



先登高科
XIANDENG HI-TECH

Jiuli

先登高科电气有限公司

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先登高科

XIANDENG HI-TECH

/ 一心一意做好一根线 /
Committed to Magnet Wire with a Full Heart

为动力产业提供可靠解决方案，
成为全球电磁线用户优选供应商

Provide reliable solutions for the power industry, become
the preferred supplier of global magnet wire users





企业概述 Company Profile

先登高科电气有限公司是一家专业制造铜、铝漆包绕组线的国家级高新技术企业。公司成立于1984年，位于太湖南岸风景秀丽的湖州市，毗邻上海和杭州等大城市，交通便利。公司拥有年产各种型号、规格的漆包绕组线8万吨的生产能力。

公司立足于电磁线产业领域，致力于技术创新和市场开拓，其主导产品“先登”牌系列电磁线具有四十多种型号、超千种规格，产品采用国际标准组织生产，取得美国UL认证、RoHS认证、SGS证书。公司与国内外科研院所及跨国公司开展广泛的技术合作，完成了多项国家级、省级、市级技改和科研项目，研制开发了一系列科技新产品。目

前，耐高温特种漆包绕组线已成为公司的优势龙头产品，并出口海外市场。公司产品覆盖国内三十个省、市，并远销大洋洲、中东、美洲、东南亚、非洲等国家和地区，已成为国内外大中型电机、家用电器、变压器制造企业的定点配套供应商。

公司取得ISO9001，IATF16949质量管理体系认证、ISO14001环境管理体系认证。目前正在组织实施新能源汽车电机专用电磁线技改项目。“追求低耗、创造精品”的公司精神激励着全体员工再接再厉，为使公司成为优质电磁线的生产基地而奋斗不息。

Established in 1984, Xiangdeng Hi-tech Electric Co., Ltd. is a professional manufacturer of enameled copper & aluminum wires in china. It is located in Huhzou city where is very near to Shanghai and Hangzhou. In 2018, she created over 350 million US dollars of sales volume, with nearly 10% exported to global market.

With more than 30 years of development, we are pride of achievements as following:

◎ **Production Capacity:**

Annual Output: 8,000 metric tons

◎ **Product Size Range:**

0.06 mm to 6.00 mm for enameled round copper wires
0.20 mm to 5.00 mm for enameled round aluminum wires
3.00 mm² to 65.00 mm² for both enameled rectangular copper wires and aluminum wires

◎ **Management System:**

ISO 9001:2008 IATF 16949:2016 ISO 14001:2004

◎ **QC Certificate:**

RoHS SGS UL Approved

In the next few years, our annual output will reach up to 100,000 metric tons. Meanwhile, we would be one of the most important manufacturers and exporters in magnet wires industry across the world.

◎ **Main Overseas Markets:**

Australia, New Zealand, Philippines, Indonesia, K.S.A., Egypt, Malaysia, Chile, Thailand, Africa etc.



ISO
9001:2015



IAFA
16949:2016



ISO 14001:2015



UL E488183



生产装备 Production Equipment

先登引进全球先进的生产设备，定制开发专业的生产管理软件。目前公司拥有48套先进的漆包设备，其中5套为意大利高速连拉连包漆包设备，属于国内同行业最先进的漆包机型号之一。另外，还有20多套高速连拉连包的漆包设备，能满足客户对漆包线性能的定制化需求。

We imported world advanced equipment from Italy, customized and developed manufacturing management software. Presently, we have 48 sets of enameled machines, 5 of which are the most advanced enameled machines in the world. Another over 20 sets of high DV enameled machines with inline drawing can satisfy diverse requirement from the customers across the industries.





研发品管 R&D and QC

先登与国内外科研院所广泛合作，成立了博士后科研工作工作站和省级高新技术研发中心，拥有精良的研发设备和较强的自主研发实力，参与起草20多项国家标准和行业标准。公司获得ISO9001:2015质量管理体系认证，IATF 16949认证，UL认证。产品符合汽车行业设计标准要求。

公司测试体系完备，具备按GB、IEC、JIS、NEMA等标准要求完成产品全性能检测的能力。

We cooperate with domestic and overseas scientific research institutes extensively, with one station for post-doctoral research and Provincial center for high technology and development. We have the ability of research and development independently and precise instruments. Our company operates strictly under ISO9001:2015 and our wires have got RoHS, UL approval (File No. E488183). Moreover, our company is one of few companies who get the IATF 16949 certificate, enabling us to satisfy the strict quality requirement of automotive industry.

