309

Executive standard： GB/T 29713 S309
AWS A5.9 ER309
ISO 14343 B-SS309

Instruction: Main component of TOKO S309 is 22Cr-12Ni, which is protected by 98% Ar+2% O_2 gas. The arc is stable, the wire feeding is smooth, the splash is small, the X-ray pass rate is high, and the weld shape is beautiful. It can be used for all position welding.

Purpose： Widely used for welding carbon steel and stainless steel dissimilar materials or welding martensitic and ferritic stainless steel with poor toughness, such as petrochemical, thermal power generation, etc.

Chemical composition of welding wire (Mass percentage)%

	C	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.12	≤0.65	23.0-25.0	12.0-14.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.07	0.46	24.00	13.50	0.13	0.010	0.008	0.16

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	580	---	39	---	

TOKO S309L

Executive standard： GB/T 29713 S309L
AWS A5.9 ER309L
ISO 14343 B-SS309L

Instruction: Main component of TOKO S309L is low C-22Cr-12Ni, which is protected by 98% Ar+2% O_2 gas. It can be used for all position welding. The arc is stable during welding, the wire feeding is smooth, the splash is small, the X-ray pass rate is high, the weld shape is beautiful, and it has good corrosion resistance.。

Purpose： Widely used for welding carbon steel and stainless steel dissimilar materials, welding transition metals on the inner wall of reaction vessels in the petrochemical industry, or welding martensitic and ferritic stainless steel with poor toughness.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	≤0.65	23.0-25.0	12.0-14.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.015	1.85	0.32	24.00	13.50	0.10	0.011	0.007	0.19

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	580	---	39	---	

TOKO S309LSi

Executive standard： GB/T 29713 S309LSi
AWS A5.9 ER309LSi
ISO 14343 B-SS309LSi

Instruction: Main component of TOKO S309LSi is low C-22Cr-12Ni, which is protected by 98% Ar+2% O_2 gas. It can be used for all position welding. The arc is stable during welding, the wire feeding is smooth, and the splash is small. The X-Ray qualification rate is high. The weld seam has good corrosion resistance, and the shape of the weld seam is more beautiful due to the addition of Si.

Purpose： Widely used for welding carbon steel and stainless steel dissimilar materials, welding transition metals on the inner wall of reaction vessels in the petrochemical industry, or welding martensitic and ferritic stainless steel with poor toughness.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	0.65-1.00	23.0-25.0	12.0-14.0	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.018	1.87	0.75	24.00	13.65	0.13	0.010	0.008	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	595	---	40	---	

TOKO S310

Executive standard： GB/T 29713 S310
AWS A5.9 ER310
ISO 14343 B-SS310

Instruction: Main component of TOKO S310 is 25Cr-20Ni, which can be welded in all positions. Stable high-temperature resistance, up to 1200 ℃ . Excellent welding performance, smooth wire feeding, stable arc, beautiful forming, minimal splashing, stable mechanical properties of deposited metal, and high X-ray pass rate

Purpose： It is often used for high-temperature resistant products such as high-temperature furnaces, coal coking equipment, etc., and can also be used for welding of dissimilar materials

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	0.08-0.15	1.00-2.50	0.30-0.65	25.0-28.0	20.0-22.5	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.087	2.00	0.38	26.50	21.00	0.03	0.010	0.006	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	——	——	——	——	98%Ar+2%O_2
Measured Value	630	——	35	——	

TOKO S310L

Executive standard： GB/T 29713 S310L
AWS A5.9 ER310L
ISO 14343 B-SS310L

Instruction: Main component of TOKO S310L is low C-25Cr-20Ni, which can be welded in all positions. Stable high-temperature resistance, up to 1200 ℃ . Excellent welding performance, smooth wire feeding, stable arc, beautiful forming, minimal splashing, stable mechanical properties of deposited metal, and high X-ray pass rate.

Purpose： It is often used for high-temperature resistant products such as high-temperature furnaces, coal coking equipment, etc., and can also be used for welding of dissimilar materials.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.00-2.50	0.30-0.65	25.0-28.0	20.0-22.5	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.018	1.90	0.40	27.00	21.00	0.025	0.010	0.006	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	610	---	38	---	

TOKO S316

Executive standard： GB/T 29713 S316
AWS A5.9 ER316
ISO 14343 B-SS316

Instruction： The main component of SLDS316 is 18Cr-12Ni-2Mo, protected by 98% Ar+2% O_2 gas, which can be used for all position welding. The arc is stable during welding, the wire feeding is smooth, the splash is small, the X-ray pass rate is high, the weld shape is beautiful, and it has good corrosion resistance.

