宁波可可磁业股份有限公司
地址 / 宁波余姚三七市镇安捷西路117号
电话 / +86-574-62925557
+86-574-58221933
传真 / +86-574-62938889
+86-574-62947528
邮箱 / sales@kkmagnet.com
网址 / www.kkmagnet.com

可可磁业
COCO MAGNETIC INDUSTRY

宁波可可磁业股份有限公司
Ningbo Keke Magnet Industry Co.,ltd

COMPANY PROFILE
公司介绍

宁波可可磁业股份有限公司成立于2006年，是集研发、生产和销售高性能钕铁硼永磁材料于一体的高新技术企业，是节能环保领域核心应用材料的领先供应商。公司产品被广泛应用于新能源汽车及汽车零部件、工业节能电机、节能电梯、电动工具、风力发电等领域，并与各领域国内外龙头企业建立了长期稳定的合作关系。

钕铁硼永磁材料与其他磁性材料相比磁性能优势突出，具有高的磁能积、矫顽力和能量密度。公司目前已具备全产品生产能力，具体涵盖产品研究与开发、坯料生产、成品加工、表面处理等各环节，并对各工艺流程进行全面控制和管理。公司掌握毛坯生产和晶界渗透技术等核心技术，可长期稳定地给客户供应高性价比的高性能稀土永磁体，并根据应用领域的需求，配备生产、检验和研发设备，建立完善的生产工艺流程和质量管理体系，已获得ISO14001:2015；ISO9001:2015；IATF16949:2016等环境、质量体系认证。

Ningbo Cocomag Industry Co., Ltd., established in 2006, is a high-tech enterprise integrated R & D, production and sales of high-performance NdFeB magnet materials. We are a leading supplier of core application materials in the field of energy conservation and environmental protection. The company's products are widely used in new energy vehicles, auto parts, industrial motors, energy-elevators, electric tools, wind power generation and other fields. We have established a long-term and stable cooperative relations with leading enterprises at domestic and abroad markets in various fields.

Compared with other magnetic materials, Nd-Fe-B permanent magnetic materials have outstanding magnetic properties, with high magnetic energy product, coercivity and energy density. At present, we have a strong capacity of full product productions, specifically covering all lines such as R&D, blank magnet production, mechanic works, surface treatment, comprehensively controlling and managing all manufacturing processes. We have matured technologies such as grain boundary's reconstruction of high-performance NdFeB magnets, and can supply customers with cost-effective for a long time relationship. According to the demands of application fields, we have built high-level equipments with production, inspection and R & D, and establishes a perfect production process and quality management system, which has obtained iso14001:2015; ISO9001:2015; IATF 16949:2016 and other environmental and quality system certification.

DEVELOPMENT PATH
发展历程

2022年

确定启动IPO申报计划
Determine to launch IPO application plan

子公司投产
瑞途科技投产，
年产3000吨高性能钕铁硼
Production of subsidiaries
Ruitu technology is put into production, with annual output of 3000 tons of high-performance Nd-FeB.

2021年

引入外部机构投资
Introduce external institutional investment.

2018年

新三板挂牌
Successfully listed on NEW OTC market.

2016年

新厂房搬迁
占地面积30000平方米
Moves to new plant.
It covers an area of 30,000 square meters

2011年

公司成立
6月宁波可可磁业有限公司成立
Establishment of the company
In June,
NINGBO COCO MAGNETICS CO., LTD.
Was established