We also have advanced testing equipments to do all the necessary tests before shipment to ensure all technical parameters of our wires meet our customer's requirements.

【合作伙伴】 Cooperative Partners



◎ 主要漆包铜圆线性能指标
Main performance for enameled round copper wires

导体尺寸 Conductor Diameter	公差 Tol	最大外径 Max Overall Diameter (mm)		最小漆膜厚度 Min.Insulation (mm)		击穿电压 Breakdown Voltage (V)		伸长率 Elongation (%)	回弹角 Springness (°)		电阻 ElectricalResistance (Ω/m 20)	
		Grade 1	Grade 2	Grade 1	Grade 2	Grade 1	Grade 2		Grade 1	Grade 2	最大	最小
(mm)	(mm)±											
0.050		0.060	0.660	0.005	0.010	≥300	≥600	≥10			9.48900	7.92200
0.056		0.067	0.074	0.006	0.011	≥325	≥650	≥10			7.56500	6.31600
0.063	0.003	0.076	0.083	0.006	0.012	≥375	≥700	≥12			5.92200	5.04500
0.071	0.003	0.084	0.091	0.007	0.012	≥425	≥700	≥13			4.74700	3.94100
0.080	0.003	0.094	0.101	0.007	0.014	≥425	≥850	≥14	≤70	≤80	3.70300	3.13300
0.090	0.003	0.105	0.113	0.008	0.015	≥500	≥900	≥15	≤67	≤77	2.90000	2.49500
0.100	0.003	0.117	0.125	0.008	0.016	≥500	≥950	≥16	≤64	≤73	2.33300	2.03400
0.112	0.003	0.130	0.139	0.009	0.017	≥1300	≥2700	≥17	≤64	≤73	1.84800	1.63200
0.125	0.003	0.144	0.154	0.010	0.019	≥1500	≥2800	≥17	≤62	≤70	1.47500	1.31700
0.140	0.003	0.160	0.171	0.011	0.021	≥1600	≥3000	≥18	≤59	≤67	1.17000	1.05500
0.160	0.003	0.182	0.194	0.012	0.023	≥1700	≥3200	≥19	≤59	≤67	0.89060	0.81220
0.180	0.003	0.204	0.217	0.013	0.025	≥1700	≥3300	≥20	≤57	≤65	0.70070	0.64440
0.200	0.003	0.226	0.239	0.014	0.027	≥1800	≥3500	≥21	≤54	≤62	0.56570	0.52370
0.224	0.003	0.252	0.266	0.015	0.029	≥1900	≥3700	≥21	≤51	≤59	0.44950	0.41880
0.250	0.004	0.281	0.297	0.017	0.032	≥2100	≥3900	≥22	≤49	≤56	0.36280	0.33450
0.280	0.004	0.312	0.329	0.018	0.033	≥2200	≥4000	≥22	≤47	≤53	0.28820	0.26760
0.315	0.004	0.349	0.367	0.019	0.035	≥2200	≥4100	≥23	≤50	≤55	0.22700	0.21210
0.355	0.004	0.392	0.411	0.020	0.038	≥2300	≥4300	≥23	≤48	≤53	0.17820	0.16740
0.400	0.005	0.439	0.459	0.021	0.040	≥2300	≥4400	≥24	≤45	≤50	0.14070	0.13160
0.450	0.005	0.491	0.513	0.022	0.042	≥2300	≥4400	≥25	≤44	≤48	0.11090	0.10420
0.500	0.005	0.544	0.566	0.024	0.045	≥2400	≥4600	≥25	≤43	≤47	0.08959	0.08462
0.560	0.006	0.606	0.630	0.025	0.047	≥2500	≥4600	≥26	≤41	≤44	0.07153	0.06736
0.630	0.006	0.679	0.704	0.027	0.050	≥2600	≥4800	≥27	≤46	≤50	0.05638	0.05335
0.710	0.007	0.762	0.789	0.028	0.053	≥2600	≥4800	≥28	≤44	≤47	0.04442	0.04198
0.800	0.008	0.855	0.884	0.030	0.056	≥2600	≥4900	≥28	≤41	≤43	0.03500	0.03305
0.900	0.009	0.959	0.989	0.032	0.060	≥2700	≥5000	≥29	≤45	≤48	0.02765	0.02612
1.000	0.010	1.062	1.094	0.034	0.063	≥2700	≥5000	≥30	≤42	≤45	0.02240	0.02116
1.120	0.011	1.184	1.217	0.034	0.065	≥2700	≥5000	≥30	≤39	≤41	0.01785	0.01687
1.250	0.012	1.316	1.349	0.035	0.067	≥2700	≥5000	≥31	≤35	≤37	0.01435	0.01353
1.400	0.014	1.468	1.502	0.036	0.069	≥2700	≥5000	≥32	≤32	≤34	0.01143	0.01079
1.600	0.016	1.670	1.706	0.038	0.071	≥2700	≥5000	≥32	≤28	≤30	0.008749	0.00826
1.800	0.018	1.872	1.909	0.039	0.073	≥2700	≥5000	≥32	≤5	≤5	0.006913	0.006529
2.000	0.020	2.074	2.112	0.040	0.075	≥2700	≥5000	≥33	≤5	≤5	0.005600	0.005289
2.240	0.022	2.316	2.355	0.041	0.077	≥2700	≥5000	≥33	≤5	≤5	0.004465	0.004218
2.500	0.025	2.578	2.618	0.042	0.079	≥2700	≥5000	≥33	≤5	≤5	0.003584	0.003385
2.800	0.028	2.880	2.922	0.043	0.081	≥1300	≥2500	≥34	≤5	≤5	0.003190	0.002698
3.150	0.032	3.233	3.276	0.045	0.084	≥1300	≥2500	≥34	≤5	≤5	0.002258	0.002131
3.550	0.036	3.635	3.679	0.046	0.086	≥1300	≥2500	≥35	≤5	≤5		
4.000	0.040	4.088	4.133	0.047	0.089	≥1300	≥2500	≥35	≤5	≤5		
4.500	0.045	4.591	4.637	0.049	0.092	≥1300	≥2500	≥36	≤5	≤5		
5.000	0.050	5.093	5.141	0.050	0.094	≥1300	≥2500	≥36	≤5	≤5		