Purpose： Commonly used for welding 07Cr17Ni12Mo2 stainless steel working at high temperatures or in atmospheres containing chloride ions. Due to its high content of molybdenum, it has good resistance to spot corrosion in industries such as fertilizers, urea, and petrochemical.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.08	1.0-2.5	≤0.65	18.0-20.0	11.0-14.0	2.0-3.0	≤0.03	≤0.03	≤0.75
Measured Value	0.04	2.05	0.48	19.50	12.50	2.85	0.011	0.008	0.15

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	570	---	37	---	

TOKO S316L

Executive standard： GB/T 29713 S316L
AWS A5.9 ER316L
ISO 14343 B-SS316L

Instruction: Main component of TOKO S316L is low C-18Cr-12Ni-2Mo, protected by 98% Ar+2% O_2 gas, which can be used for all position welding. The arc is stable during welding, the wire feeding is smooth, the splash is small, the X-Ray pass rate is high, the weld shape is beautiful, and it has good corrosion resistance

Purpose： Mainly used for welding of ultra-low carbon Mo containing austenitic stainless steel and alloys, such as 00Cr17Ni14Mo2, etc.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	≤0.65	18.0-20.0	11.0-14.0	2.0-3.0	≤0.03	≤0.03	≤0.75
Measured Value	0.02	2.05	0.45	19.00	12.50	2.80	0.010	0.007	0.17

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{r0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	550	---	40	---	

TOKO S316LSi

Executive standard： GB/T 29713 S316LSi
AWS A5.9 ER316LSi
ISO 14343 B-SS316LSi

Instruction: Main component of TOKO S316LSi is 19Cr-12Ni-2Mo, which is protected by 98% Ar+2% O_2 gas. It can be used for all position welding. The arc is stable during welding, the wire feeding is smooth, the splash is small, the X-ray pass rate is high, the weld seam has good corrosion resistance, and the weld shape is more beautiful

Purpose： Mainly used for welding in industries such as fertilizers, urea, and petrochemicals, such as 00Cr17Ni14Mo2.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.03	1.0-2.5	0.65-1.00	18.0-20.0	11.0-14.0	2.0-3.0	≤0.03	≤0.03	≤0.75
Measured Value	0.018	1.65	0.85	18.95	12.00	2.65	0.011	0.008	0.18

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	580	---	38	---	

TOKO S430

Executive standard： GB/T 29713 S430
AWS A5.9 ER430
ISO 14343 B-SS430

Instruction： Main component of TOKO S430 is 17Cr, which is a ferritic stainless steel welding wire protected by 98% Ar+2% O_2 gas. It can be used for all position welding. During welding, the arc is stable, the wire feeding is smooth, the spatter is small, the X-Ray qualification rate is high, and the weld formation is beautiful.

Purpose： For welding 12Cr17 stainless steel, the weld seam has good corrosion resistance. This welding requires preheating before welding and heat treatment after welding.

Chemical composition of welding wire (Mass percentage)%

	C	Mn	Si	Cr	Ni	Mo	P	S	Cu
Guarantee Value	≤0.10	≤0.6	≤0.5	15.5-17.0	≤0.6	≤0.75	≤0.03	≤0.03	≤0.75
Measured Value	0.06	0.25	0.17	16.50	0.16	0.10	0.010	0.010	0.14

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(indoor temperature) KV_2(J)	shielding gas
Guarantee Value	---	---	---	---	98%Ar+2%O_2
Measured Value	480	---	32	---	

Welding Electrode

TOKO J421

Executive standard: GB/T 5117 E4313
AWS A5.1 E6013

Instruction: TOKO J421 is a titanium oxide coated carbon steel rod that can be used for both AC and DC welding in all positions. It has excellent welding process performance, good operational performance, easy arc ignition, and beautiful weld formation.

Purpose: Suitable for welding steel plates for ships and vehicles, especially for welding thin plates and cover welding that require a beautiful and smooth weld surface.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V
Guarantee Value	≤0.10	0.32-0.55	≤0.30	≤0.035	≤0.030	≤0.30	≤0.20	≤0.30	≤0.08
Measured Value	0.075	0.37	0.22	0.016	0.024	0.050	0.025	0.007	0.009

Mechanical properties of deposited metal:

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(0℃)KV_2(J)
Guarantee Value	≥430	≥355	≥22	≥47
Measured Value	490	385	28	76

TOKO J506

Executive standard: GB/T 5117 E5016
AWS A5.1 E7016
ISO 2560-B-E4916A

Instruction: TOKO E5016 is an alkaline coated Non-alloy steel rod that can be used for both AC & DC welding in all positions. It has excellent welding process performanc e, stable arc, small splashing, easy slag removal, good re arc performance, beautif ul weld formation, and high welding efficiency.

