



**≡ *TIANJIN SAINTEAGLE WELDING CO., LTD.***

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***ELITE OF WELDING***

***SAINTEAGLE CHINA***





## EXCELLENT PRODUCTS, REMARKABLE REPUTATION

The products have been approved by ten countries' shipbuilding certificate including CCS (China), ABS (America), LR (Britain), GL (Germany), DNV (Norway), NK (Japan), BV (France), RINA (Italy), KR (Korea) and VR (Vietnam).













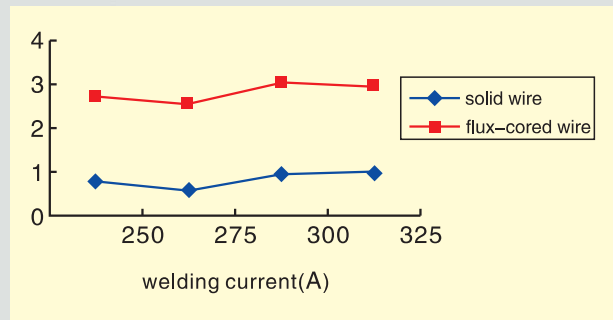
**Tianjin Santeagle Welding Co., Ltd. has obtained  
ISO 9001:2000 International Quality System Certification.**



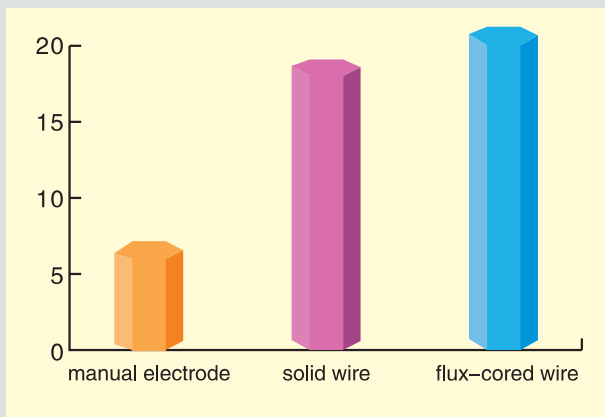
## The New Century Welding Consumables: Flux-cored Wire

- High production efficiency – 2~4 times higher than manual electrode, 0.1 ~ 0.2 times higher than solid wire;
- Few spatter, perfect weld appearance – much better than solid wire, no post-weld clean-up;
- Low cost – weld cost per meter (consumables cost + labor cost + electricity consumption + other) is 50% of the manual electrode, and similar with the solid wire;
- Excellent welding performance and mechanical properties – suitable for widespread use of various industries.

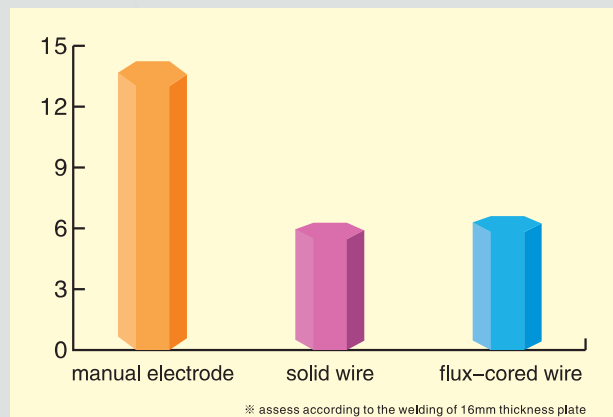
the amount of welding spatter (g/min)



the amount of deposited metal (kg / (person · class))



the weld cost per meter (Yuan / m)