线盘信息 Reel Information

漆包圆线系列

ENAMELLED ROUND WIRES



线盘类型 Reel Type	上盘板径D1 Top Flange (mm)	下盘板径D2 Bottom Flange(mm)	桶体上径d1 Top Core(mm)	桶体下径d2 Bottom Core(mm)	内宽 W (mm)	盘板厚a (mm)	轴孔径 h Center Bore(mm)	重量 Weight (g)
PT-4	130	140	74	86	170	15	27	230
PT-10	168	180	96	110	200	15	32	450
PT-15	183	200	96	110	200	15	32	550
PC-20	216	227	110	120	200	18	35	700
PT-25	216	230	106	130	250	15	35	750
PT-45	236	250	140	160	355	32.5	35	2150
PT-60	270	300	150	175	350	25	35	2250
PT-90	300	315	180	200	425	37.5	35	3900
PT-200	375	400	225	250	530	50	35	7340
PC250	250	250	140	140	160	15	35	1000
PC355	355	355	224	224	160	20	36	1950
PC500A	500	500	315	315	180	35	40	8450
PC500B	500	500	250	250	250	25	56	8600
300*180 wooden	300	300	150	150	180	16	40	/
355*180 wooden	355	355	160	160	180	18	40	/
500*210 wooden	500	500	260	260	210	20	40	/
Other type on request								

◎ 聚氨酯系列 /Polyurethane series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
F	155	CU	UEW	0.06-1.00	42~18	60317-20	6109.10	MW79-C	C3202
H	180					60317-51	6109.23	MW82-C	
F	155		UEWSB			60317-35	6109.16		

产品主要性能及用途:

Main features and application:

- 能直焊, 易染色, 高频介质损耗低, 盐水针孔性能优
- 适用于继电器、微电机、变压器、仪器仪表和各类电子元器件的绕组
- Can be soldered without removal of coating, easily to be dyed, low dielectric loss under high frequency and good pinhole test performance
- Relays, micro-motors, transformers, instruments, meter s, various types of electronic components



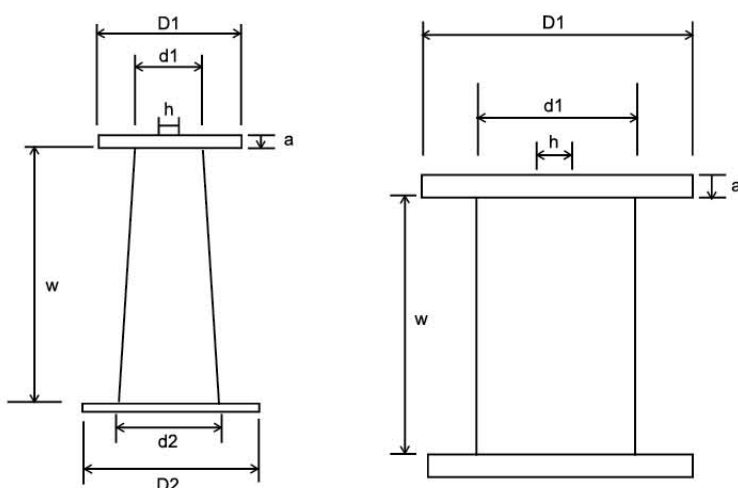
◎ 尼龙复合系列 /Nylon overcoating series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
F	155	CU	UEWN	0.06-1.00	42~18	60317-21	6109.11		C3202
H	180					60317-22	6109.12		