Purpose: Used for welding carbon steel or low alloy steel such as 16Mn, 09Mn2Si, as well as important structural components such as ships, vehicles, bridges with corresponding strength levels

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	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	0.07	1.15	0.58	0.018	0.010	0.020	0.031	0.003	0.010

Mechanical properties of deposited metal:

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)
Guarantee Value	≥490	≥400	≥20	≥27
Measured Value	560	450	30	125

TOKO E6010

Executive standard： GB/T 5117 E6010

AWS A5.1 E6010

Instruction: TOKO AWS A5.1 E6010 Welding Rod is a high cellulose covering stick welding electrode, used for pipeline welding. Due to the cellulose (organic material like pape r, with high hydrogen in form of moisture), the burning of E6010 Welding Rod coat ing does not produces any slag and resulting in less weld cleaning.

Purpose： Used for welding of medium and low carbon steel, low alloy steel, and important structural components such as ships, vehicles, bridges, etc. with corresponding strength levels.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Ni	Cr	Mo	V
Guarantee Value	≤0.20	≤1.20	≤0.10	≤0.040	≤0.030	≤0.30	≤0.20	≤0.30	≤0.08
Measured Value	0.11	0. 38	0.10	0.012	0.009	0.080	0.030	0.022	0.005

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{p0.2}$(MPa)	A(%)	(-30℃)KV_2(J)
Guarantee Value	500-640	≥340	≥22	80
Measured Value	510	415	27	

TOKO E6011

Executive standard： GB/T 5117 E6011
AWS A5.1 E6011

Instruction: TOKO A5.1 E6011 welding rods are a type of rutile-coated carbon steel welding electrode E6011 rods have good arc stability and are easy to strike and maintain. Produce a strong, ductile weld that is suitable for welding low-carbon steel and some low-all oy steels.

Purpose： Moreover, the cellulose coating of the E6011 welding rod allows for deeper weld penetration. E6011's high cellulose potassium coating al lows and helps conduct AC and DC electric current.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S
Guarantee Value	≤2.0	≤1.20	≤1.00	≤0.035	≤0.035
Measured Value	0.095	0. 50	0.37	0.012	0.013

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)
Guarantee Value	≥350	≥430	≥22	27
Measured Value	420	490	30	41

TOKO J557

Executive standard： GB/T 5117 E5515-G
AWS A5.5 E8015-G
ISO 2560-B-E5515-GA

Instruction： TOKO 5515-G is an alkaline coated Non-alloy steel rod that can be used for both AC and DC welding in all positions. It has excellent welding process performance, beautiful weld formation, and excellent mechanical properties and crack resistance.

Purpose： Used for welding 550MPa grade medium and low carbon steel, low alloy steel, and important structural components such as ships, vehicles, bridges, etc. with corresponding strength levels, such as 15MnTi, 15MnV, etc.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S
Guarantee Value	≤0.12	≥1.00	0.30-0.70	≤0.035	≤0.025
Measured Value	0.08	1.40	0.42	0.015	0.012

Mechanical properties of deposited metal：

	R_m(MPa)	R_{eL} or $R_{P0.2}$(MPa)	A(%)	(-30℃)KV_2(J)
Guarantee Value	≥550	≥460	≥17	≥54
Measured Value	≥590	≥490	20	110

TOKO E308

Executive standard： GB/T 983 E308-16
AWS A5.4 E308-16
ISO 3581-B-ES308-16

Instruction： TOKO E308 is a rutile coated stainless steel rod with excellent heat resistance, corrosion resistance, and crack resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for stainless steel structural components such as 06Cr19Ni9 and 06Cr19Ni11Ti, as well as for chromium stainless steel, composite steel, and special-shaped steel that cannot undergo heat treatment after welding.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.08	0.5-2.5	≤1.00	≤0.04	≤0.03	18.0-21.0	9.0-11.0	≤0.75	≤0.75
Measured Value	0.06	0.99	0.72	0.025	0.012	19.00	9.52	0.10	0.09

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥550	≥30
Measured Value	590	42