## F.C.W. for Mild and Low-alloy High Strength Steel

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)					
	GB	AWS	JIS	C	Si	Mn	S	P	Others
SQJ501	E501T1	E71T-1	YFW-C50DR	0.05	0.45	1.35	0.009	0.013	
SQJ501L	E501T-1C,1M	E71T-1C,1M		0.04	0.40	1.22	0.010	0.015	
				0.04	0.60	1.54	0.008	0.015	
SQJ50MX	E500T1	E70T-1	YFW-C50DM	0.05	0.50	1.41	0.010	0.015	
SQJ501Ni	E501T1	E71T-9	YFL-C504R	0.05	0.40	1.28	0.009	0.013	Ni: 0.41
SQJ501A	E501T1M	E71T-1M	YFW-C50DR	0.05	0.45	1.35	0.009	0.013	
SQJ502	E501T1	E71T-1	YFW-C50DR	0.05	0.45	1.35	0.009	0.013	
SQJ601	E601T1	E91T1Ni		0.04	0.45	1.40	0.011	0.011	
SQJ507	E500T5	E70T-5		0.06	0.46	1.45	0.010	0.010	
SQJ607-CrNiMo	E600T5-K2	E90T5-K2		0.05	0.42	1.36	0.016	0.015	Cr: 0.05 Ni: 1.52 Mo: 0.33
SQJ707-CrNiMo	E700T5-K3	E100T5-K2		0.048	0.32	1.25	0.010	0.015	Cr: 0.60 Ni: 1.65 Mo: 0.52
SQJ857-CrNiMo	E850T5-K4			0.07	0.49	1.49	0.018	0.017	Cr: 0.50 Ni: 2.00 Mo: 0.43



Typical Mechanical Properties of Deposited Metal				Characteristics and Applications	Certificate of Approval	Shielding Gas
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)	$A_{kv}(J)$ (0°C/-20°C)			
560	480	30	120/90	Rutile type flux-cored wire for all position welding, excellent welding performance and mechanical properties, for building of ships, machines, steel structure and bridges, etc.	CCS, ABS, LR, GL, DNV, KR, NK, BV, RINA, VR	CO <sub>2</sub>
540	450	30	160/150	All-position welding, also apply to 100% CO <sub>2</sub> and 80% Ar + 20% CO <sub>2</sub> two kinds of shield gas; deposited metal with low diffusible hydrogen content [H] ≤ 5mL/100g, crack resistibility is excellent.	CCS, DNV, GL	CO <sub>2</sub>
610	520	26	150/140			80%Ar+20%CO <sub>2</sub>
590	510	29	140/100	High efficient metal core flux-cored wire, clean up the slag after 3-passes, strong ability against blow hole, for building of ships, bridges, machines and cars, etc.	CCS, DNV, GL, LR NK, ABS, CWB	CO <sub>2</sub>
580	480	31	140/120	Excellent welding performance and mechanical properties, good impact values because of a little Ni in the deposited metal at low temperature, for building of ships, machines, steel structure and bridges, etc.	CCS, ABS, GL, LR DNV	CO <sub>2</sub>
560	480	30	120/90	Rutile type flux-cored wire for all position welding with Ar+CO <sub>2</sub> mixing gas, excellent welding performance and mechanical properties, excellent bead appearance, few spatter, for building of machines, steel structure and bridges, etc.		80%Ar +20%CO <sub>2</sub>
560	480	30	120/90	A popular new product of SOJ501, all position welding, excellent welding performance and mechanical properties, better bead appearance, reasonable price, for building of machines, steel structure and petrochemical industries, etc.		CO <sub>2</sub>
640	570	25	(-30°C)60	Suitable for the welding of 600 MPa class high strength steel, excellent welding performance and mechanical properties, high impact toughness.		CO <sub>2</sub>
560	480	28	150/110	Basic type flux-cored wire, excellent welding performance and mechanical properties, low diffusible hydrogen content, good ability to anti-cracks, for building of machines, hydroelectric and petrochemical equipments, etc.	ABS, CCS, DNV, GL, LR	CO <sub>2</sub> or 80%Ar +20%CO <sub>2</sub>
740	580	21	(-30°C)53	Basic type flux-cored wire, for welding of 600 MPa class high strength steel.		CO <sub>2</sub> or 80%Ar +20%CO <sub>2</sub>
797	625	18	(-30°C)49	Basic type flux-cored wire, for welding of 700 MPa class high strength steel or heat resistance steel.		CO <sub>2</sub> or 80%Ar +20%CO <sub>2</sub>
850	760	20	(-30°C)49	Good anti-cracks ability and good weld toughness, for high strength steel welding of 30CrMo and 35CrMo.		CO <sub>2</sub> or 80%Ar +20%CO <sub>2</sub>



