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**ANQIU SAN KIN YIP
DENG FENG WELDING MATERIAL CO.,LTD.**

SOLUTION FOR WELDING MATERIAL MANUFACTURE

DENG FENG WELDING has been engaged in welding material manufacturing since 1981, with rich experience in technology consulting and production line design.

1. Welding Electrode Production Line



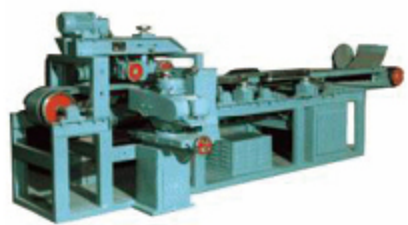
Wire cutter



Powder coating machine



Wire-feed machine



Head-tail grinding machine



Drying oven

2. Solid Wire Production Line



Pretreatment line



Wire drawing machine



Chemical copper plating machine



Wire layer rewinding machine



DENG FENG WELDING INTRODUCTION



• 2011~2018

- ▶ Present capacity is 50000 tons per year , including many kinds of welding electrodes , welding wires for MIG, MAG,TIG, FCW, SAW, welding fluxes, etc.
- ▶ Got CE certificate , expanding the market in Europe in 2018
- ▶ Attended OSAKA & TOKYO welding fair four times in 2012-2018
- ▶ 2011, Sub-company, TOAN CO., LTD. Founded in Japan.

• 2000~2010

- ▶ Attended BEIJING ESSEN welding & cutting fair every year
- ▶ Constructed a factory in Khartoum ,Sudan for international assistance in 2005
- ▶ Beginning of development of foreign market from 2000

• 1990~2000

- ▶ DengFeng welding rods was advertised in CCTV-1 in 1994
- ▶ Constructed two sub-factories in YanAn city(SHANXI)and ZiChang county (XINJIANG).
- ▶ Certified by ISO9001 in 1993
- ▶ Approved by NK, DHV, ABS,BV,GLAND LR in 1993
- ▶ One of the biggest factories which offered the most of welding electrodes in ShanDong province.
- ▶ “DengFeng”got the famous logo(trade mark) in ShanDong province

• 1979~1990

- ▶ Development of welding electrode assisted by The ShanDong university.
- ▶ Weifang welding electrode factory founded, and “DENG FENG” logo established



焊条 Welding Electrode



E308-16 welding electrode



E6013 welding electrode

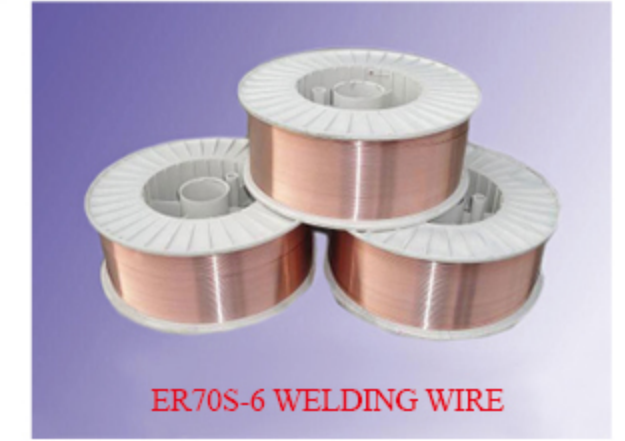
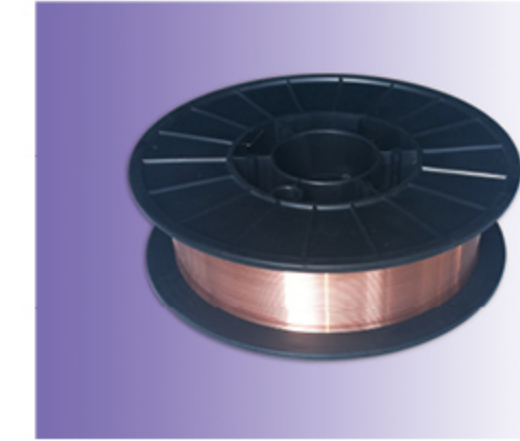


