

碳钢焊条产品一览表 Carbon Steel Electrodes

焊条牌号 Model	国标型号 GB Size	药皮类型 Type of Coating	焊接电源 Reference Current	主要用途 Purpose
LT·J422	E4303	钛钙型 Calcium-Titanium	交直流 (AC、DC)	焊接低碳钢结构和强度等级相同的低合金钢结构 It is used for welding of low carbon steel structure and low strength grade of low alloy steel structure. Such as Q235, 09MnV, 09Mn2 etc.
LT·J421	E4313	钛型 Titanium	交直流 (AC、DC)	焊接低碳钢结构, 尤其宜薄板小件, 间断焊和要求表面光洁的盖面焊 It is suitable for welding structures made of low carbon steel, performs very well in welding thin and small size steel plates and also has very good performance in the situation that requires nice and clean bead appearance..
LT·J502	E5003	钛钙型 Calcium-Titanium	交直流 (AC、DC)	焊接16Mn及相应强度的低合金钢结构 Used for welding 16Mn and low-alloy structures
LT·J506	E5016	低氢型 Low-Hydrogen	交直流 (AC、DC ⁺)	用于中碳钢和低合金钢重要结构的焊接 It is applied in welding medium-carbon steel and low-alloy structures
LT·J507	E5015	低氢型 Low-Hydrogen	直流反接 (DCEP)	用于中碳钢和低合金钢重要结构的焊接 It is applied in welding medium-carbon steel and low-alloy structures

LT·J422

符合GB/T 5117 E4303 ISO 2560-B-E 43 03 A

Conform to Standard GB/T 5117 E4303 ISO 2560-B-E 43 03 A

说明: 钛钙型药皮的碳钢焊条, 交直流两用。具有优良的焊接工艺性能及良好的力学性能; 电弧稳定, 飞溅小, 脱渣容易, 焊缝成形美观; 可进行全位置焊接。

用途: 用于低碳钢结构和强度等级低的低合金钢结构, 如Q235、09MnV、09Mn2等。

Specification: LT·J422 is calcium-titanium coated carbon steel electrode. It has very good welding usability that enables it to operate on AC/DC, performs all-position welding, has stable arc, removal of slag is easy and has good bead appearance. Its good mechanical properties give it very good low temperature toughness. During the application, its characteristic of easy maneuverability offers easy striking, easy re-striking and good control of welding speed, which enables the welders to have desired weld path and penetration of the arc.

Purpose: It is used for welding of low carbon steel structure and low strength grade of low alloy steel structure. Such as Q235, 09MnV, 09Mn2 etc.

熔敷金属化学成分 (%) Chemical Composition of Deposited Metal (%)

试验项目 Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
标准值 Guarantee Value	≤0.20	≤1.20	≤1.00	≤0.035	≤0.040	≤0.30	≤0.20	≤0.30	≤0.08
例值 General Result	0.077	0.42	0.18	0.018	0.023	0.020	0.032	0.008	0.005

熔敷金属力学性能Mechanical Properties of Deposited Metal

试验项目 Test Item	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				0°C	-20°C
标准值 Guarantee Value	≥430	≥330	≥20	≥27	≥47
例值 General Result	469	385	30	97	70

X射线探伤要求: II级 X-Ray Radio-graphic Test Requirements: Grade II

参考电流 (AC、DC) Reference Current (AC、DC)

焊条直径 (mm) Diameter (mm)	Φ2.0	Φ2.5	Φ3.2	Φ4.0	Φ5.0
焊接电流 (A) Amperage (A)	40~70	60~100	80~140	140~220	180~230

LT·J421

符合GB/T 5117 E4313 AWS A5.1 E6013 ISO 2560-B-E 43 13 A

Conform to Standard GB/T 5117 E4313 AWS A5.1 E6013 ISO 2560-B-E 43 13A

说明: 氧化钛型药皮的碳钢焊条, 交直流两用。具有优异的焊接工艺性能, 操作性能良好, 电弧稳定, 焊缝成形美观, 可进行全位置焊接。

用途: 焊接低碳钢结构, 特别适于薄板小件及要求焊缝表面美观和光洁的盖面焊。

Specification: LT·J421 is rutile-based carbon steel electrode. It has very good welding usability that enables it to perform all-position welding, operates on AC/DC, removal of slag is easy, has stable arc and also has very good bead appearance. It is easy to operate, which makes re-striking the arc easy.