2006年

ENTERPRISE CULTURE
企业文化

愿景：成为世界知名磁材品牌
Vision: Become a famous worldwide brand in magnet industry

使命：驱动人类低碳生活
Mission: Drive low carbon human life

价值观：诚信、创新、协同、奉献
Values: Integrity, Innovation, Collaboration, Dedication

精神：超越自我、追求卓越
Spirit: Exceed ourselves, pursue excellence

定位：立足磁业之峰
Location: In the top magnet industries

核心理念：技术、服务、增值
Core philosophy: Technologies, Services, Value added

Products and Applications
产品与应用

USED IN AUTOMOTIVE
清 洁 能 源 汽 车 应 用

钕铁硼永磁材料用于新能源汽车驱动电机及ABS（防抱死制动系统）、EPS（电动助力转向系统）等汽车零部件，可以提高电机功率密度，使其具有更好的运行效率。

NdFeB permanent magnet materials are used in E-vehicle drive motors and auto parts such as ABS(explosion-proof dead braking system),EPS(electric power steering system),etc.,which can improve the power density of the motor and make it more efficient.

/

新 能 源 电 机

USED IN SMART ROBOT AND SERVO MOTOR

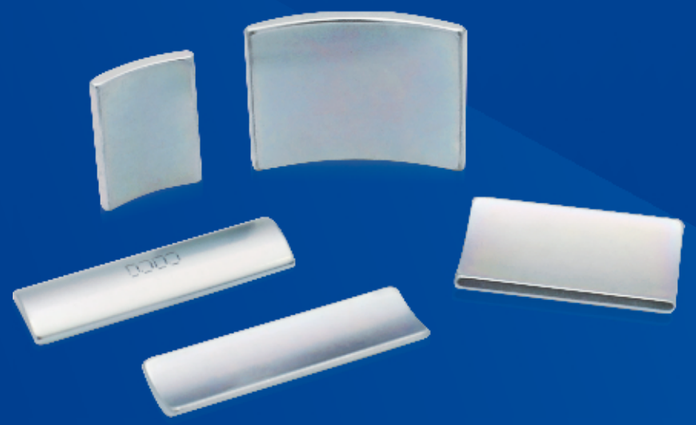
机 器 人 及 智 能 制 造 电 机 应 用

钕铁硼永磁材料用于工业机器人中的伺服电机，可以提高功率密度、减少电机体积，提高相关组件的性能。

NdFeB is used for servo motors in industrial intelligent robots,which can improve the performance of related components.

/

伺 服 电 机



USED IN WIND POWER SYSTEM

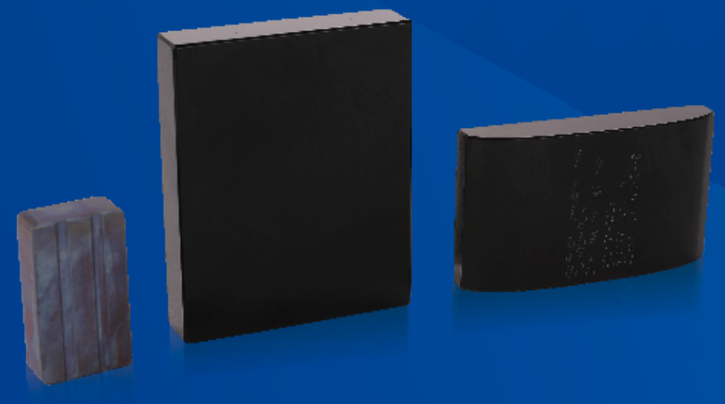
风 力 发 电 应 用

钕铁硼永磁材料用于永磁直驱风力发电机组，具有结构简单、运行与维护成本低、使用寿命长、并网性能良好、发电效率高、更能适应在低风速的环境下运行等特点。

Reduce wind turbine gearbox maintenance costs and extend its working life.It can have higher power generation,compared with traditional wind turbines,easier to operate in low wind speed environment.