WELDING EXPERIMENT

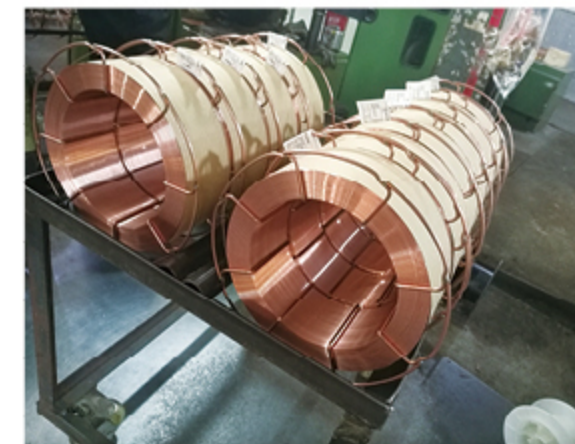


various welding rods and packaging

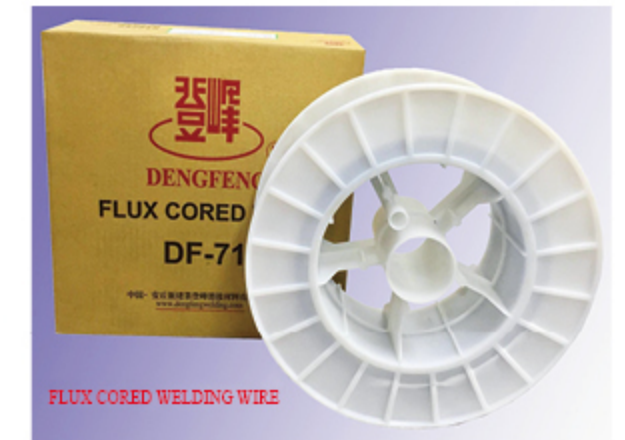
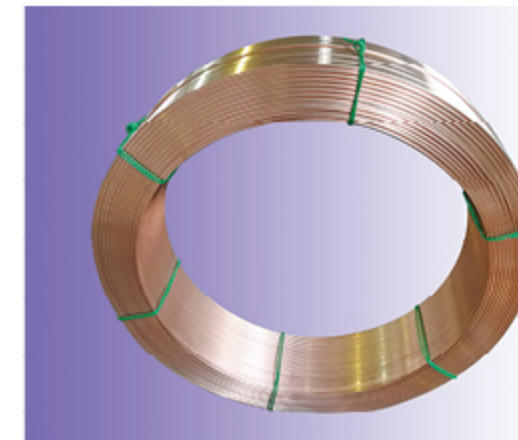
焊丝焊剂 Welding Wire & Flux



ER70S-6 WELDING WIRE




TIG WELDING WIRE




FLUX CORED WELDING WIRE



碳钢焊条 Carbon Steel Welding Electrode

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)					
				C	Si	Mn	S	P	Cr
	DF-J421	E4313	E6013	≤0.12	≤0.35	0.30-0.60	≤0.035	≤0.040	
	DF-J426	E4316	E6016	≤0.12	≤0.90	≤1.25	≤0.035	≤0.040	≤0.20
	DF-J502	E5003		≤0.12	≤0.30	0.4-1.9	≤0.035	≤0.040	
	DF-J505	E5011	E7011	≤0.12	≤0.20	0.4-0.6	≤0.035	≤0.040	
	DF-J506	E5016	E7016	≤0.12	≤0.75	≤0.16	≤0.035	≤0.040	≤0.20
	DF-J506Fe	E5018	E7018	≤0.12	≤0.75	≤0.16	≤0.035	≤0.035	≤0.20
	DF-J506Fe18	E5028	E7028	≤0.12	≤0.90	≤0.16	≤0.035	≤0.040	≤0.20
	DF-J507	E5015	E7015	≤0.12	≤0.75	≤0.16	≤0.035	≤0.040	≤0.20