Purpose: It is suitable for welding structures made of low carbon steel, performs very well in welding thin and small size steel plates and also has very good performance in the situation that requires nice and clean bead appearance.

熔敷金属化学成分 (%) Chemical Composition of Deposited Metal (%)

试验项目 Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
标准值 Guarantee Value	≤0.20	≤1.20	≤1.00	≤0.035	≤0.040	≤0.30	≤0.20	≤0.30	≤0.08
例值 General Result	0.075	0.38	0.21	0.018	0.024	0.020	0.032	0.005	0.010

熔敷金属力学性能Mechanical Properties of Deposited Metal

试验项目 Test Item	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				0°C	
标准值 Guarantee Value	≥430	≥330	≥16	≥47	
例值 General Result	485	380	28.5	86	

X射线探伤要求: II级 X-Ray Radio-graphic Test Requirements: Grade II

参考电流 (AC、DC) Reference Current (AC、DC)

焊条直径 (mm) Diameter (mm)	Φ2.5	Φ3.2	Φ4.0	Φ5.0
焊接电流 (A) Amperage (A)	60~100	8~140	140~220	180~240

LT·J502

符合GB/T 5117 E5003 ISO 2560-B-E 49 03A

Conform to Standard GB/T 5117 E5003 ISO 2560-B-E 49 03A

说明: 钛钙型药皮的碳钢焊条。具有优良的焊接工艺性能和力学性能, 电弧稳定, 飞溅很少, 脱渣容易, 交直流两用, 可进行全位置焊接。

用途: 用于490MPa抗拉强度等级的低合金钢结构的焊接。

Specification: LT·J502 is calcium-titanium coated carbon steel electrode. It has very good welding usability that enables it to operate on AC/DC, performs all-position welding, has stable arc, removal of slag is easy and has good bead appearance. Its good mechanical properties give it very good low temperature toughness. During the application, its characteristic of easy maneuverability offers easy striking, easy re-striking and good control of welding speed, which enables the welders to have desired weld path and penetration of the arc.

Purpose: Used for welding all kinds of 490MPa low-alloy structures

熔敷金属化学成分 (%) Chemical Composition of Deposited Metal (%)

试验项目 Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
标准值 Guarantee Value	≤0.15	≤1.25	≤0.90	≤0.035	≤0.040	≤0.30	≤0.20	≤0.30	≤0.08
例值 General Result	0.095	0.72	0.27	0.015	0.022	0.025	0.036	0.010	0.008

熔敷金属力学性能Mechanical Properties of Deposited Metal

试验项目 Test Item	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				0°C	
标准值 Guarantee Value	≥490	≥400	≥20	≥47	
例值 General Result	530	440	26	85	

X射线探伤要求: II级 X-Ray Radio-graphic Test Requirements: Grade II

参考电流 (AC、DC) Reference Current (AC、DC)

焊条直径 (mm) Diameter (mm)	Φ2.0	Φ2.5	Φ3.2	Φ4.0	Φ5.0
焊接电流 (A) Amperage (A)	40~70	60~100	80~140	140~220	180~240

LT·J506

符合GB/T 5117 E5016 AWS A5.1 E7016 ISO 2560-B-E 49 16 A

Conform to Standard GB/T 5117 E5016 AWS A5.1 E7016 ISO 2560-B-E 49 16 A

说明: 低氢钾型药皮的碳钢焊条。具有良好的焊接工艺性能, 电弧稳定, 飞溅少, 易脱渣, 其熔敷金属具有优良的力学性能和抗裂性能, 低温冲击韧性好。交直流两用, 可进行全位置焊接。

用途: 用于焊接中碳钢和低合金钢结构, 如16Mn、09Mn2Si和船舶用A、B、D、E级钢等。

Specification: LT·J506 is low-hydrogen potassium coated carbon steel electrode. It has very good welding usability that enables it to operate on AC/DC, performs all-position welding, has stable arc, removal of slag is easy and has low spatter. The deposited metal has good mechanical performance and crack-resistance

Purpose: It is applied in welding medium-carbon steel and low-alloy structures such as 16Mn, 09Mn2Si, 09Mn2V and the steels used in shipbuilding such as A, B, D, E.