/

风 力 发 电



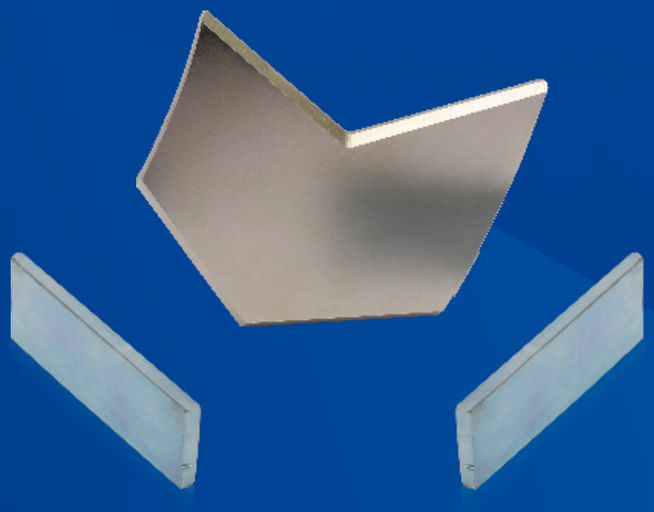
USED IN ENERGY -SAVING ELEVATOR
节 能 电 梯 应 用

钕铁硼永磁材料用于电梯曳引机，替代了涡轮蜗杆结构，具有更高的驱动效率，较小的尺寸，较低的噪音运营成本低。

NeFeB permanent magnet material for elevator traction machine.Altenative to worm gear structure,higher drive efficiency,light weight,low noise,low cost.