TOKO E308L

Executive standard： GB/T 983 E308L-16
AWS A5.4 E308L-16
ISO 3581-B-ES308L-16

Instruction: TOKO E308L is a rutile coated stainless steel rod with excellent resistance to intergranular corrosion. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for ultra-low carbon stainless steel structural components such as 00Cr18Ni9 and 0Cr19Ni11Ti, and is widely used for welding in equipment such as petroleum and chemical industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.00	≤0.04	≤0.03	18.0-21.0	9.0-12.0	≤0.75	≤0.75
Measured Value	0.025	0.95	0.72	0.025	0.013	19.20	9.87	0.11	0.08

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥510	≥30
Measured Value	580	40

TOKO E309

Executive standard： GB/T 983 E309-16
AWS A5.4 E309-16
ISO 3581-B-ES309-16

Instruction: TOKO E309 is a rutile coated stainless steel rod with excellent crack resistance and corrosion resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding low carbon steel Cr19Ni10, high chromium steel, and high manganese steel, and is widely used for welding equipment in petroleum, chemical, and other industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.15	0.5-2.5	≤1.00	≤0.04	≤0.03	22.0-25.0	12.0-14.0	≤0.75	≤0.75
Measured Value	0.07	1.00	0.70	0.025	0.011	23.5	12.9	0.11	0.08

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥550	≥25
Measured Value	590	38

TOKO E309L

Executive standard： GB/T 983 E309L-16
AWS A5.4 E309L-16
ISO 3581-B-ES309L-16

Instruction: TOKO E309L is a rutile coated stainless steel rod with excellent corrosion resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding ultra-low carbon Cr23Ni13 and the same type of stainless steel and special-shaped steel, and is widely used for welding equipment in petroleum, chemical, and other industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.00	≤0.04	≤0.03	22.0-25.0	12.0-14.0	≤0.75	≤0.75
Measured Value	0.027	1.20	0.66	0.025	0.012	24.21	12.55	0.13	0.04

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥510	≥25
Measured Value	580	36

TOKO E309Mo

Executive standard: GB/T 983 E309Mo-16
AWS A5.4 E309Mo-16
ISO 3581-B-ES309Mo-16

Instruction: TOKO E309Mo is a rutile coated stainless steel rod with excellent corrosion resistance and oxidation resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose: The product is used for welding stainless steel and special-shaped steel in sulfuric acid containers, and is widely used for welding equipment such as corrosion-resistant containers in petroleum and chemical industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.12	0.5-2.5	≤1.00	≤0.04	≤0.03	22.0-25.0	12.0-14.0	2.0-3.0	≤0.75
Measured Value	0.06	0.99	0.70	0.025	0.012	24.25	12.50	2.56	0.18

Mechanical properties of deposited metal:

	R_m(MPa)	A(%)
Guarantee Value	≥550	≥25
Measured Value	610	39

TOKO E310

Executive standard： GB/T 983 E310-16
AWS A5.4 E310-16
ISO 3581-B-ES310-16

Instruction： SLDE310 is a stainless steel rod with a rutile coating, and the deposited metal has good corrosion resistance and oxidation resistance at high temperatures. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding heat-resistant stainless steels such as Cr5Mo, Cr13, and Cr28, and is widely used for welding equipment such as boilers and chemical industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	0.08-0.20	1.0-2.5	≤0.75	≤0.03	≤0.03	25.0-28.0	20.0-22.5	≤0.75	≤0.75
Measured Value	0.10	2.10	0.58	0.023	0.009	26.25	21.10	0.05	0.15

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥550	≥25
Measured Value	600	38

TOKO E310Mo

Executive standard： GB/T 983 E310Mo-16
AWS A5.4 E310Mo-16
ISO 3581-B-ES310Mo-16

Instruction: TOKO E310Mo is a stainless steel rod with a rutile coating, and the deposited metal has good corrosion resistance and oxidation resistance at high temperatures. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding stainless steel equipment under high temperature conditions and is widely used for welding corrosion-resistant containers in petroleum and chemical industries.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.12	1.0-2.5	≤0.75	≤0.03	≤0.03	25.0-28.0	20.0-22.0	2.0-3.0	≤0.75
Measured Value	0.08	2.00	0.59	0.026	0.010	26.51	21.30	2.11	0.09

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥550	≥28
Measured Value	590	38

TOKO E316

Executive standard： GB/T 983 E316-16
AWS A5.4 E316-16
ISO 3581-B-ES316-16

Instruction: TOKO E316 is a stainless steel rod with a rutile coating, & the deposited metal has good corrosion resistance and oxidation resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance

Purpose： The product is used for welding stainless steel such as 06Cr17Ni12Mo2, and is widely used for welding corrosion-resistant containers and other equipment.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.08	0.5-2.5	≤1.00	≤0.04	≤0.03	17.0-20.0	11.0-14.0	2.0-3.0	≤0.75
Measured Value	0.06	1.12	0.77	0.026	0.010	18.98	11.95	2.50	0.09

