



湖州中航轧辊有限公司
HUZHOU ZHONGHANG ROLL CO.,LTD.

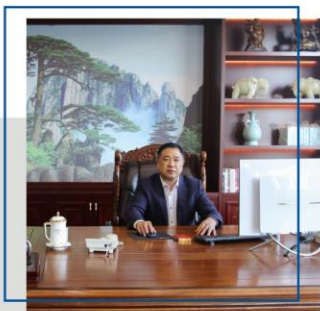


地址 (Add): 浙江省湖州市德清产业新城
Deqing industrial new town, Huzhou,
Zhejiang, China.
邮编 (PC): 313219
电话 (Tel): 0572-8686777
传真 (Fax): 0572-8686678

▪ 专注成就专业 品质铸就品牌 ▪
Focus on professional achievement, quality casting brand.

CHAIRMAN'S MESSAGE

董事长致辞



尊敬的客户：

感谢您惠顾中杭公司，感受中杭文化、浏览中杭产品！

这是您与中杭公司的第一次握手，期待与您的当面交流！

二十八年来，我们迎来送往了来自世界20多个国家和全国500多家企业的来访客人，通过深入的探访与交流，我们为400多条钢材轧制生产线提供了量身定制的轧辊产品。

金杯银杯不如用户的口碑！中杭将一如既往地遵循“诚实守信、共创双赢”经营理念，为客户提供更高性价比的轧辊产品和优质服务。

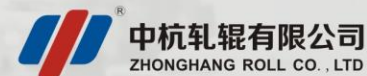
Dear Customer:

Thank you for patronizing Zhonghang Company, feeling Zhonghang culture and browsing Zhonghang products!

This is your first handshake with Zhonghang Company, and we look forward to communicating with you in person!

In the past 28 years, we have welcomed visitors from more than 20 countries and more than 500 companies nationwide. Through in-depth visits and exchanges, we have provided tailor-made rolls for more than 400 steel rolling production lines. product.

Gold cup and silver cup are not as good as users' reputation! Zhonghang will, as always, follow the business philosophy of "honesty and trustworthiness, and create a win-win situation" to provide customers with more cost-effective roll products and quality services.



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湖州中抗轧辊有限公司是一家专业生产轧辊及辊环的企业，始建于1992年，2015年公司异地扩建，从杭州迁至湖州德清产业新城，是国内较早生产冶金轧辊的企业之一。经过20多年的稳步发展，企业实力不断增强，具有良好的生产保障能力和产品检测手段。拥有国内先进的熔炼炉、离心机、热处理、数控加工等设备100多台套；建有高标准的环境设施；配备德国进口的OBLF炉前直读光谱分析仪、硬度、抗拉强度、金相组织、超声波探伤检测设备，年生产各类材质轧辊及辊环15000吨。

公司秉承“承担、探索、超越”的核心理念，汇集了国内著名轧辊技术专家和高、中级工程技术人员12名；拥有市级研发中心并与浙大、北科大材料科学与工程学院等科研院所结成技术伙伴。目前已获得发明专利4项、实用新型专利22项；另有10项发明、10个实用新型专利审批中；公司被评为国家高新技术企业，企业的技术和创新能力处于行业领先水平。

公司自成立以来，始终恪守“持续完善、追求卓越”的质量方针，自2006年先后通过了ISO9001、ISO14001国际质量及环境管理体系认证；被国家冶金机电标准化委员会评定的“国内知名轧辊生产制造企”荣誉称号，通过ISO10012国际测量管理体系认证AAA标准化良好行为认证。产品销往国内80多家大中型钢铁企业并出口到美国、俄罗斯、日本、西班牙、意大利、马来西亚、菲律宾、韩国等十几个国家，深受国内外用户的好评。

ABOUT US

关于我们

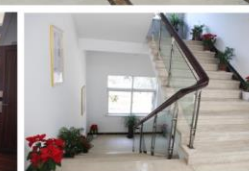
Huzhou Zhonghang Roll Co., Ltd. is a professional production roll and ring enterprises, founded in 1992. 2015 expansion of the company from Hangzhou to Huzhou Deqing County, Zhejiang industrial new city, is one of the early production of gold roller enterprises. After more than 20 years of steady development, the strength of the Enterprise has been constantly strengthened, with good production support capacity and product testing means. It has more than 100 sets of domestic advanced melting furnace, centrifuge, heat treatment, numerical control processing equipment and high standard environmental protection facilities. Equipped with OBLF furnace front direct reading spectrum analyzer, hardness, tensile strength, metallographic structure, ultrasonic testing equipment, annual production of all kinds of materials roll and ring 15000 tons.