/

节 能 电 梯



Products and Applications
产品与应用

OTHER COMPREHENSIVE
其 他 综 合

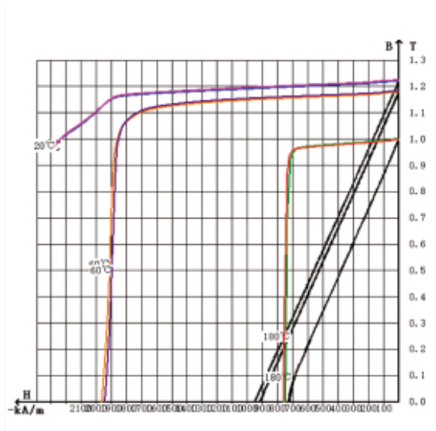
Magnetic Table

磁 性 能 表

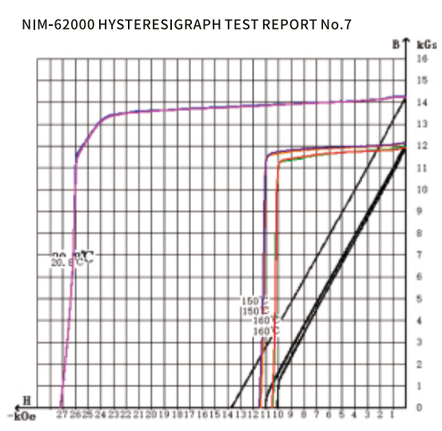
Item 类别	Grade	Remanence;Br 剩磁				Coercive Force;bHc 磁感应强度矫顽力		Intrisic Coercive Force;iHc 内禀矫顽力		Max Energy Product;(BH)max 最大磁能积				Working Temp. ℃ 工作温度
		kGs		T		kOe	KA/m	kOe	KA/m	MGOe		KJ/m3		
		Max.	Min.	Max.	Min.	Min		Min		Max.	Min.	Max.	Min.	
N	N54	15.0	14.5	1.50	1.45	10.5	836	11	876	55	51	438	406	≤80
	N52	14.8	14.2	1.48	1.42	10.5	836	11	876	53	49	422	390	≤80
	N50	14.5	14.0	1.45	1.40	11	876	12	955	51	47	406	374	≤80
	N48	14.3	13.7	1.43	1.37	11	876	12	955	49	45	390	358	≤80
	N45	13.7	13.2	1.37	1.32	11	876	12	955	46	43	366	342	≤80
	N42	13.2	12.9	1.32	1.29	11	876	12	955	43	40	342	318	≤80
	N40	12.9	12.6	1.29	1.26	11	876	12	955	41	38	326	302	≤80
	N38	12.6	12.3	1.26	1.23	11	876	12	955	39	36	310	287	≤80
	N35	12.2	11.8	1.22	1.18	10.9	868	12	955	36	33	287	263	≤80
	N33	11.8	11.3	1.18	1.13	10.5	836	12	955	34	31	271	247	≤80
	N30	11.3	10.8	1.13	1.08	10	796	12	955	31	28	247	223	≤80
M	N54M	14.9	14.4	1.49	1.44	13.30	1059	14	1114	55	50	438	398	≤100
	N52M	14.8	14.2	1.48	1.42	13.20	1051	14	1114	53	49	422	390	≤100
	N50M	14.5	14.0	1.45	1.40	13.00	1035	14	1114	51	47	406	374	≤100
	N48M	14.3	13.7	1.43	1.37	12.70	1011	14	1114	49	45	390	358	≤100
	N45M	13.7	13.2	1.37	1.32	12.20	971	14	1114	46	43	366	342	≤100
	N42M	13.2	12.9	1.32	1.29	11.80	939	14	1114	43	40	342	318	≤100
	N40M	12.9	12.6	1.29	1.26	11.40	907	14	1114	41	38	326	302	≤100
	N38M	12.6	12.3	1.26	1.23	11.00	876	14	1114	39	36	310	287	≤100
	N35M	12.3	11.8	1.23	1.18	10.80	860	14	1114	36	33	287	263	≤100
H	N54H	14.9	14.4	1.49	1.44	13.20	1051	16	1274	55	50	438	398	≤120
	N52H	14.8	14.2	1.48	1.42	13.10	1043	16	1274	53	49	422	390	≤120
	N50H	14.5	14.0	1.45	1.40	13.00	1035	16	1274	51	47	406	374	≤120
	N48H	14.3	13.7	1.43	1.37	12.80	1019	17	1353	49	45	390	358	≤120
	N45H	13.7	13.2	1.37	1.32	12.50	995	17	1353	46	43	366	342	≤120
	N42H	13.2	12.9	1.32	1.29	12.00	955	17	1353	43	40	342	318	≤120
	N40H	12.9	12.6	1.29	1.26	11.70	931	17	1353	41	38	326	302	≤120
	N38H	12.6	12.3	1.26	1.23	11.40	907	17	1353	39	36	310	287	≤120
	N35H	12.3	11.8	1.23	1.18	11.00	876	17	1353	36	33	287	263	≤120
	N33H	11.8	11.3	1.18	1.13	10.60	844	17	1353	34	31	271	247	≤120
SH	N52SH	14.8	14.2	1.48	1.42	13.10	1043	19	1512	53	49	422	390	≤150
	N50SH	14.5	14.0	1.45	1.40	13.00	1035	19	1512	51	47	406	374	≤150
	N48SH	14.3	13.7	1.43	1.37	12.80	1019	19	1512	49	45	390	358	≤150
	N45SH	13.7	13.2	1.37	1.32	12.50	995	20	1592	46	43	366	342	≤150
	N42SH	13.2	12.9	1.32	1.29	12.00	955	20	1592	43	40	342	318	≤150
	N40SH	12.9	12.6	1.29	1.26	11.50	915	20	1592	41	38	326	302	≤150
	N38SH	12.6	12.3	1.26	1.23	11.10	884	20	1592	39	36	310	287	≤150
	N35SH	12.3	11.8	1.23	1.18	11.00	876	20	1592	36	33	287	263	≤150
	N33SH	11.8	11.3	1.18	1.13	10.50	836	20	1592	34	31	271	247	≤150