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥520	≥25
Measured Value	570	40

TOKO E316L

Executive standard： GB/T 983 E316L-16
AWS A5.4 E316L-16
ISO 3581-B-ES316L-16

Instruction: TOKO E316L is a stainless steel rod with a rutile coating, & the deposited metal has good corrosion resistance and oxidation resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding stainless steel in industries such as petroleum and chemical, as well as for welding dissimilar and composite steels.。

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
Guarantee Value	≤0.04	0.5-2.5	≤1.00	≤0.04	≤0.03	17.0-20.0	11.0-14.0	2.0-3.0	≤0.75
Measured Value	0.028	1.10	0.66	0.023	0.010	18.90	11.90	2.48	0.10

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥490	≥25
Measured Value	590	41

TOKO E347

Executive standard： GB/T 983 E347-16
AWS A5.4 E347-16
ISO 3581-B-ES347-16

Instruction: TOKO E316L is a stainless steel rod with a rutile coating, the deposited metal has good corrosion resistance and oxidation resistance. It can be used for both AC and DC welding, and can be used for all position welding. The arc is stable, with small splashing, easy slag removal, beautiful weld formation, and good welding process performance.

Purpose： The product is used for welding corrosion resistant stainless steel 06Cr18Ni11Ti and 06Cr18Ni11Nb.

Chemical composition of deposited metal (Mass percentage)%

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Nb+Ta
Guarantee Value	≤0.08	0.5-2.5	≤1.00	≤0.04	≤0.03	18.0-21.0	9.0-11.0	≤0.75	≤0.75	8*C-1.00
Measured Value	0.05	0.98	0.70	0.025	0.009	18.96	9.80	0.06	0.05	0.55

Mechanical properties of deposited metal：

	R_m(MPa)	A(%)
Guarantee Value	≥520	≥25
Measured Value	600	39

Submerged ARC welding flux

Submerged arc welding flux
Product description and precautions

Product description:

The submerged arc welding flux produced by the company is mainly sintered flux, which can effectively improve the conductivity of the arc, making it easy to start and stabilize the arc; Easy to form slag, protect transition droplets, protect the formed molten pool, cover the surface of the weld bead, and avoid rapid cooling of the weld seam. The company has successively researched high-strength series SLD-60M, SLD-70M, and SLD-80M special welding fluxes for high-strength welding wire products, resulting in beautiful weld formation

Matters needing attention:

1. The flux must be baked at 300℃-350℃ for 1-2 hours before use;

2.Before welding, impurities such as rust, oil stains, and moisture should be removed from the welded parts.

Welding wire handling and storage:

1. When handling welding flux, it should be handled with care to prevent damage;

2. Welding flux should be stored in a closed, dry, and clean room, with a room temperature of no less than 5℃ and a relative humidity of no more than 60%;

3. When storing in the warehouse, the welding flux should be placed on wooden pallets or iron frames, with a distance of more than 30cm from the wall. When using it, the principle of "first in, first out" should be followed.

TOKO SJ101

Instruction: TOKO SJ101 is a fluorine-alkali sintered flux with an alkalinity of approximately 1.8. It is a white circular particle with a particle size of 2.0-0.4mm (10-45 mesh). It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC. Stable arc combustion, easy slag removal, and beautiful weld formation. The weld seam has high low-temperature impact toughness. Due to the use of special production processes, the flux has good moisture resistance, small welding loose weight, and low flux consumption during the welding process.

Purpose: Suitable welding wire (H08C, H08MnA, H10Mn2, H08MnMoA, H08Mn2MoA) can be used to weld various pipeline steels, such as X52, X60, X65, X70, etc. It can also be used for multi-layer welding, double-sided single pass welding, multi wire welding, and narrow gap submerged arc welding.

Flux reference composition(%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	18-25	30-38	25-35	16-25	≤0.06	≤0.08
Measured Value	19.4	33.8	26.8	23.1	0.030	0.025

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(indoor temperature) KV_2(J)	
				-20℃	-40℃
H10Mn2	≥390	490-670	≥18	≥47	≥27

TOKO SJ101G

Instruction: TOKO SJ101G flux is a special sintered flux for X60-X70 grade submerged arc welding of pipes, with a alkalinity of about 1.8. It is a white circular particle with a particle size of 2.0-0.4mm (10-45 mesh). It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC. Stable arc combustion, easy slag removal, and beautiful weld formation. The weld seam has high low-temperature impact toughness. Due to the use of special production processes, the flux has good moisture resistance, small welding loose weight, and low flux consumption during the welding process.