The company receives the core idea of undertaking, exploring and surpassing, and has collected 12 famous roll technical experts and high and middle-level engineering and technical personnel. It has municipal R & D centers and technical partners with Zhejiang University, materials science, and other research institutes. At present, the company has obtained 4 invention patents and 22 utility model patents, and 10 inventions and 10 utility model patents are being examined and approved.

Since its inception, the company has always adhered to continuous improvement, the pursuit of excellence quality policy, since 2006 has passed the ISO9001, ISO14001 international quality and Environmental Management System Certification; By the National Metallurgical Mechanical and Electrical Standardization Committee evaluation of domestic well-known roll production enterprise honorary title, through ISO10012 International Measurement Management System Certification Aaa standardization good behavior certification. Products are sold to more than 80 large and medium-sized steel enterprises and exported to the United States, Russia, Japan, Italy, Spain, Malaysia, the Philippines, South Korea and more than 10 countries, well received by domestic and foreign users.

OFFICE ENVIRONMENT

办公环境



LIVING ENVIRONMENT

生活环境



健康体检

Health check-up



- 提高员工的劳动生产效率
Improve the Labor productivity of the employees
- 能减少员工病假带来的经济损失
Can reduce the economic loss caused by sick leave
- 员工职业卫生年检
Annual inspection of employee occupational hygiene
- 健康体检是激励员工的福利
Health check-up is a benefit to motivate employees



中华传统美德

Traditional Chinese virtues



爱护
卫生
Good Hygiene

珍惜
粮食
Cherish the grain

文明
就餐
Civilized dining

节约
用水
water conservation

礼让
待人
Be courteous to others

中杭公司一直在用行动实践“以人为本”的真正涵义。对员工的深切关怀便是最直观的表现。员工是企业最大的财富。他们在用智慧和汗水成就中杭公司辉煌的同时，也深切感受到中杭公司对他们的关爱。

生机勃勃的绿色植物遍布园区，盎然的绿色随时点燃员工的工作热情；现代化的生产区域让每一位员工的自我价值得到充分的体现与提升；洁净明亮的用餐环境让员工体会到大家庭的温暖安心；高标准的宿舍给予员工最大程度的生活保障；篮球场、乒乓球室、台球室、图书馆、卡拉OK厅等娱乐健身设施的兴建与不断完善，让员工们的身心在工作之余得到了彻底的放松，自身潜能也得以不断激发。于此同时，他们又以感恩的心态、更饱满的激情与创造力积极投入新的工作，驱动企业不断前行。

Zhonghang Company is always practicing the true meaning of "people oriented" in action, which can be directly perceived through the deep concern it shows for the staff members. The staff members are the biggest wealth of the enterprise. While they are creating the resplendence of Zhonghang Company by their wisdom and sweat, they experience in a profound way the concern and love Zhonghang Company shows for them.

Vigorous green plants cover the park, and the abundant green color ignites the working enthusiasm of the staff members at any time; the modern production area enables every member to fully represent and improve their self-worth; the clean and bright dining area let the staff members feel warmth and relief of the big family; the high standard dormitory offers them with maximum life assurance; the construction and continuous improvement for entertainment and fitness facilities such as the basketball court, the table tennis room, the billiards room, the library and the karaoke hall enable the bodies and minds of the staff members to relax thoroughly after work, and to further stimulate their potentials. Meanwhile, they actively devote them to new work in full appreciation, passion and innovation, to propel the enterprise to advance continuously.

