Stainless Steel Flux Cored Welidng Wire

Stainless Steel Flux Cored Welidng Wire

AWS A5.22 E308HT1-1/4

DA YANG OCEAN WELDING

Characteristics：

1. E308HT1-1/4 welding wire contains a higher proportion of carbon, which is suitable for welding stainless steel equipment used under high temperature conditions.
2. The arc is soft and stable, with less spatter, beautiful shape, good slag removal, stable wire feeding, and excellent welding process performance.
3. Suitable for welding in all positions.

Application：

1. Suitable for welding of chemical equipment, pressure vessels, and storage tanks
2. Suitable for welding of equipment in the dairy, papermaking, textile, pharmaceutical and other industries
3. Suitable for welding of LNG storage, cryogenic containers and pipelines

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
AWS Standard	0.08max	0.5-2.5	1.0max	0.04max	0.03max	18.0-21.0	9.0-11.0	0.75max	0.75max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾350 MPa**	**≥520 MPa**	**≥35%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. When the wind speed is greater than 0.5 m/s, wind protection measures should be taken.
3. When welding, use small wire energy and it is recommended to use a lower interpass temperature.

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AWS A5.22 E309HT1-1/4

Characteristics：

1. E309HT1-1/4 welding wire contains a higher proportion of carbon, which is suitable for welding stainless steel equipment used under high temperature conditions.
2. The arc is soft and stable, with less spatter, beautiful shape, good slag removal, stable wire feeding, and excellent welding process performance.
3. Suitable for welding in all positions.

Application：

1. Suitable for welding of chemical equipment, pressure vessels, and storage tanks.
2. Suitable for welding of LNG storage, cryogenic containers, and pipelines.
3. Suitable for welding 22%Cr-12%Ni steel (SUS 309S), 18%Cr-8%Ni composite steel, and dissimilar materials such as Cr-Mo steel or low carbon steel and stainless steel.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	N	Nb
AWS Standard	0.04-0.08	1.20min	0.80min	0.04max	0.03max	23.80min	12.60min	0.05min	-

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E309LMoT1-1/4

Characteristics：

1. E309LMoT1-1/4 welding wire has good resistance to intergranular corrosion and is suitable for welding dissimilar materials such as carbon steel and stainless steel.
2. The surface after welding is bright white and the color is beautiful.
3. The arc is stable, there is less spatter, and the weld has a beautiful appearance.
4. There is no crack after welding, which is suitable for welding dissimilar steels that are difficult to weld and easy to crack.

Application：

1. Suitable for welding of carbon steel and stainless steel dissimilar materials
2. Suitable for welding of petrochemical equipment
3. Suitable for welding of thermal power station equipment

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo
AWS Standard	0.08max	2.0max	0.80max	0.04max	0.03max	22.0-25.0	12.0-14.0	1.5-2.5

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E309LT1-1/4

Characteristics：

1. E309LT1-1/4 welding wire has low spatter generation, stable arc, beautiful weld shape and easy slag removal.
2. The weld has excellent shape and appearance, and it is easy to remove the slag.
3. In flat welding and fillet welding, it has high deposition efficiency.
4. The weld metal contains a moderate amount of ferrite, which reduces the sensitivity of cracks.
5. High chromium and nickel content provides excellent resistance to intergranular corrosion and stress corrosion cracking.

Application：

1. Suitable for welding of chemical equipment, pressure vessels, and storage tanks.
2. Suitable for welding of equipment in the dairy, papermaking, textile, pharmaceutical and other industries.
3. Suitable for welding of LNG storage, cryogenic containers and pipelines.
4. Suitable for welding 22%Cr-12%Ni steel (SUS 309S), 18%Cr-8%Ni composite steel, and dissimilar materials such as Cr-Mo steel or low carbon steel and stainless steel.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
AWS Standard	0.04max	0.5-2.5	1.0max	0.04max	0.03max	22.0-25.0	12.0-14.0	0.75max	0.75max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾350 MPa**	**≥520 MPa**	**≥35%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. When the wind speed is greater than 0.5 m/s, wind protection measures should be taken.
3. When welding, use small wire energy and it is recommended to use a lower interpass temperature.