## F.C.W. for Low Temperature Service Steel

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)					
	GB	AWS	JIS	C	Si	Mn	S	P	Other
SQJ501Ni(L)	E501T9	E71T-9	YEL-C504R	0.05	0.39	1.27	0.011	0.013	Ni: 0.50
SQJ551-Ni1	E551T1-Ni1	E81T1-Ni1	YEL-C554R	0.05	0.33	1.13	0.010	0.015	Ni: 1.00
SQJ551-Ni2	E551T1-Ni2	E81T1-Ni2	YEL-C556R	0.04	0.38	1.32	0.010	0.015	Ni: 1.80
SQJ551-K2	E551T1-K2	E81T1-K2		0.042	0.39	1.28	0.010	0.010	Ni: 1.41
SQJ557-Ni1	E550T5-K1	E80T5-K1	YEL-A556B	0.05	0.40	1.20	0.010	0.015	Ni: 1.05

## F.C.W. for Corrosion Resistance Steel

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)					
	GB	AWS	JIS	C	Si	Mn	S	P	Others
SQJ501-CrNiCu			YFA-50W	0.04	0.23	0.90	0.010	0.015	Cr: 0.50 Ni: 0.43 Cu: 0.40
SQJ551-CrNiCu	E550T1-W	E80T1-W	YFA-58W	0.04	0.27	0.97	0.010	0.015	Cr: 0.60 Ni: 0.43 Cu: 0.40
SQJ501WCu				0.04	0.23	0.70	0.010	0.015	W: 0.35 Cu: 0.30
SQJ507WCu				0.04	0.40	0.90	0.010	0.015	W: 0.35 Cu: 0.30

Typical Mechanical Properties of Deposited Metal				Characteristics and Applications	Certificate of Approval	Shielding Gas
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)	$A_{Kv}$ (J)			
585	485	31	(-40°C)110	Good impact values at -40°C, all position welding, diffusible hydrogen content < 5mL/100g (chromatograph), for welding of warships and important low temperature steel structure.	4Y: ABS, CCS, DNV, GL, NK	CO <sub>2</sub>
620	560	27	(-40°C)70	Good impact values at -40°C, all position welding, diffusible hydrogen content < 5mL/100g (chromatograph) for welding of warships and important low temperature steel structure.		CO <sub>2</sub>
620	560	27	(-60°C)70	Good impact values at -60°C, all position welding, diffusible hydrogen content < 5mL/100g (chromatograph) for welding of important low temperature steel structure.		CO <sub>2</sub>
625	555	28	(-60°C)100	All position welding, good impact toughness at temperature down to -60°C, for welding of marine platform and steel at low temperature.	CCS, ABS, DNV, GL	CO <sub>2</sub>
590	500	26	(-60°C)100	Basic type flux-cored wire, excellent crack resistance, good impact toughness, diffusible hydrogen content < 5mL/100g (chromatograph), for welding of important low temperature steel structure.		CO <sub>2</sub> or 80%Ar +20%CO <sub>2</sub>

Typical Mechanical Properties of Deposited Metal				Characteristics and Applications	Shielding Gas
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)	$A_{Kv}$ (J)		
560	461	26	(0°C)94	For welding of 400~490 MPa class weatherproof steel.	CO <sub>2</sub>
600	538	25	(-30°C)128	For welding of 500~590 MPa class weatherproof steel.	CO <sub>2</sub>
500	440	26	(-20°C)70	For welding of weatherproof steel structure trains.	CO <sub>2</sub>
560	480	27	(-40°C)60	For welding of 09MnCuPTi, 09MnCuPTiRe class weatherproof steel, structure trains, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>





## F.C.W. for Heat Resistance Steel

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)							
	GB	AWS	JIS	C	Si	Mn	Cr	Mo	V	S	P
SQR202	E551T1-B1	E81T1-G		0.06	0.37	1.37	0.55	0.59		0.020	0.030
SQR207	E550T5-B1			0.06	0.41	1.32	0.61	0.50		0.020	0.030
SQR302	E551T1-B2	E81T1-B2		0.06	0.46	0.46	1.23	0.48		0.020	0.030
SQR307	E550T-B2L	E80T5-B2L		0.06	0.35	0.67	1.23	0.48		0.020	0.030
SQR337				0.05	0.26	0.40	1.10	0.80	0.20	0.020	0.030
SQR402	E601T1-B3	E91T1-B3	YF2CM-C	0.06	0.47	0.50	2.16	0.97		0.020	0.030
SQR407	E600T5-B3	E90T5-B3	YF2CM-C	0.045	0.19	0.64	2.15	1.15		0.018	0.016