STAFF HOUSE

员工之家



▪ 2019年度优秀员工合影



▪ 篮球比赛



▪ 三清山旅游

CORPORATE PHILOSOPHY

企业理念



核心理念
Core idea

承担/超越/探索
Commitment / Transcendence
Exploration

文化理念
Cultural concepts

学习/感恩/规范/和谐
Learning / gratitude
discipline / harmony

经营理念
Business Philosophy

诚实守信/共创双赢
Be Honest and trustworthy
create a win-win situation

管理理念
Management Philosophy

科学决策/规范管理
Scientific decision-making
Management by discipline

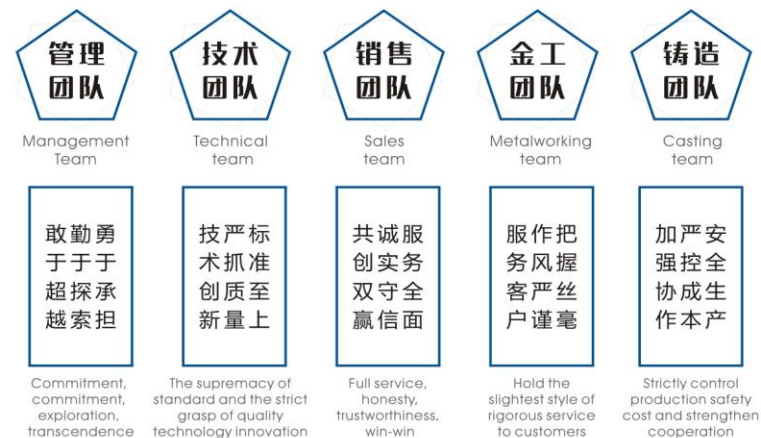
人才理念
Talent concept

育才尊才/唯贤是用
Education is for the best
for the best

TEAM CULTURE AND TRAINING

团队文化与培训

- 致力打造符合国际化标准的中小轧辊生产基地
To build up to the international standards of small and medium-sized roll production base



Create and enjoy together
Repay the society 共创共享 / 回报社会





李济玉

Jiyu Li

湖州中杭轧辊有限公司专家顾问, 高级工程师
原上海新沪钢铁厂副总工程师, 今胜集团原首席技术顾问
杭州中强轧辊有限公司原总工程师
现任中国金属学会轧辊分会轧辊技术学术委员会委员

Expert Consultant and senior engineer of Huzhou Zhonghang Roll Co., Ltd.
Formerly deputy chief engineer of Shanghai Xinhu Steel Works, the former chief engineer of Jinsheng Group Hangzhou Zhongqiang Roll Co., Ltd. is a member of the Roll Technology Academic Committee of the Roll Branch of China Metal Society
Invention patent Pollution discharge permit in zhejiang province

李济玉高工从事轧辊铸造63年,是我国知名的轧辊专家。他是我国第一部《铸铁轧辊》-国家标准(GB1504-79)的主要起草人之一,第三部《铸铁轧》是国家标准(GB1504-2008)专家审定组成员,他组织领导研发的轧辊新材料、新工艺获得国家发明专利四项。他研发的“稀土在叠轧薄板轧辊上应用”获得成功,轧耗低于前苏联同期水平,荣获上海市重大科学技术成果奖。他采用先进的工艺,使离心复合轧辊的中心强度达到国内先进水平,为此2009荣获杭州市总工会授予的“李济玉离心浇铸先进操作法”奖牌。李济玉高工共著书三本,发表论文近百篇,其中近70篇论文分别发表在《铸造技术》《钢铁》《轧钢》《现代铸铁》《铸造工程》《铸工》《球铁》等16种杂志上,他的第一本专著《铸铁轧辊的制造》一书,由上海科学技术出版社1959年出版,此书是我国自己编著的轧辊铸造方面的第一本专业书;第二本专著《冷铸生铁车轮》一书,由上海科学技术出版社1960年出版,此书是我国冷铸生铁车轮制造第一本专业书,也是至今为止唯一一本专业书,第三本专著《李济玉轧辊论文集》。由上海科学技术出版社2012年出版,本书是作者1958-2012年发表在国内16种杂志上的58论文汇编。本书是国内用个人名义正式出版的第一本轧辊论文集。

Jiyu Li high-tech workers engaged in roll casting 63 years, is China's well-known roll experts. He is one of the main drafters of the first "cast iron roll"-National Standard (GB1504-79) in China, and the third "cast iron roll" is a member of the expert examination and approval group of the National Standard (G1504-2008) He organized and led the development of new roll materials, new technology obtained four national invention patents. His "application of rare earth in laminated thin plate roller" has been successful, and the rolling consumption is lower than the same level of the former Soviet Union. It has won the important scientific and technological achievement award of Shanghai. He adopted advanced technology to make the center strength of Centrifugal Composite Roller reach the advanced level in China. Therefore, he was awarded the "Li Jiyu Centrifugal casting advanced operation" medal by Hangzhou Federation of Trade Unions in 2009. Li Jiyu is a high-tech industry author of three books, published nearly 100 papers, of which nearly 70 papers were published in 16 magazines, including "casting technology", "steel", "modern cast iron", "foundry engineering", "ductile iron" and so on. His first monograph, "the manufacture of cast iron rolls", was published by the Shanghai Scientific and Technical Publishers in 1959. This book is the first professional book on Roll Casting compiled by our country: The second monograph, "cold cast pig iron wheels", was published by the Shanghai Scientific and Technical Publishers in 1960. This book is our country cold cast iron wheel manufacturing the first professional book, is so far the only professional book, the Third Monograph "Li Jiyu Roll thesis collection.". Published by the Shanghai Scientific and Technical Publishers in 2012, the book is a compilation of 58 papers published by the author in 16 domestic journals from 1958 to 2012. This book is the first book published in China in the name of the official roll monograph.