低合金钢焊条 Low Alloy Steel Welding Electrode

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				C	Si	Mn	S	P
	DF-J506RH	E5016-G	E7016-G	≤0.10	≤0.50	≤1.5	≤0.025	≤0.025
	DF-J507R	E5015-G	E7015-G	≤0.12	≤0.70	≤1.6	≤0.035	≤0.035
	DF-J606	E6016-D1	E9016-D1	≤0.12	≤0.60	1.25-1.75	≤0.035	≤0.035
	DF-J707	E7015-D2	E10015-D2	≤0.15	≤0.60	1.65-2.00	≤0.035	≤0.035
	DF-J757	E7515-G	E11015-G	≤0.2.0	≤0.60	≥1.0	≤0.030	≤0.030
	DF-J857	E8515-G	E12015-G	≤0.15	≤0.80	≥1.0	≤0.035	≤0.035


			Mechanical Performance of Deposit Metal				Packing
Ni	Mo	Cu	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
			≥420	≥330	≥22	≥47(0)	5kg/box, 20kg/carton Or as required
≤0.30	≤0.30	≤0.08	≥420	≥330	≥22	≥47(-30)	
			≥490	≥400	≥20	≥27(0)	
			≥490	≥400	≥20	≥27(-30)	
≤0.30	≤0.30	≤0.08	≥490	≥400	≥22	≥27(-30)	
≤0.30	≤0.30	≤0.08	≥490	≥400	≥22	≥27(-30)	
≤0.30	≤0.30	≤0.08	≥490	≥400	≥22	≥27(-20)	
≤0.30	≤0.30	≤0.08	≥490	≥400	≥22	≥27(-30)	

		Mechanical Performance of Deposit Metal				Packing
Ni	Mo	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
0.35-0.80		≥490	≥390	≥22	≥34(-40)	5kg/box, 20kg/carton Or as required
≤0.70		≥490	≥390	≥22	≥27(-30)	
	0.25-0.45	≥590	≥490	≥15	≥27(-30)	
	0.25-0.45	≥690	≥590	≥15	≥27(-30)	
	≤1.00	≥740	≥640	≥13	60	
	0.6-1.20	≥830	≥740	≥12	-	

不锈钢焊条 Stainless Steel Welding Electrode

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				C	Si	Mn	S	P
	DF-G207	E410-15	E410-15	≤0.12	≤0.90	≤1.0	≤0.030	≤0.040
	DF-A002	E308L-16	E308L-16	≤0.04	≤0.90	0.5-0.25	≤0.030	≤0.040
	DF-A022	E316L-16	E316L-16	≤0.04	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A042	E309MoL-16	E309MoL-16	≤0.04	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A062	E309L-16	E309L-16	≤0.04	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A102	E308-16	E308-16	≤0.08	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A132	E347-16	E347-16	≤0.08	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A172	E307-16	E307-16	≤0.13	≤0.90	3.30-4.75	≤0.030	≤0.040
	DF-A212	E318-16	E318-16	≤0.08	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A302	E309-16	E309-16	≤0.15	≤0.90	0.5-2.5	≤0.030	≤0.040
	DF-A402	E310-16	E310-16	≤0.20	≤0.75	1.0-2.5	≤0.030	≤0.030


耐热钢焊条 Heat Resistant Steel Welding Electrode

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				C	Si	Mn	S	P
	DF-R107	E5015-A1	E7015-A1	≤0.12	≤0.50	0.50-0.90	≤0.035	≤0.035
	DF-R207	E5515-B1	E8015-B1	≤0.12	≤0.50	0.50-0.90	≤0.035	≤0.035
	DF-R307	E5515-B2	E8015-B2	≤0.12	≤0.50	0.50-0.90	≤0.035	≤0.035
	DF-R407	E6015-B3	E9015-B3	≤0.12	≤0.50	0.50-0.90	≤0.035	≤0.035