## Flux-cored Arc Welding Wire for Electrode Gas Welding

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)						
	GB	AWS	JIS	C	Si	Mn	Ni	Mo	S	P
SQL507		EG70T-2	Z3319 YFE-22C	0.083	0.26	1.35	0.22	0.18	0.016	0.018
SQL607		EG90T-2	Z3319 YFEG-32C	0.071	0.39	1.48	0.51	0.30	0.019	0.013

Typical Mechanical Properties of Deposited Metal			Characteristics and Applications	Shielding Gas
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)		
615	510	21	Rutile type flux-cored wire, excellent welding performance, for welding of CrMo steel below 510°C, such as 12CrMo.	CO <sub>2</sub>
610	520	23	Basic type flux-cored wire, excellent crack resistibility, for welding of CrMo steel below 510°C, such as 12CrMo.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
633	549	25	TiCa type flux-cored wire, excellent welding performance, for welding of CrMo steel below 520°C, such as 15CrMo.	CO <sub>2</sub>
590	500	22	Basic type flux-cored wire, excellent crack resistibility, for welding of CrMo steel below 520°C, such as 15CrMo.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
570	480	22	Basic type flux-cored wire, excellent crack resistibility, for welding of CrMo V steel below 550°C.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
690	602	20	Good welding performance, for welding of CrMo steel below 550°C.	CO <sub>2</sub>
689	610	21	Basic type flux-cored wire, excellent crack resistibility, for welding of CrMo steel below 520°C, such as 2.25Cr-1Mo.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>

Typical Mechanical Properties of Deposited Metal				Characteristics and Applications	Shielding Gas
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)	$A_{KV}$ (J)		
580	440	24	(-20°C)85	Special welding wire for forced moulding of electrogas welding, high welding efficiency, for vertical long straight connecting welding of medium thick plates of ships, silos, metallurgical furnaces, etc.	CO <sub>2</sub>
648	529	24	(-20°C)61		



## F.C.W. for Stainless Steel

Product Name	Specification			Typical Chemical Composition of Deposited Metal (%)							
	GB	AWS	JIS	C	Si	Mn	Cr	Ni	Mo	S	P
SQA307	E307T0-1 E307T0-4	E307T0-1 E307T0-4		0.09	0.60	4.25	19.47	10.15	1.3	0.016	0.026
SQA307HMn				0.070	0.40	6.0	19.5	10.00	1.0	0.010	0.010
SQA308	E308T1-1 E308T1-4	E308T1-1 E308T1-4	YF308C	0.051	0.49	1.13	20.18	10.43	0.05	0.007	0.034
SQA308L	E308LT1-1 E308LT1-4	E308LT1-1 E308LT1-4	YF308LC	0.024	0.69	1.26	20.27	10.82		0.009	0.026
SQA308MoL	E308LMoT0-1	E308LMoT0-1		0.026	0.76	1.31	20.84	11.52	2.31	0.014	0.035
SQA309L	E309LT0-1 E309LT0-1	E309LT0-1 E309LT0-1	YF309LC	0.029	0.59	1.21	23.11	13.56	0.04	0.010	0.031
SQA309MoL	E309LMoT0-1 E309KMoT0-4	E309LMoT0-1 E309KMoT0-4	YF309MoLC	0.027	0.71	1.17	23.68	14.86	2.49	0.016	0.029
SQA316	E316T0-1 E316T0-4	E316T0-1 E316T0-4	YF316C	0.047	0.75	1.23	19.22	12.57	2.34	0.015	0.025
SQA316L	E316LT0-1 E316LT0-4	E316LT0-1 E316LT0-4	YF316LC	0.024	0.57	1.33	18.35	12.49	2.42	0.013	0.034
SQA317L	E317LT0-1 E317LT0-4	E317LT0-1 E317LT0-4	YF317LC	0.028	0.58	1.29	20.36	13.54	3.21	0.014	0.031
SQA347	E347T1-1 E347T1-4	E347T1-1 E347T1-4	YF317C	0.062	0.71	1.13	20.06	10.43	0.08	0.014	0.023
SQA409	E409T0-1	E409T0-1		0.076	0.43	0.52	12.09	0.42	0.08	0.019	0.034
SQA410	E410T0-1	E410T0-1	YF410C	0.085	0.49	0.82	12.07	0.48	0.08	0.021	0.029