Purpose: Suitable welding wire (H08C, H08MnA, H10Mn2, H08MnMoA, H08Mn2MoA, EH14) can be used to weld various pipeline steels, such as X52, X60, X65, X70, etc. It can also be used for multi-layer welding, double-sided single pass welding, multi wire welding, and narrow gap submerged arc welding

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	18-25	28-35	23-30	16-25	≤0.06	≤0.08
Measured Value	19.2	32.2	24.1	24.6	0.025	0.026

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{P0.2}$(MPa)	R_m(MPa)	A(%)	(-40℃)KV_2(J)
EH14	≥390	490-670	≥18	≥47

TOKO SJ101Q

Instruction: TOKO SJ101Q belongs to the fluorine alkali alkaline sintered flux, with a particle size of 2.0-0.28mm (10-60 mesh) and an alkalinity of about 1.8. It can be used for both AC and DC purposes. Stable arc combustion, easy slag removal, beautiful weld formation, and high low-temperature impact toughness of the weld metal.

Purpose: Use appropriate welding wire (such as H08Mn2E) for submerged arc welding of bridge beam steel (such as Q370q)

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	18-25	30-38	25-35	16-25	≤0.06	≤0.08
Measured Value	18.5	32.6	25.7	19.5	0.013	0.018

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(-40℃)KV_2(J)
H10Mn2	≥390	490-670	≥18	≥47

TOKO SJ301

Instruction: TOKO SJ301 is a silicon calcium type sintered flux with a alkalinity of about 1.0 and circular particles with a particle size of 2.0-0.28mm (10-60 mesh). It has excellent welding technology, stable arc combustion, good slag removal performance, and beautiful weld formation. The physical characteristics of slag are short slag, which does not flow during short arc submerged arc welding, making it particularly suitable for welding various types of circumferential seams. It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC.

Purpose: With appropriate welding wire (such as H08A, H08MnA, H08MnMoA, etc.), it can weld ordinary structural steel, pipeline steel, etc., especially suitable for welding pipelines of various diameters.

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	---	---	---	---	≤0.06	≤0.08
Measured Value	29.5	25	28.5	17.5	0.030	0.035

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(-20℃)KV_2(J)
H08A	≥330	430-600	≥20	≥27

TOKO SJ501

Instruction: TOKO SJ501 is an aluminum titanium type acidic sintered flux with a alkalinity of 0.5-0.8 and circular particles with a particle size of 2.0-0.28mm (10-60 mesh). It has excellent welding technology, stable arc combustion, good slag removal performance, and beautiful weld formation. Flux has strong resistance to porosity and is not sensitive to a small amount of rust and high-temperature oxide film. It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC.

Purpose: Equipped with appropriate welding wire (such as H08A, H08MnA, H08MnMoA, etc.), it can weld low carbon steel and low alloy steel, such as boilers, pressure vessels, etc., making it more suitable for high-speed welding of thin plates.

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	S	P
Guarantee Value	---	---	---	≤0.06	≤0.08
Measured Value	30	58	8.6	0.025	0.026

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(-20℃)KV_2(J)
H08A	≥330	430-600	≥20	≥27

TOKO SJ503

Instruction: TOKO SJ503 is an aluminum titanium type weakly acidic sintered flux, with a alkalinity of 0.7-0.9 and circular particles with a particle size of 2.0-0.28mm (10-60 mesh). It has excellent welding technology, stable arc combustion, good slag rem oval performance, and beautiful weld formation. Flux has strong resistance to poros ity and is not sensitive to a small amount of rust and high-temperature oxide film. It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC.

Purpose: Equipped with appropriate welding wire (such as H08A, H08MnA, H08MnMoA, etc.), it can weld low-carbon and low alloy steels, such as bridges, boilers, pressure vessels, etc., making it more suitable for high-speed welding of thin plates.

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	S	P
Guarantee Value	---	---	---	≤0.06	≤0.08
Measured Value	29	59	8.7	0.025	0.026

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(-20℃)KV_2(J)
H08A	≥330	430-600	≥20	≥27

TOKO HJ350

Introduction: TOKO HJ350 is a melting type medium manganese medium silicon medium fluorine flux, consisting of red brown to light yellow glassy particles with a particle size of 8-40 mesh. It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC. The welding process has good performance, easy slag removal, and beautiful weld formation.

Purpose: H10Mn2 and other welding wire can weld important structures of low and medium alloys, mainly used for welding ships.