					Mechanical Performance of Deposit Metal		Packing
Cr	Ni	Mo	Cu		σ _b (Mpa) Tensile Strength	δ ₅ (%) Elongation	
11.0-13.5	≤0.70	≤0.75	≤0.75		≥450	≥20	2kg/plastic box, 20kg/carton Or as required
18.0-21.0	9.0-11.0	≤0.75	≤0.75		≥520	≥35	
17.0-20.0	11.0-14.0	2.0-3.0	≤0.75		≥490	≥30	
22.0-25.0	12.0-14.0	2.0-3.0	≤0.75		≥540	≥25	
22.0-25.0	12.0-14.0	≤0.75	≤0.75		≥520	≥25	
18.0-21.0	9.0-11.0	≤0.75	≤0.75		≥550	≥35	
18.0-21.0	9.0-11.0	≤0.75	≤0.75	Nb8xc~1.0	≥520	≥25	
18.0-21.5	9.0-10.7	0.5-1.5	≤0.75		≥590	≥30	
17.0-20.0	11.0-14.0	2.0-3.0	≤0.75	Nb6xc~1.0	≥550	≥25	
22.0-25.0	12.0-14.0	≤0.75	≤0.75		≥550	≥25	
25.0-28.0	20.0-22.5	≤0.75	≤0.75		≥550	≥25	

		Mechanical Performance of Deposit Metal				Packing
Cr	Mo	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
	0.40-0.65	≥490	≥390	≥22	≥27	5kg/box, 20kg/carton Or as required
0.40-0.65	0.40-0.65	≥540	≥440	≥16	≥47	
0.80-1.50	0.40-0.65	≥540	≥440	≥17	≥47	
2.00-2.50	0.90-1.20	≥590	≥490	≥15	≥47	

铸铁焊条 Cast Iron Welding Electrode

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)			
				C	Si	Mn	S
	DF-Z208	EZC		2.0-4.0	2.5-6.5	≤0.75	≤0.10
	DF-Z308	EZNi-1	ENi-1	≤2.00	≤2.50	≤0.10	≤0.03
	DF-Z508	EZNiCu-1	ENiCu-B	≤0.10	≤0.80	≤2.50	≤0.025
	DF-Z408	EZNiFe-1	ENiFe-C1	≤2.00	≤2.50	≤1.80	≤0.03

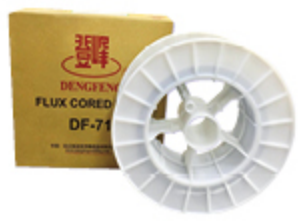
堆焊焊条 Hardfacing Welding Electrode

Product Show	Brand Name	GB	Chemical Composition of Deposit Metal(%)			
			C	Si	Mn	S
	DF-D132	EDPCrMo-A2-03	≤0.50		≤1.50	
	DF-D172	EDPCrMo-A3-03	≤0.50			
	DF-D212	EDPCrMo-A4-03	0.30-0.60			
	DF-D256	EDMn-A-16	≤1.10	≤1.310	11.0-16.0	
	DF-D327	EDRCrMoWV-A1-15	≤0.50			≤0.035
	DF-D608	EDZ-A1-08	2.5-4.5			
	DF-D802	EDCoCrA-03	0.70-1.40	≤2.00	≤2.00	
	DF-EDZCr60-G					

				Mechanical Performance of Deposit Metal		Packing
P	Ni	Cu		σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	
≤0.15				≥490	≥390	2kg/box, 20kg/carton Or as required
	≥90		Fe≤8	≥540	≥440	
	60-70	24-35	Fe≤6	≥540	≥440	
	45-60			≥590	≥490	

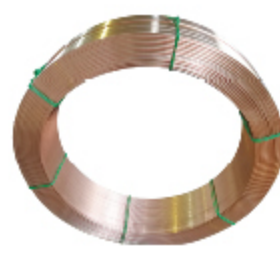
						Hardness of Deposit Metal	Packing
P	Cr	Mo	V	W		HRC	
	≤2.00	≤1.50				≥30	2kg/plastic box, 20kg/carton Or as required
	≤2.50	≤2.50				≥40	
	≤4.00	≤5.00				≥50	
						HB≥170	
≤0.04	≤5.00	≤2.50	≤1.0	7.0-10.0		≥55	
	3.0-5.0	3.0-5.0				≥55	
	25.0-32.0			3.0-6.0	Fe≤5.00	≥40	
						≥60	