Item 类别	Grade	Remanence;Br 剩磁				Coercive Force;bHc 磁感应强度矫顽力		Intrisic Coercive Force;iHc 内禀矫顽力		Max Energy Product;(BH)max 最大磁能积				Working Temp. ℃ 工作温度
		kGs		T		kOe	KA/m	kOe	KA/m	MGOe		KJ/m3		
		Max.	Min.	Max.	Min.	Min		Min		Max.	Min.	Max.	Min.	
UH	N52UH	14.8	14.2	1.48	1.42	13.10	1043	25	1990	53	49	422	390	≤180
	N50UH	14.5	14.0	1.45	1.40	13.00	1035	25	1990	51	47	406	374	≤180
	N48UH	14.3	13.6	1.43	1.36	12.80	1019	25	1990	49	45	390	358	≤180
	N45UH	13.6	13.2	1.36	1.32	12.20	971	25	1990	46	43	366	342	≤180
	N42UH	13.2	12.9	1.32	1.29	11.80	939	25	1990	43	40	342	318	≤180
	N40UH	12.9	12.6	1.29	1.26	11.50	915	25	1990	41	38	326	302	≤180
	N38UH	12.6	12.3	1.26	1.23	11.10	884	25	1990	39	36	310	287	≤180
	N35UH	12.3	11.8	1.23	1.18	10.60	844	25	1990	36	33	287	263	≤180
	N33UH	11.8	11.3	1.18	1.13	10.30	820	25	1990	34	31	271	247	≤180
	N30UH	11.3	10.8	1.13	1.08	9.50	756	25	1990	31	28	247	223	≤180
EH	N48EH	14.3	13.6	1.43	1.36	12.40	987	29	2308	49	45	390	358	≤200
	N45EH	13.6	13.2	1.36	1.32	12.30	979	29	2308	46	43	366	342	≤200
	N42EH	13.2	12.9	1.32	1.29	12.20	971	29	2308	43	39	342	310	≤200
	N40EH	12.9	12.6	1.29	1.26	11.90	947	30	2388	41	37	326	295	≤200
	N38EH	12.6	12.2	1.26	1.22	11.60	923	30	2388	39	35	310	279	≤200
	N35EH	12.2	11.8	1.22	1.18	11.10	884	30	2388	36	33	287	263	≤200
	N33EH	11.8	11.3	1.18	1.13	10.30	820	30	2388	34	31	271	247	≤200
	N30EH	11.3	10.8	1.13	1.08	9.50	756	30	2388	31	28	247	223	≤200
	N28EH	10.8	10.4	1.08	1.04	9.50	756	30	2388	29	26	231	207	≤200
AH	N40AH	12.9	12.6	1.29	1.26	11.00	876	35	2786	41	37	326	295	≤230
	N38AH	12.6	12.2	1.26	1.22	10.80	860	35	2786	39	36	310	287	≤230
	N35AH	12.2	11.8	1.22	1.18	10.60	844	35	2786	36	33	287	263	≤230
	N33AH	11.8	11.3	1.18	1.13	10.20	812	35	2786	34	31	271	247	≤230
	N30AH	11.3	10.8	1.13	1.08	10.10	804	35	2786	31	28	247	223	≤230
	N28AH	10.8	10.4	1.08	1.04	9.50	756	35	2786	29	26	231	207	≤230

38EH变温曲线



52UH变温曲线



物理特性 Physical Properties		
项目 Item	参数 Parameters	参考值 Reference Value
辅助磁性能 Additional Magnetic Properties	剩磁温度系数 (α(Br))/(%/K)Temp.Coeff.of Br	-0.08～-0.12
	内禀矫顽力温度系数 (β(Hcj))/(%/K)Temp.Coeff.of Hcj	-0.42～-0.70
	居里温度 (Tc)/K Curie Temperature	310～380
	回复磁导率 (μrec)[-]Recoil Permeability	1.05
机械物理特性 Mechanical And Physical Properties	密度(g/cm3)Density	7.40～7.70
	维式硬度/(Hv)Vickers Hardness	650
	电阻率/(μΩom)Electrical Resistivity	1.4
	电阻率/(μΩom)Electrical Resistivity	1.4
	抗压强度/(MPa)Compressive Strength	1050
	抗拉强度/(MPa)Tensile Strength	80
	抗弯强度/(MPa)Bending Strength	290
	热传导率/(W/(moK))Thermal Cinductivity	6～8
	杨式模量/(GPa)Young's Modulus	160
	热膨胀系数(垂直于取向方向)(10-6/K) Coefficient of Thermal Expansion(C⊥)	-1.5
	□□□□□□□□□□□□□□□(10-6/K) Coefficient of Thermal Expansion(C□)	6.5