产品主要性能及用途:

Main features and application:

- 保留单涂层原有特点外, 还具有表面摩擦系数小、耐磨性能优, 弯折性能好
- Same properties as polyurethane coatings, what's more, these wires' mechanic properties are improved greatly in friction modulus, abrasive resistance, bending properties etc



漆包圆线系列

ENAMELLED ROUND WIRES



漆包圆线系列

ENAMELLED ROUND WIRES



◎ 聚酯系列 /Polyester series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
B	130	CU	PEW	0.06-6.00	42~4	60317-34	6109.7		C3202
F	155					60317-3	6109.2	MW5-C	

产品主要性能及用途:

Main features and application:

- 耐刮性、耐溶剂性能良好
- 适用于B级普通电机、普通电器、仪器仪表和各类电子元器件的绕组
- Good resistance to abrasion and solvent
- B class motors, appliances, instruments, meters, various types of electronic components



◎ 聚酯亚胺系列 /Polyesterimide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
H	180	CU	EIW	0.06-6.00	42~3	60317-8	6109.5	MW30-C	C3202
		AL		0.20-5.00	32~4	60317-15	23312.5		
		CU	EIWSB	0.06-3.00	42~9	60317-37	6109.18		

产品主要性能及用途:

Main features and application:

- 优良的热稳定性,耐刮、耐溶剂性
- 适用于大中型H级电机,高温电压器、仪器仪表和各类电子元器件的绕组
- Good thermostability under 180°C working environment, Good resistance to abrasion and solvent
- All sizes of H class motors, transformers, instruments, meters and various types of electronic components



◎ 聚酯或聚酯亚胺复合聚酰胺酰亚胺系列 / Polyester or polyesterimide over-coated polyamide-imide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
C	200	CU	EI/AIW	0.06-6.00	42~3	60317-13	6109.20	MW35-C	
			EI/AIWSB	0.06-3.00	42~9	60317-38	6109.19		
	200	AL	EI/AIW	0.20-5.00	32~4	60317-25	23312.7	MW35-A	

产品主要性能及用途:

Main features and application:

- 耐高温、耐严寒、耐冷冻剂、耐辐射、耐热冲击,机械性能优良
- 适用于压缩机电机、高品质电动工具和高品质照明灯具
- Good properties of resistance to high and low temperature, powerful cryogen, mechanical and radiation
- Motor of compressor, high quality power tools and light fitting, etc



◎ 聚酰亚胺系列 /Polyamide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准		
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA
C	220	CU	PIW	0.20-2.00	32~12	60317.7	6109.6	MW73-C
	240					60317.46	60317.22	MW16-C

产品主要性能及用途:

Main features and application:

- 耐高温、耐严寒、耐冷冻剂、耐辐射、耐热冲击,化学性能优良
- 适用于各类工作环境恶劣的C级电机和变压器,如汽车、航空航天、核工业等
- Keep working under extreme situations, good properties of resistance to high and low temperature, powerful cryogen, forceful heat shock, chemical and radiation
- C class motors under extreme situation, transformers, such as automobile, aerospace and nuclear industry



漆包圆线系列

ENAMELLED ROUND WIRES



漆包扁线系列

ENAMELLED RECTANGULAR WIRES



耐电晕系列 /Corona-resistant series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准			
Code 代号	Level 耐温等级			mm	AWG	IEC	GB/T	NEMA	JIS
C	200	CU	EI/AIWCR	0.30-3.00	29~9		10930-2010		
C	200	CU	EI/AIWCR	0.30-3.00	29~9		21707-2008		

产品主要性能及用途：
Main features and application:

- 耐电晕、耐高温、耐冷冻剂、耐化学性，机械性能优良
- 适用于变频调速起重电机、工业电机、电梯电机等
- Good properties of resistance to corona,high temperature,cryogen,chemical and mechanic
- Frequency control lifting motors,industrial motors and elevators,etc