药芯焊丝 Flux Cored Welding Wire


Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				C	Si	Mn	S	P
	DF-YJ50-1	E500T-1	E70T-1C	0.07	0.39	1.46	0.012	0.014
	DF-YJ507	E500T-5	E70T-5C/M	0.05	0.32	1.29	0.008	0.011
	DF-YJ502	E501T-1	E71T-1C	≤0.18	≤0.90	≤1.75	≤0.030	≤0.030
	DF-YJ551Ni1	E551T1-Ni1C	E81T1-Ni1C	≤0.15	≤0.80	0.8-1.40	≤0.030	≤0.030
	DF-YJ602	E621T1-K2C	E91T1-K2C	0.08	0.37	1.27	0.01	0.013
	DF-YJ707	E90T5-K3C	E100T5-K3C	0.07	0.25	1.71	0.016	0.009
	DF-YJ857	E830T5-K4C	E120T5-K4C	0.06	0.41	1.28	0.008	0.009
	DF-E501T-11	E501T-11	E71T-11	0.24	0.35	0.58	0.001	0.009
	DF-E501T-GS	E501T-GS	E71T-GS	0.24	0.38	0.64	0.002	0.012
	DF-YR302	E551T1-B2C	E81T1-B2C	0.06	0.41	0.81	0.011	0.014
	DF-YR402	E621T1-B3LC	E91T1-B3C	0.09	0.52	1.21	0.008	0.011
	DF-YA308	E308T1-1	E308T1-1	0.056	0.48	1.26	0.011	0.014
	DF-YA308L	E308LT1-1	E308LT1-1	0.028	0.38	1.38	0.011	0.012
	DF-YA309	E309T0-1	E309T0-1	0.048	0.52	1.46	0.006	0.014
	DF-YA309L	E309LT0-1	E309LT0-1	0.036	0.56	1.43	0.006	0.013
	DF-YA316L	E316LT0-1	E316LT0-1	0.028	0.52	1.45	0.012	0.017
	DF-YA347	E347T1-1	E347T1-1	0.047	0.48	1.29	0.014	0.018
	DF-YA309Mo	E309LMoT0-1	E309LMoT0-1	0.032	0.58	1.16	0.012	0.019
	DF-SF501	E501T-1	E71T-1C	≤0.18	≤0.90	≤1.75	≤0.030	≤0.003
	DF-SF81Ni1	E551T1-Ni1C	E81T1-Ni1C H4	≤0.12	≤0.80	≤1.50	≤0.030	≤0.003
DF-SF91K2	E621T1-K2C	E91T1-K2C H4	≤0.15	≤0.80	0.5-1.75	≤0.030	≤0.030	

				Mechanical Performance of Deposit Metal				Packing
Cr	Ni	Mo	Cu	σ_b (Mpa) Tensile Strength	σ_s (Mpa) Yield Strength	δ_5 (%) Elongation	Impact Value J(°C)	
	0.86	0.16		620	540	26	70(-18)	1/5/15kg spool with protective film and carton Or as required
				560	490	28	110(-30)	
≤0.20	≤0.50	≤0.30	≤0.35	≥480	≥400	≥22	≥27(-20)	
≤0.15	0.8-1.10	0.20-0.65	0.20-0.50	550-690	≥470	≥19	≥27(-40)	
	1.22			670	560	25	76(-20)	
	1.55	0.44		735	680	22	80(-50)	
0.48	1.95	0.58		910	820	17	60(-50)	
				530	460	22		
				520	450	21		
1.22		0.48		620	540	25		
2.28		1.00		690	580	23	60(0)	
19.6	9.6			590		39		
20.5	10.3			570		40		
23.2	12.6			625		34		
22.8	12.4			590		36		
19.00	12.4	2.4		580		38		
19.3	9.86			610		38		
21.5	12.3	2.3		580		32		
				490-660	≥375	≥22	≥47(-20)	
	0.8-1.10			550-690	≥470	≥19	≥27(-40)	
≤0.15	1.0-2.0	≤0.35		620-760	≥540	≥17	≥27(-40)	