Flux reference composition (%) contents (%) :

Item	SiO_2+MnO	CaF_2+CaO	Al_2O_3	FeO	S	P
Guarantee Value	44-54	24-38	13-18	1.0	≤0.06	≤0.08
Measured Value	48	27	15	0.6	0.030	0.035

Mechanical properties of deposited metal:

Mating wire	R_{eL} or $R_{P0.2}$(MPa)	R_m(MPa)	A(%)	(-40℃)KV_2(J)
H10Mn2	≥390	490-670	≥18	≥47

TOKO HJ431

Instruction: TOKO HJ431 is a melting type high manganese, high silicon, and low fluorine solder, consisting of red brown to light yellow glassy particles with a particle size of 8-40 mesh. It can be used for both AC and DC, and the welding wire is connected to the positive rod during DC. The welding process has good performance, easy slag removal, and beautiful weld formation.

Purpose: Cooperate with welding wire such as H08A, H08MnA, and H10Mn2 to weld low-carbon steel and certain low alloy steel structures (16Mn, 15MnV, etc.), such as boilers, ships, pressure vessels, etc. It can also be used for electroslag welding and copper welding.

Flux reference composition (%) contents (%) :

Item	SiO_2+MnO	CaF_2+CaO	Al_2O_3+MgO	S	P
Guarantee Value	74-82	10-14	9-12	≤0.06	≤0.08
Measured Value	78	12	11	0.025	0.035

Mechanical properties of deposited metal:

Mating wire	R_{eL} or $R_{P0.2}$(MPa)	R_m(MPa)	A(%)	(0℃)KV_2(J)
H08A	≥330	430-600	≥20	≥27

TOKO SJ603W

Instruction: TOKO SJ603W is a fluorine-alkali alkaline (B ≈ 2.0) sintered flux, with spherical particles and particle size of 2.0-0.28mm (10-60 mesh). It is used for both AC and DC purposes, with stable arc stability, good high-temperature slag removal performance, and strong resistance to porosity. The flux contains deoxidizers and alloying agents, and the weld seam has excellent low-temperature impact toughness.

Purpose: Equipped with suitable welding wire such as H08MnD and H10Mn2D, as well as appropriate welding processes, it is mainly used for welding low-temperature steel structures, fine-grained steel structures, such as chemical machinery, refrigeration, air separation, and other structures.

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	15-25	20-30	25-35	20-30	≤0.06	≤0.08
Measured Value	15.5	27.8	30.2	23.0	0.020	0.030

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{p0.2}$(MPa)	R_m(MPa)	A(%)	(-40℃)KV_2(J)
SLDH09MnDR	≥390	490-670	≥18	≥47

TOKO SJ609

Instruction: TOKO SJ609 is a fluorine alkali type high alkalinity low hydrogen sintered flux with an alkalinity of about 2.2. The flux is circular particles with a particle size of 2.0-0.28mm (10-60 mesh). Adopting DC power supply, welding wire connected to positive rod, excellent welding process performance, stable arc, excellent slag removal performance, and beautiful welding formation. The weld seam has excellent crack resistance and high low-temperature impact toughness.

Purpose: Combined with appropriate welding wire (such as H09MnNi3DR, H07MnNi2DR, etc.), it is suitable for using steel with temperatures of -100 ℃ and -70 ℃ (such as 3.5Ni steel, H09MnNiDR, etc.)

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	---	---	---	---	≤0.06	≤0.08
Measured Value	---	---	---	---	0.020	0.030

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{P0.2}$(MPa)	R_m(MPa)	A(%)	(-20℃)KV_2(J)
SLDS410NiMo	---	≥760	≥13	---

TOKO SJ601

Instruction: TOKO SJ601 is an alkaline sintered flux for submerged arc welding of stainless steel and heat-resistant steel, with a particle size of 3.0-0.28mm (10-60 mesh). It is used fo r direct current welding and welding to the positive rod. Stable arc combustion, easy slag removal, beautiful weld formation, and excellent intergranular corrosion resista nce of weld metal.

Purpose: Cooperate with appropriate welding wire (such as H0Cr21Ni10, H00Cr21Ni10) for submerged arc welding of 18-8 low-carbon and ultra-low-carbon stainless steel a nd welding of stainless steel pressure vessels.