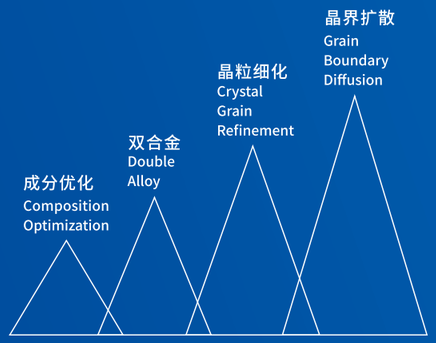
技术规格和参数如有变化，恕不另行通知。
Technical specifications and parameters are subject to change without notice.

磁性性能参数及换算表 Magnetic Parameter and Conversion Table:		
参数及表示 Unit and Symbol	国际单位 SI-units	单位换算 Conversion Table
磁感应强度 B Flux density B	T(Tesla)	1T=1Vs/m2=10kGs
磁极化强度 J Polarzation J	T(Tesla)	1T=1Vs/m2=10kGs
磁场强度 H Magnetic field intensity H	KA/m	1KA/m=4ЛOe≈12.57Oe
磁能积(BH)m Energy density (BH)m	KJ/m3	1KA/m3=0.126MGOe
磁通Φ Magnetic flux Φ	Wb(Weber)	1Wb=1Vs=108Mx

Production Equipment

生 产 设 备

Quality Control
质 量 控 制



1、交期问题

烧结钕铁硼的生产加工过程需要经过13道工序，具有工序多，周期长的特点。目前大部分制造商没有同时具备前道毛坯生产、机加工及表面处理三大工段车间，往往在机加工及表面处理工序需要委托外加工，从而导致交期进一步延长。

我司是行业内较少同时具有前道毛坯生产及后道全系列机加工车间的企业之一，为满足客户交期提供全力保障。

2、一致性问题

烧结钕铁硼采用粉末冶金工艺生产，主要成分为纯铁及稀土金属（两者占比约为65%、30%），因粉末平均粒径仅为3.0μm左右，比表面积大、粉末活性强，极易与氧发生反应。如果操作不当将造成磁体局部或整体氧含量偏高，最终导致产品性能一致性差等问题。

我司通过引进先进的生产设备、采用低氧生产工艺、执行严格的质量控制体系，加强一线操作员培训等措施，保证每个环节严格按工艺要求操作，控制磁体氧含量，从而确保材料的一致性满足客户要求。

3、稳定性问题

烧结钕铁硼为负温度系数材料，居里温度低，在高温下使用会出现磁性下降的问题，稳定性差的材料在高温时退磁率过大，影响使用。

我司拥有一支专业的研发团队，近3年申报产品发明专利10余项，已获授权的发明专利5项。公司已将最新研发的晶界扩散、晶粒细化、双合金、成分优化、低氧等新工艺应用于材料的工业化生产，保证材料磁性能的稳定性。

1. Lead Time

The production and mechanic works of sintered NdFeB need to go through 13 various processes, with

long-lead time features. At present, most manufacturers do not have both front blank production (raw material to blank magnets) mechanic work lines and surface treatments.

The machining and surface treatment process oftenneed consigned processing, resulting delay in delivery.

Our company is one of the few companies in the industry that has both lines of front-end blank production and back-end machining.

Which is one of the largest enterprises in NdFeB industry, provide full guarantee to meet lead times.

2. Consistency

Sintered NdFeB is produced by powder metallurgy process, the main components are pure iron and rare earth material.

(iron 65% and rare earth 30%). The average particle size of the powder is only about 3.0 μm. Because of bigger surface area, strong powder activity, it is easily oxidized. If done incorrectly,

It will cause oxygen to be high in the part or whole magnet which will eventually lead to the low consistency of magnet performance.