埋弧焊丝 Submerged Arc Welding Wire

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				C	Si	Mn	S	P
	DF-H08A	H08A	EL12	≤0.10	≤0.03	0.30-0.55	≤0.030	≤0.030
	DF-H08E	H08E	EL12	≤0.10	≤0.03	0.30-0.55	≤0.025	≤0.025
	DF-H08MnA	H08MnA	EM12	≤0.10	≤0.07	0.8-1.10	≤0.030	≤0.030
	DF-H10Mn2	H10Mn2	EH14	≤0.12	≤0.07	1.50-1.90	≤0.04	≤0.04
	DF-H10MnSi	H10MnSi	EM13K	≤0.14	0.60-0.90	0.80-1.10	≤0.030	≤0.04


氩弧焊丝 TIG Welding Wire

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)			
				C	Mn	Si	S
	DF-TG308L	H03Cr21Ni10Si	ER308L	≤0.03	1.0-2.50	0.30-0.65	≤0.030
	DF-TG308	H08Cr21Ni10Si	ER308	≤0.08	1.0-2.50	0.30-0.65	≤0.030
	DF-TG309L	H03Cr24Ni13Si	ER309L	≤0.03	1.0-2.50	0.30-0.65	≤0.030
	DF-TG309	H12Cr24Ni13Si	ER309	≤0.12	1.0-2.50	0.30-0.65	≤0.030
	DF-TG310	H12Cr26Ni21Si	ER310	0.08-0.15	1.0-2.50	0.30-0.65	≤0.030
	DF-TG316L	H03Cr19Ni12Mo2Si	ER316L	≤0.03	1.0-2.50	0.30-0.65	≤0.030
	DF-TG347	H08Cr20Ni10SiNb	ER347	≤0.08	1.0-2.50	0.65-1.00	≤0.030
	DF-TG410	H12Cr13	ER410	≤0.12	≤0.60	≤0.50	≤0.030
	DF-TG50-6	ER50-6	ER70S-6	0.06-0.15	1.40-1.85	0.80-1.15	≤0.025


			Mechanical Performance of Deposit Metal				Packing
Cr	Ni	Cu	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
≤0.20	≤0.30		410-550	≥330	≥22	≥27(0)	25-250kg spool
≤0.20	≤0.30		410-550	≥330	≥22	≥27(0)	
≤0.20	≤0.30		450-550	≥360	≥22	≥34(-40)	
≤0.20	≤0.30		500-600	≥400	≥24	≥34(-40)	
≤0.20	≤0.30	≤0.35	500-600	≥400	≥24	≥27(-40)	

						Mechanical Performance of Deposit Metal		Packing
P	Cr	Ni	Mo	Cu		σ _b (Mpa) Tensile Strength	δ ₅ (%) Elongation	
≤0.030	19.50-22.0	9.0-11.0	≤0.75	≤0.75		560	44	5/10kg plastic box. Or as required
≤0.030	19.50-22.0	9.0-11.0	≤0.75	≤0.75		585	42	
≤0.030	23.0-25.0	12.0-14.0	≤0.75	≤0.75		570	39	
≤0.030	23.0-25.0	12.0-14.0	≤0.75	≤0.75		590	37	
≤0.030	25.0-28.0	20.0-22.50	≤0.75	≤0.75		590	35	
≤0.030	18.0-20.0	11.0-14.0	2.0-3.0	≤0.75		575	38	
≤0.030	19.0-21.5	9.0-11.0	≤0.75	≤0.75	Nb10xC	585	37	
≤0.030	11.50-13.50	≤0.60	≤0.75	≤0.75	-1	558	26	
≤0.025	≤0.15	≤0.15	≤0.15	≤0.50		Rm570 Rel 430	29	