Typical Mechanical Properties of Deposited Metal		Characteristics and Applications	Shielding Gas
$R_m$ (MPa)	$A_5$ (%)		
613	46	Weld is Austenite microstructure contained 4%Mn, low crack sensitivity, for welding of bullet proof steel plates, overlaying stainless steel, high strength steel and hardened alloy steel, etc.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
593	40	Complete non-magnetic Austenite microstructure, for welding of 14%Mn, hardened alloy steel, magnetic steel and other steel difficult to be welded.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
573	43	Proper ferrite in Austenite microstructure, low crack sensitivity, for welding of 18-8 (SUS304) stainless steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
553	43	Proper ferrite in Austenite microstructure, low crack sensitivity, for welding of 18-8 (SUS304) extra low carbon stainless steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
546	47	Strong performance against intergranular corrosion, for welding of 18-8 extra low carbon stainless steel, or the similar steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
557	42	Hardfacing of dissimilar steel or underlaying of carbon steel and low alloy steel, or the welding of similar steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
541	35	Hardfacing of dissimilar steel or underlaying of carbon steel and low alloy steel, or the welding of similar low carbon steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
546	42	Proper ferrite in Austenite microstructure, low crack sensitivity, for welding of 18-12Mo2 stainless steel.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
516	44	For welding of 18-12Mo2 extra low carbon stainless steel, good welding performance, strong performance against intergranular corrosion.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
549	25	Austenite microstructure, extra low carbon, against intergranular corrosion, no heat treatment, high stability at high temperature, for welding of important chemical containers.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
549	38	Strong performance against intergranular corrosion, high strength at high temperature, for welding of SUS321, SUS304L base metal.	CO <sub>2</sub> or Ar+(20~25)%CO <sub>2</sub>
491	24	For welding of 0Cr13 stainless steel, or hardfacing and repair of valves.	CO <sub>2</sub>
556	23	For welding of 410 or 420 series stainless steel, high property of hardening, good performance against oxidation and corrosion under high temperature, for hardfacing and repair in petrochemical refinery and chemical industry.	CO <sub>2</sub>



## Self-shielded F.C.W.

Product Name	Specification		Typical Chemical Composition of Deposited Metal (%)						
	GB	AWS	C	Si	Mn	Ni	Al	S	P
SZJ507-K6	E501T8-K6	E71T8-K6	0.75	0.26	0.93	0.86	0.80	0.005	0.011
SZJ507-Ni1	E501T8-Ni1	E71T8-Ni1	0.07	0.28	1.13	0.90	0.91	0.009	0.011
SZJ507-G	E500T8-G	E70T8-G	0.28	0.08	0.58			0.009	0.011

## F.C.W. of Stainless Steel for TIG Welding Without Backing Argon

Product Name	Specification		Typical Chemical Composition of Deposited Metal (%)							
	GB	AWS	C	Si	Mn	Cr	Ni	Mo	S	P
SQA308-T	R308T1-G	R308T1-G	0.046	0.46	1.31	19.58	10.23		0.018	0.019
SQA308L-T	R308LT1-5	R308LT1-5	0.025	0.51	1.24	19.47	10.74		0.018	0.032
SQA316L-T	R316LT1-5	R316LT1-5	0.016	0.92	2.16	18.79	12.57	2.64	0.016	0.028
SQA309L-T	R309LT1-5	R309LT1-5	0.025	0.86	1.82	23.48	13.22	0.26	0.014	0.031

Typical Mechanical Properties of Deposited Metal				Characteristics and Applications	Polarity
$R_m$ (MPa)	$R_{eH}$ (MPa)	$A_5$ (%)	$A_{KV}$ (J)		
520	405	31	75(-20°C)	For welding of oil/gas pipeline, steel structure of metallurgic engineering, etc.	DC-
535	492	24	89(-30°C)	For welding of silos, marine engineering, etc.	DC-
576	445	24		For materials without any high requirement for toughness.	DC-

Typical Mechanical Properties of Deposited Metal		Characteristics and Applications	Shielding Gas
$R_m$ (MPa)	$A_{KV}$ (J)		
556	45	TIG welding wire of single welding and double-face moulding, without argon gas on the back, for underlaying of SUS304 stainless steel pipe.	Ar
549	48	TIG welding wire of single welding and double-face moulding, without argon gas on the back, for underlaying of SUS304L extra low carbon stainless steel pipe.	Ar
517	46	TIG welding wire of single welding and double-face moulding, without argon gas on the back, for underlaying of 18-12Mo2 extra low carbon stainless steel pipe.	Ar
537	54	TIG welding wire of single welding and double-face moulding, without argon gas on the back, for underlaying of 25%Cr-13%Ni (SUS309L) extra low carbon stainless steel pipeline.	Ar