AWS A5.22 E310T1-1

Characteristics：

1. E310T1-1 welding wire has good welding process performance, stable arc, less spatter, beautiful shape, easy slag removal, suitable for all-position welding.
2. Stable high temperature resistance, up to 1200℃, with good high temperature oxidation resistance and corrosion resistance.
3. The deposited metal has good high temperature oxidation resistance and corrosion resistance.

Application：

1. Suitable for welding of petrochemical equipment.
2. Suitable for welding of food processing equipment.
3. Suitable for welding of pressure vessels.
4. Suitable for welding of boilers and gas turbines.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo
AWS Standard	0.20max	1.0-2.5	1.0max	0.04max	0.03max	25.0-28.0	20.0-22.5	0.75max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**≥520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

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AWS A5.22 E316LT1-1/4

Characteristics：

1. E316LT1-1/4 welding wire has low spatter generation, stable arc, beautiful weld shape and easy slag removal.
2. The weld has excellent shape and appearance, and it is easy to remove slag.
3. In flat welding and fillet welding, it has high deposition efficiency.
4. The weld metal contains a moderate amount of ferrite, which reduces the sensitivity of cracks.
5. The ultra-low carbon content provides excellent resistance to intergranular corrosion and stress corrosion cracking.

Application：

1. Suitable for welding of petrochemical equipment.
2. Suitable for welding of marine engineering equipment.
3. Suitable for welding of food processing equipment.
4. Suitable for welding of pressure vessels..

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo
AWS Standard	0.04max	0.5-2.5	1.00max	0.04max	0.03max	17.0-20.0	11.0-14.0	2.0-3.0

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E317LT1-1/4

Characteristics：

1. E317LT1-1/4 welding wire has low spatter generation, stable arc, beautiful weld shape and easy slag removal.
2. The surface after welding is bright white and the color is beautiful.
3. Suitable for welding in all positions.
4. Ultra-low carbon content provides excellent resistance to intergranular corrosion and stress corrosion cracking.

Application：

1. Suitable for welding of petrochemical equipment.
2. Suitable for welding of food processing equipment.
3. Suitable for welding of pressure vessels.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo
AWS Standard	0.04max	0.5-2.5	1.00max	0.04max	0.03max	18.00-21.00	12.00-14.00	3.00-4.00

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥20%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E347T1-1/4

Characteristics：

1. E347T1-1/4 welding wire has low spatter generation, stable arc, beautiful weld formation, easy slag removal, good welding process performance, and can be welded in all positions.
2. Contains an appropriate amount of stabilizing element Nb, strong resistance to intergranular corrosion, high temperature strength, suitable for welding 07Cr19Ni11Ti (SUS321), 07Cr18Ni11Nb (SUS347L).
3. The deposited metal contains 0.04-0.08% carbon, so it can provide higher high temperature strength. No heat treatment is required after welding, which is suitable for welding containers with higher service temperature requirements. Because the deposited metal contains low carbon and the stabilizing element Nb is added, its weld has excellent mechanical properties and excellent resistance to intergranular corrosion.

Application：

1. Suitable for welding of petrochemical equipment.
2. Suitable for welding of food processing equipment.
3. Suitable for welding of pressure vessels.
4. Suitable for welding of boilers and gas turbines.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	Nb+Ta
AWS Standard	0.04-0.08	0.5-2.5	1.00max	0.04max	0.03max	18.00-21.00	9.00-11.00	0.75max	8xC-1.0min

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E2209T1-1/4

Characteristics:

1. E2209T1-1/4 welding wire has good welding process performance, stable arc, less spatter, beautiful shape, easy slag removal, suitable for all-position welding.
2. The deposited metal has excellent resistance to pitting, stress corrosion and cracking, especially suitable for welding 22% chromium duplex stainless steel, such as UNS S31803 (Alloy 2205).
3. The deposited metal has high strength, good elongation and good low-temperature impact toughness.

Application:

1. Suitable for welding of chemical equipment, pipelines and containers.
2. Suitable for welding of offshore platforms, pipelines and flow lines.
3.: Suitable for welding of oil and gas pipelines

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	N
AWS Standard	0.03-0.08	1.0-2.0	1.0max	0.04max	0.03max	22.0-23.0	8.0-10.0	2.5-3.5	0.10-0.20

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾520 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. When welding, use low wire energy and it is recommended to use a lower interpass temperature.
3. When the wind speed is greater than 0.5 m/s, wind protection measures should be adopted.