Flux reference composition (%) contents(%)

Item	SiO_2+TiO_2	CaO+MgO	Al_2O_3+MnO	CaF_2	S	P
Guarantee Value	5-10	6-10	30-40	40-50	≤0.06	≤0.08
Measured Value	6.2	7.1	32.3	44.6	0.020	0.030

Mechanical properties of deposited metal

Mating wire	R_{eL} or $R_{r0.2}$(MPa)	R_m(MPa)	A(%)	(-20℃)KV_2(J)
SLDS309L	---	490-670	≥18	---

Aluminum Alloy welding wire

TOKO 4043

Executive standard： GB/T 10858 SAl4043
AWS A5.10 ER4043
ISO 18273 SAl4043

Instruction: TOKO 4043 is an aluminum alloy welding wire containing 5% Si, suitable for welding cast aluminum alloys.

Purpose： Applied to ships, locomotives, chemicals, food, sports equipment, molds, furniture, containers, and containers

Chemical composition of welding wire：(Mass percentage)%

	Si	Fe	Cu	Mn	Mg	Zr	Be	Ti
Guarantee Value	4.50-5.50	≤0.80	≤0.30	≤0.05	≤0.05	≤0.10	≤0.0003	≤0.20

TOKO 5356

Executive standard： GB/T 10858 SAl5356
AWS A5.10 ER5356
ISO 18273 SAl5356

Instruction: TOKO 5356 is an aluminum alloy welding wire containing 5% Mg, which is a versatile universal welding material suitable for welding or surfacing 5% Mg cast aluminum alloy. It has high strength, good malleability, and good corrosion resistance. This product can also provide a good color matching for anodized welding.

Purpose： Applied to sports equipment such as bicycles and aluminum scooters, locomotive carriages, chemical pressure vessels, military production, shipbuilding, aviation, etc.

Chemical composition of welding wire：(Mass percentage)%

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Be	Ti
Guarantee Value	≤0.25	≤0.40	≤0.10	0.05-0.20	4.50-5.50	0.05-0.20	≤0.10	≤0.0003	0.06-0.20

TOKO 5183

Executive standard： GB/T 10858 SAl5183
AWS A5.10 ER5183
ISO 18273 SAl5183

Instruction: TOKO 5183 is an aluminum alloy welding wire containing 4.5% Mg, suitable for welding or surface surfacing of aluminum alloy materials.

Purpose： Applied in chemical pressure vessels, nuclear industry, shipbuilding, refrigeration industry, boilers, aerospace industry, etc

Chemical composition of welding wire：(Mass percentage)%

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Be	Ti
Guarantee Value	≤0.40	≤0.40	≤0.10	0.05-1.00	4.30-5.20	0.05-0.25	≤0.20	≤0.0003	≤0.15

TOKO 4047

Executive standard： GB/T 10858 SAl4047
AWS A5.10 ER4047
ISO 18273 SAl4047

Instruction: TOKO 4047 is an aluminum alloy welding wire containing 12% Si, suitable for welding various cast and extruded aluminum alloys. The low melting point and good fluidity make the welding deformation of the base material very small

Purpose： Suitable for welding or surfacing light alloy processing industries.

Chemical composition of welding wire：(Mass percentage)%

	Si	Fe	Cu	Mn	Mg	Zn	Be	Ti
Guarantee Value	11.00-13.00	≤0.60	≤0.30	≤0.15	≤0.10	≤0.20	≤0.0003	≤0.15

1：Packing specifications of gas shielded welding wire and flux-cored welding wire

Packaging type	Common winding weight	illustration
Reel Pack D200	5Kg	Commonly used for ϕ 0.6- ϕ 0.8 and other fine specifications of gas shielded and flux cored welding wire
Reel Pack D270	15Kg 20Kg	Commonly used for ϕ 0.8- ϕ 1.6 specifications of gas shielded and flux cored welding wire
Reel Pack D300	15Kg	Commonly used for ϕ 0.8- ϕ 1.6 specifications of gas shielded welding wire
Frame pack K300	15Kg	Commonly used for ϕ 0.8- ϕ 1.6 specifications of gas shielded welding wire
Fiber drum pack ϕ 500*420	100Kg	Commonly used for ϕ 0.8- ϕ 1.6 specifications of stainless steel welding wire
Fiber drum pack ϕ 500*800	200Kg、250Kg 300Kg	Commonly used for ϕ0.8- ϕ1.6 specifications of welding wire, the maximum winding of gas-protected welding wire is 300Kg, and the maximum winding of flux-cored welding wire is 200Kg
Fiber drum pack ϕ 660*770	300Kg、350Kg	Commonly used for ϕ0.8- ϕ1.6 gas-protected welding wire, the maximum winding of gas-protected welding wire is 350Kg, and the maximum winding of flux-cored welding wire is 250Kg