## F.C.W. for Hardfacing

### Gas-shielded Arc Welding Wire for Hard Surfacing

Product Name	Typical Chemical Composition of Deposited Metal(%)							
	C	Mn	Si	Cr	Mo	W	V	Other
SQD127	0.1~0.2	2.5~4.5	0.3~0.5					≤1.0
SQD237	0.3~0.6	0.5~1.5		8.0~10.0	1.0~3.5		0.5~1.0	≤3.0
SQD276	0.4~0.8	11.0~16.0	0.3~0.8	13.0~17.0				
SQD337	0.2~0.6			2.0~3.5		7.0~10.0		≤2.0
SQD517	0.1~0.3			12.0~16.0				≤1.0
SQD698	2.0~3.0			4.0~5.0	8.5~14.0			≤5.0

### Submerged Arc Welding Wire for Hard Surfacing

Product Name	Typical Chemical Composition of Deposited Metal(%)							
	C	Mn	Si	Cr	Mo	W	V	Other
SMD401	0.2~0.4			10.0~16.0				≤2.5
SMD402	0.2~0.5	≤2.0	≤1.0	2.0~5.0	1.0~3.0			≤3.0
SMD481	0.3~0.6			2.0~5.0		7.0~10.0		≤3.0
SMD501	0.3~0.6	≤2.0	≤0.6	10.0~16.0	≤0.20			≤3.0
SMD502	0.3~0.7	≤2.0	≤3.0	≤0.8	1.0~3.0		≤1.0	≤3.0
SMD581	2.8~4.5	≤2.0		22.0~32.0		7.0~9.0		≤3.0
SMD601	3.0~5.0	≤2.0	≤2.0	15.0~25.0	≤5.0			≤2.0
SMD602	4.0~6.0			18.0~26.0	4.0~9.0		≤1.0	≤2.0

Hardness of Deposited Metal (HRc)	Characteristics and Applications	Shielding Gas
≥28	For hardfacing of shafts, gears, mixers, wheels, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
≥50	For hardfacing hydraulic machinery with sand corrosion and air damage.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
≥50	For hardfacing parts with air corrosion of water turbine blades or high Mo steel, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
≥48	For hardfacing various heat forging moulds and rollers, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
≥45	Hardfacing wire for 2Cr13 valves, for hardfacing shafts, over heated steam valves, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>
≥60	Cr Tungsten and cast iron welding wire, for hardfacing mine machinery and slurry pumps, etc.	CO <sub>2</sub> or 80%Ar+20%CO <sub>2</sub>

Hardness of Deposited Metal (HRc)	Characteristics and Applications	Welding Flux
≥40	Hardfacing wire for 2Cr13 valves, for hardfacing or spraying shafts and over heat steam valves, etc.	HJ260 or HJ107
≥45	Hardfacing wire for 25Cr3 hot rolling rollers, and spraying.	HJ260 or HJ107
≥48	Hardfacing wire of 3Cr2W8 hot forging mould.	HJ260 or HJ107
≥50	Hardfacing wire of high Cr continuous casting rollers.	HJ260 or HJ107
≥50	For repair of steel rollers of other heat rolling.	HJ260 or HJ107
58-63	High Cr casting iron, for hardfacing parts worn badly, such as coal grinding rollers, water turbine blades, etc.	HJ260 or HJ107
≥50	Hardfacing wire of CrMo, for hardfacing coal grinding rollers, cement rollers, etc.	HJ260 or HJ107
≥50	For hardfacing heavily worn parts in high temperature, such as furnace materials, cloth material sliding groove, etc.	HJ260 or HJ107





## F.C.W. for Hardfacing

### Self-shielded Arc Welding Wire for Hard Surfacing

Product Name	Typical Chemical Composition of Deposited Metal(%)						
	C	Mn	Si	Cr	Mo	W	Other
SZD50	0.1~0.3	≤2.0	≤0.8	10.0~15.0			≤1.0
SZD55	2.5~4.0	0.8~2.0	0.4~1.2	16.0~27.0	2.0~4.0		≤1.0

Product Name	Hardness of Deposited Metal (HRc)	Characteristics and Applications
SZD50	40~50	Excellent performance of wearable and impact resistance, for hardfacing continuous caster roller, etc.
SZD55	54~59	For hardfacing the vulnerable parts of the milling coal rollers and hopper.