CO₂ 气体保护焊丝 CO₂ Gas Shielded Welding Wire

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)					
				C	Mn	Si	S	P	Cr
	DF-ER49-1	ER49-1	ER70S-1	≤0.11	1.80-2.10	0.65-0.95	≤0.030	≤0.030	≤0.20
	DF-ER50-6	ER50-6	ER70S-6	0.06-0.15	1.40-1.85	0.80-1.15	≤0.025	≤0.025	≤0.15
	DF-ER50-G	ER50-G	ER70S-G	≤0.15	0.85-1.6	0.4-1.0	≤0.030	≤0.030	0.15-0.25
	DF-ER55-1	ER55-1	ER80S-G	≤0.10	1.20-1.60	≤0.60	≤0.020	≤0.025	0.30-0.90

铝焊丝 Aluminum Welding Wire

Product Show	Brand Name	GB	AWS	Chemical Composition of Deposit Metal(%)				
				Al	Mn	Si	Fe	Cr
	DF-ER1100	ER1100	ER1100	Rem	0.05	0.25	0.30	0.05
	DF-ER4043	ER4043	ER4043	Rem	0.05	4.5-6.0	0.80	0.05
	DF-ER4047	ER4047	ER4047	Rem	0.15	11.0-13.0	0.80	0.05
	DF-ER5356	ER5356	ER5356	Rem	0.05-0.20	0.25	0.40	0.05-0.20
	DF-ER5556	ER5556	ER5556	Rem	0.50-1.0	0.25	0.40	0.05-0.20

焊剂 Welding Flux

Product Show	Brand Name	GB	AWS	SiO ₂ +TiO ₂
	DF-SJ101	F4A4-H08MnA F5A4-H10Mn2	F6A4-EM12 F7A4-EH14	15-25
	DF-SJ301	F4A2-H08A F5A2-H08MnA	F6A2-EL8 F7A2-EM12	25-35
	DF-SJ501	F5A0-H08A	F7A0-EL12	25-35

Composition(%)				Mechanical Performance of Deposit Metal				Packing
Ni	Mo	Cu	V	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
≤0.030				≥490	≥372	≥20	≥47	1/5/15/20kg spool with protective film and carton.Or 150-350kg drum. Or as required
≤0.15	≤0.15	≤0.15	≤0.03	≥500	≥420	≥22	≥27(-30)	
1.20-1.60	0.30-0.60	0.5		≥490	≥345	≥22	≥27(-30)	
0.20-0.60		0.20-0.50		≥550	≥450	≥22	≥60(-40)	

Composition(%)				Mechanical Performance of Deposit Metal			Packing
Mg	Zn	Cu	Ti	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	
0.05	0.10	0.05-0.20	0.05	95	35	24	MIG:0.5/2/7kg plastic box TIG:5/10kg plastic box Or as required
0.05	0.10	0.30	0.20	150	110	14	
0.10	0.20	0.30	0.005	130	60	5	
4.5-5.5	0.10	0.10	0.06-0.20	240	110	17	
4.7-5.5	0.25	0.10	0.05-0.20	275	125	17	

Composition(%)			Mechanical Performance of Deposit Metal				Packing
CaO+MgO	Al ₂ O ₃ +MnO	CaF ₂	σ _b (Mpa) Tensile Strength	σ _s (Mpa) Yield Strength	δ ₅ (%) Elongation	Impact Value J(°C)	
25-35	20-30	15-25	410-550 480-650	≥330 ≥400	≥22 ≥22	≥27(-40) ≥27(-40)	25kg bag or as required
15-25	30-40	5-15	410-550 530-630	≥330 ≥400	≥22 ≥22	≥27(-20) ≥27(-20)	
	50-60	3-10	410-550	≥330	≥22	≥27(0)	