By introducing advanced production equipments, adopting low-oxygen production technology, and implementing strictquality control system, strengthen the training of front-line operators and other measures to ensure strictness in each step operated according to the process requirements, control the oxygen content of the magnet, so as to ensure the consistency of the magnets to meetcustomer requests.

3. Stability

Sintered NdFeB material is a material with negative temperature coefficient and low curie temperature.

There is a problem of magnetic decay and the demagnetization rate of materials with low stability is too high at high temperature, which will affect theapplications run.

Our company has a professional R&D team, and has applied for more than 10 patents in the past 3 yearsand 5 of them have been authorized.

We have applied the latest research and development of new technologies such as grain boundary diffusion, crystal grain refinement, double alloys, composition optimization, and hypoxia, are applied to the industrialization of materialsproduction to ensure the stability of the magnetic properties of the material.

Quality Control
质量控制

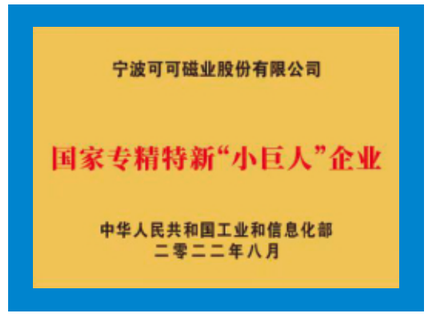
SYSTEM
体 系

知识产权贯标、两化融合贯标体系证书

质量、环境、职业健康三体系证书

Honor Patent
荣誉专利

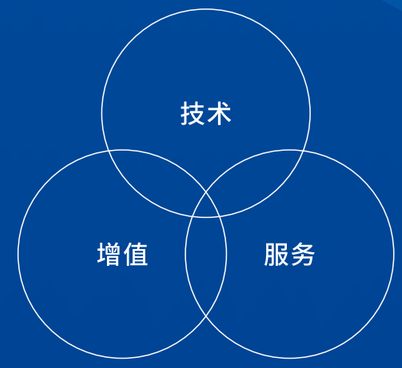
REWARDS
荣 誉



PATENT
专 利

注:1.截止2022年3月,企业有效专利一共60项,其中发明专利20项,实用新型专利39项,外观专利1项;

AFTER SALES AND SERVICE
售 后 及 服 务



可可磁业独一无二的解决方案:
技术+服务+增值

A、技术

项目前期:为每一个目标客户提供定制化“技术蓝图”

项目中期:每周为合作客户提供一份“项目进度表”

项目后期:为长期合作客户提供“产品优化方案”

B、服务

周到的售前服务:合同额≥2万元,免费打样

完善的售中服务:100%按合同约定期限内交付

无忧的售后服务:30天包换

C、增值

企业开办“可可商学院”(线上、线下、移动课堂),每月开展降本增效(节流)的课程,专家研讨会,分享会;

每季度:北、上、广、深、行业(磁材商会、产业联盟)峰会承办

商学院宗旨:帮客户成长,和客户一起成长!

A. Technology

Beginning of the project: Provide a customized "technical blueprint" for each target customer

Mid-term project: Provide cooperative customers with a "project schedule" every week

Later stage of the project: Provide "product optimization plan" for long-term cooperative customers

B. service

Pre-sales service: contract amount ⩾ 20,000 yuan, free sample.

Perfect in-sale service: 100% delivery within the contract period

Worry-free after-sales service: 30-day replacement

C. Value-Added

Enterprises set up "Cocomag Business School" (online, offline, mobile classroom), which is held every month.

Courses, expert seminars and sharing sessions to reduce costs and increase efficiency

Quarterly: North Area, Shanghai, Guangzhou, Shenzhen, and industry summits (Magnetic Chamber of Commerce, Industry Alliance).

Business School Mission: To help customers grow and grow with them!