## F.C.W. for Spray

Product Name	Typical Chemical Composition of Deposited Metal(%)					
	C	Mn	Si	Cr	S, P	Other
SPD30	0.20~0.35	0.8~1.8	0.5~2.0	3.0~5.0	≤0.03	1.0~2.0
SPD40	0.15~0.25	0.8~1.8	0.5~2.0	12.0~15.0	≤0.03	1.0~2.0
SPD45	0.30~0.45	0.8~1.8	0.5~2.0	12.0~15.0	≤0.03	1.0~2.0
SPD50	0.65~0.85	0.8~1.8	0.5~2.0	12.0~15.0	≤0.03	1.0~2.0

Product Name	Hardness of Deposited Metal (HRc)	Characteristics and Applications
SPD30	30~40	For build-up and repair the parts' surface of wearable, corrosion resistance and thermostable. Especially for repair the gas tube, water cooling wall and ceiling superheater which base metal are 20g, 15CrMo, 15Mo3 or 13CrMo44. Also repair crankshaft and piston of 50Mn, 45#, 39CrV, 40CrMo, 10CrMo.
SPD40	35~45	
SPD45	40~50	
SPD50	45~55	

## Sainteagle Pail Pack Wire

### Technical Specifications

Type	Product Name	Specification		
		GB	AWS	JIS
flux-cored wire	SQJ501	E501T1	E71T-1	YFW-C50DR
	SQJ507	E500T5	E71T-5	
	SQJ50MX	E500T1	E70T-1	YFW-50DM

## The Standard Size of Pail Pack Wire



### Flux-Cored Wire

Wire Diameter (mm)	Weight(kg)	Package Size of Pail (mm) diameter x height	Assemble Special Draw Out Clamp
1.2, 1.4	200	510 x 820	AH-500
1.6	300	660 x 770	AH-660



## F.C.W Production Line of Annual Capacity of 3000 Tons

We have successfully developed a production line the F.C.W. with a designed capacity of 3,000 tons per year by ourselves which reached international advance level. And the production line won the urban second prize for science and technology from the National Education Department. We can finish the whole project of the F.C.W. production line, including design, making, installation, adjusting etc.



### F.C.W. Forming Machine

- ◆ Maximum feeding speed of sheath: 100m/min.
- ◆ Cantilever rollers are adopted in the design of this unit in favor of easy operation and adjustment.
- ◆ Separately with frequency conversion system.
- ◆ Controlled by PLC.
- ◆ Diameter of output wire:  $\phi 2.8 \sim \phi 3.4$ mm.



### Strait-Line Wire Drawing Machine

- ◆ Maximum outputting speed: 1 080m/min.
- ◆ 6~10 head lineal wire drawing set.
- ◆ Diameter of input wire:  $\phi 2.6 \sim \phi 3.4$ mm.
- ◆ Control by PLC.
- ◆ Diameter of output wire:  $\phi 1.0 \sim \phi 1.6$ mm.



### Strip Steel Slitting Machine

- ◆ Thickness: 0.8 ~ 1.0mm.
- ◆ Maximum slitting width: 300mm.
- ◆ Maximum slitting speed: 60m/min.
- ◆ Total power: 13.2kW.

## Precision Layer Winding Line

- ◆ Maximum winding speed: 25m/s.
- ◆ Wire diameter:  $\phi 0.8 \sim \phi 2.2$ mm.
- ◆ Active release, winding with constant force.



## Pail Packing Line

- ◆ Wire diameter:  $\phi 0.8 \sim \phi 1.6$ mm.
- ◆ Maximum running machine: 25m/s.
- ◆ Packing weight: 100 ~ 400kg/ pail.
- ◆ Pail specification: diameter (530 ~ 650) mm × height (100 ~ 1350) mm.



## Automatic Batching System

- ◆ Designed batching capacity: for annual capacity of 10,000 tons F.C.W.
- ◆ Degree of accuracy: 1/1000.
- ◆ Computer automatic monitoring system.



# Company Sales Network





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