漆包铜包铝线系列 /Copper clad Aluminum series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围		Standard 适用标准
Code 代号	Level 耐温等级			mm	AWG	
F	155	CCA	PEW	0.20-2.50	32~10	According to our company's standard or customer's requirement
			UEW			
			EIW			
H	180		UEW			



产品主要性能及用途：
Main features and application:

- 良好的耐刮性、附着性、电气性能、耐溶剂性和散热性
- 适用于音响线圈、偏转线圈、消磁线圈和移动通讯设备
- Good resistance to abrasion, adhesion,electrical,solvent and heat dissipation
- Audio coils,deflection coils,degaussing coils and mobile communication equipments

聚酯系列 /Polyester series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围	Standard 适用标准		
Code 代号	Level 耐温等级			mm ²	IEC	GB/T	NEMA
B	130	CU	PEW	S: 3~65		7095.7	
F	155				60317-16	7095.3	
		AL			According to our company's standard or customer's requirement		

产品主要性能及用途：
Main features and application:

- 良好的附着性和热稳定性
- 适用于大中型电机、电器和变压器
- Good properties of adhesion and thermal stability
- Large and medium size motors,appliance and transformers



聚酯亚胺系列 /Polyesterimide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围	Standard 适用标准		
Code 代号	Level 耐温等级			mm ²	IEC	GB/T	NEMA
H	180	CU	EIW	S:3~65	60317-28	7095.4	
		AL			According to our company's standard or customer's requirement		

产品主要性能及用途：
Main features and application:

- 优良的热冲击性、耐热性和电气性能
- 适用于大中型电机和各类变压器
- Good properties of heat shock,high temperature and electrical
- Large and medium size motors and various transformers

漆包扁线系列

ENAMELLED RECTANGULAR WIRES



漆包扁线系列

ENAMELLED RECTANGULAR WIRES



◎ 聚酯或聚酯亚胺复合聚酰胺酰亚胺系列 / Polyester or polyesterimide over-coated polyamide-imide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围	Standard 适用标准		
Code 代号	Level 耐温等级			mm ²	IEC	GB/T	NEMA
C	200	CU	EI/AIW	S:3~65	60317-29	7095.6	
		AL			According to our company's standard or customer's requirement		



产品主要性能及用途:

Main features and application:

- 耐高温、耐冷冻剂、耐辐射
- 适用于密封电机、各类变压器和电抗器
- Good properties of resistance to high temperature, powerful cryogen and radiation
- Motor of compressor, various transformers and reactors

◎ 聚酰胺系列 /Polyamide series/

Thermal class 热级		Material 材质	Enamel type 涂层类型	Wire gauge 规格范围	Standard 适用标准		
Code 代号	Level 耐温等级			mm ²	IEC	GB/T	NEMA
C	220	CU	PIW	S: 3~65	60317-29	7095.6	

产品主要性能及用途:

Main features and application:

- 耐高温、耐严寒、耐冷冻剂、耐化学性、耐辐射
- 适用于大中型电机和各类变压器
- Good properties of resistance to high and low temperature, powerful cryogen, chemical and radiation
- Large and medium size motors and various transformers

◎ 纸包扁线系列 /paper covered rectangular series/

Thermal class 热级		Material 材质	Paper Type 纸张类型	Wire gauge 规格范围	Standard 适用标准		
Code 代号	Level 耐温等级			mm ²	IEC	GB/T	NEMA
	130~200	CU	Kraft, Nomex	S:3~65	60317-27	7073.3	

产品主要性能及用途:

Main features and application:

- 优良的电气性能和抗短路冲击能力
- 油浸式变压器和电抗器
- Good electric property and resistance to short circuit shock



漆包扁线规格范围 Production Range

- A 边 (厚度): 1.00~5.00 mm
- A side (thickness)
- B 边 (宽度): 3.00~13.00 mm
- B side (width)
- Radius: 0.50~1.00 mm



级 (Grade)	漆膜厚度 Insulation thickness		
	最小值 Min.	标称值 Nominal	最大值 Max.
1	0.06	0.085	0.11
2	0.12	0.145	0.17

XIANDENG HI-TECH is constantly developing new technologies
if your requirement is not listed above, please contact us for a personnalised response

应用领域

APPLICATION



先登高科

XIANDENG HI-TECH

/ 一心一意做好一根线 /
Committed to Magnet Wire with a Full Heart



风力发电
Wind Power



航空航天
Aerospace



电子产品
Electronics



汽车制造业
Automotive Industry



轨道交通
Rail Transit



变压器行业
Transformers



工业电机
Industrial Motors

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