熔敷金属化学成分 (%) Chemical Composition of Deposited Metal (%)

试验项目 Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
标准值 Guarantee Value	≤0.15	≤1.60	≤0.75	≤0.035	≤0.035	≤0.30	≤0.20	≤0.30	≤0.08
例值 General Result	0.080	1.05	0.51	0.012	0.020	0.012	0.030	0.007	0.016

熔敷金属力学性能Mechanical Properties of Deposited Metal

试验项目 Test Item	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				-20°C	-30°C
标准值 Guarantee Value	≥490	≥400	≥20	≥47	≥27
例值 General Result	540	430	32	175	169

X射线探伤要求: II级 X-Ray Radio-graphic Test Requirements: Grade II

参考电流 (AC、DC⁺) Reference Current (AC、DC⁺)

焊条直径 (mm) Diameter (mm)	Φ2.5	Φ3.2	Φ4.0	Φ5.0
焊接电流 (A) Amperage (A)	60~100	8~140	110~210	160~230

注意事项:

1.焊前焊条须经350°C烘焙1h, 随烘随用。2.焊前必须清除焊件的铁锈、油污、水分等杂质。3.焊接时必须用短弧操作, 以窄焊道为宜。

Notes: 1.The electrode must be preheated at the temperature of 350°C for 1 hour. Preheat the rod whenever it is used.

2.The impurities such as rust, oil stains and moisture must be cleared off of the work piece.

3.Short arc is required to perform welding. Narrow weld path is preferred.

LT·J507

符合GB/T 5117 E5015 AWS A5.1 E7015 ISO 2560-B-E 49 15 A

Conform to Standard GB/T 5117 E5015 AWS A5.1 E7015 ISO 2560-B-E 49 15 A

说明: 低氢钠型药皮的碳钢焊条。具有优良的焊接工艺性能, 电弧稳定, 飞溅少, 易脱渣, 熔敷金属具有优良的力学性能和抗裂性能。直流反接, 可进行全位置焊接。

用途: 用于焊接重要的中碳钢和低合金钢结构 (受压、动载)。

Specification: LT·J507 is low-hydrogen sodium coated carbon steel electrode. It must be operated on DCEP. It has very good welding usability that enables it to perform all-position welding, has stable arc, removal of slag is easy and has low spatter. The deposited metal has good mechanical performance and crack-resistance

Purpose: It is applied in welding medium-carbon steel and low-alloy structures

熔敷金属化学成分 (%) Chemical Composition of Deposited Metal (%)

试验项目 Test Item	C	Mn	Si	S	P	Ni	Cr	Mo	V
标准值 Guarantee Value	≤0.15	≤1.60	≤0.90	≤0.035	≤0.035	≤0.30	≤0.20	≤0.30	≤0.08
例值 General Result	0.082	1.10	0.58	0.012	0.021	0.011	0.028	0.007	0.016

熔敷金属力学性能Mechanical Properties of Deposited Metal

试验项目 Test Item	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				-20°C	-30°C
标准值 Guarantee Value	≥490	≥400	≥20	≥47	≥27
例值 General Result	550	450	32	150	142

X射线探伤要求: II级 X-Ray Radio-graphic Test Requirements: Grade II

参考电流 (AC、DC⁺) Reference Current (AC、DC⁺)

焊条直径 (mm) Diameter (mm)	Φ2.5	Φ3.2	Φ4.0	Φ5.0
焊接电流 (A) Amperage (A)	60~100	80~140	110~210	160~230

注意事项:

1.焊前焊条须经350°C烘焙1h, 随烘随用。2.焊前必须清除焊件的铁锈、油污、水分等杂质。3.焊接时必须用短弧操作, 以窄焊道为宜。

Notes: 1.The electrode must be preheated at the temperature of 350°C for 1 hour. Preheat the rod whenever it is used.

2.The impurities such as rust, oil stains and moisture must be cleared off of the work piece.

3.Short arc is required to perform welding. Narrow weld path is preferred.