AWS A5.22 E2594T1-1

DA YANG OCEAN WELDING

Characteristics:

1. E2594T1-1 welding wire has good welding process performance, stable arc, less spatter, beautiful shape, easy slag removal, suitable for all-position welding.
2. The deposited metal has excellent resistance to pitting, stress corrosion and cracking, especially suitable for welding 25% chromium super duplex stainless steel, such as UNS S32750 and S32760.
3. The deposited metal has high strength, good elongation and good low-temperature impact toughness.

Application:

1. Suitable for welding of offshore platforms, pipelines and flow lines.
2. Suitable for welding of chemical equipment, pipelines and containers.
3. Suitable for welding of oil and gas pipelines.
4. Suitable for welding of seawater desalination equipment.
5. Suitable for welding of flue gas desulfurization equipment.

Power polarity: DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	N	Nb
AWS Standard	0.03-0.08	0.5-2.5	1.0max	0.04max	0.03max	24.0-27.0	8.0-10.5	2.5-4.5	0.20-0.30	1.0max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾760 MPa**	**≥890 MPa**	**≥15%**

Welding Requirements.

1. It is recommended to use 75% Ar + 25% CO2 or 100% CO2 mixed gas.
2. The arc length is generally controlled at around 4-6 mm.
3. Wind protection measures should be taken when the wind speed is greater than 0.5 m/s.

AWS A5.22 E307T1-1

Characteristics：

1. E307T1-1 welding wire has good resistance to intergranular corrosion and is suitable for welding non-magnetic, high manganese steel and hardened corrosion-resistant steel.
2. The surface after welding is bright white and the color is beautiful.
3. The arc is stable, with less spatter and beautiful weld.
4. There is no crack after welding, which is suitable for welding dissimilar steels that are difficult to weld and easy to crack.

Application：

1. Suitable for welding of nuclear submarines.
2. Suitable for welding of non-magnetic materials.
3. Suitable for welding of high manganese steel.
4. Suitable for welding of hardened corrosion-resistant steel.
5. Suitable for welding of bulletproof steel plates.
6. The material is non-magnetic after welding.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
AWS Standard	0.13max	3.0-4.75	1.0max	0.04max	0.03max	18.0-20.5	9.0-10.5	0.5-1.5	0.75max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**≥590 MPa**	**≥590 MPa**	**≥30%**

Welding Requirements.

1. It is recommended to use CO2 as the shielding gas.
2. When the wind speed is greater than 0.5 m/s, wind protection measures should be taken.
3. When welding, use small wire energy and it is recommended to use a lower interpass temperature.

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AWS A5.22 E308LT1-1/4

Characteristics：

1. E308LT1-1/4 welding wire has low spatter generation, stable arc, beautiful weld shape and easy slag removal.
2. The weld has excellent shape and appearance, and it is easy to remove slag.
3. In flat welding and fillet welding, it has high deposition efficiency.
4. The weld metal contains an appropriate amount of ferrite, which reduces the sensitivity of cracks.
5. The ultra-low carbon content provides excellent resistance to intergranular corrosion and stress corrosion cracking.

Application：

1. Suitable for welding of chemical equipment, pressure vessels, and storage tanks.
2. Suitable for welding of equipment in the dairy, paper, textile, pharmaceutical and other industries.
3. Suitable for welding of LNG storage, cryogenic containers and pipelines.

Power polarity:DC+

Chemical composition.

Item	C	Mn	Si	P	S	Cr	Ni	Mo	Cu
AWS Standard	0.04max	0.5-2.5	1.0max	0.04max	0.03max	18.0-21.0	9.0-11.0	0.75max	0.75max

Mechanical properties.

Mechanical properties	Yield strength MPa	Tensile strength MPa	Elongation %
AWS Standard	**⩾350 MPa**	**≥520 MPa**	**≥35%**

Welding Requirements.

1. It is recommended to use 100% CO2 or 75-80% Ar + 20-25% CO2 mixed gas.
2. When the wind speed is greater than 0.5 m/s, wind protection measures should be taken.
3. When welding, use small wire energy and it is recommended to use a lower interpass temperature.