原北京京顺轧辊公司总工程师,从事轧辊技术管理20多年,主持京顺公司出口高速钢轧辊产品的开发、试制与工艺定型,现受聘于我公司,专门负责石墨钢轧辊产品的开发与工艺指导。

Former chief engineer of Beijing Jingshun Roll Company, engaged in roll technology management for more than 20 years, presided over the development, trial production and process shaping of high-speed steel roll products exported by Jingshun Company, and now employed by our company Responsible for graphite steel roll product development and process guidance.



王金权

Jinquan Wang



符寒光

Hanguang Fu

北京工业大学教授,主持和参与完成了包括国家科技攻关引导项目、“863”项目、国家自然科学基金、北京市自然科学基金、科技部中小企业创新基金、国家航空科学基金、云南省院省校合作项目、北京市专利成果转化项目、冶金部科技攻关项目、河南省科技攻关项目、西安市科技攻关项目、中国博士后基金和宝钢、首钢、重钢等企业横向合作项目在内的50多个课题,其中12项成果通过教育部、云南省、河南省和原冶金部鉴定,获授权发明专利93项,发表SCI、EI收录论文100多篇,其中国外期刊论文75篇,在机械工业出版社,冶金工业出版社出版《耐磨铸件制造技术》,《高速钢轧辊制造技术》。《高速钢轧辊知识问答》和《耐磨材料500问》专著4本,主持制订《烧结机篦条技术条件》冶金行业标准1项。

Professor, Beijing University of Technology, having presided over and participated in the completion of projects including the National Science and Technology Research Guidance Project, the "863" project, the National Natural Science Fund, the Beijing Municipal Natural Science Fund, the Innovation Fund for Small and medium-sized enterprises of the Ministry of Science and Technology, and the National Aviation Science Fund, more than 50 subjects, including the cooperation project between Yunnan provincial colleges and universities, the transformation project of Beijing municipal patent achievements, the scientific and Technological Research Project of the Ministry of Metallurgy, the scientific and technological research project of Henan Province, the scientific and technological research project of Xi'an Province, the Chinese postdoctoral fund and the Horizontal Cooperation Project of Baosteel, Shougang, Chongqing Steel and other enterprises, among them, 12 achievements have been appraised by the Ministry of Education, Yunnan Province, Henan Province and the former Ministry of Metallurgy, 93 patents have been granted for invention, and more than 100 papers have been published by Sci and Ei. Among them, 75 papers have been published in foreign journals, and in the China Machine Press, metallurgical Industry Press, "high speed steel roll manufacturing technology" (wear-resistant casting manufacturing technology) . "high-speed Steel Roller Knowledge Quiz" and wear-resistant materials 500 questions" monograph 4, presided over the formulation (sintering machine foot strip technical conditions) metallurgical industry standard 1.

PRODUCTION EQUIPMENT

生产设备

公司良好的硬件设施是高品质产品的有力保障。为了保证产品的高品质和企业品牌，中航立足于长远的发展目标、以独到的眼光和超凡的气度，引进具有国际先进水平的铸造加工设备，建立起以整套智能化、现代化、规范化的生产流程、智能化生产运作及品控体系、确保品质完美如一，从根本上保证了企业品牌战略的实施。

The company's good hardware facilities are the strong guarantee of high quality products. Order to ensure the high quality product and the enterprise brand, based on the long-term development goal of hangzhou, with a unique and extraordinary tolerance, has introduced the international advanced level of casting processing equipment, set up with a complete set of intelligent, modernization and standardization of production process, intelligent production operation and perfect quality control system, ensure the quality, fundamentally guarantee the implementation of the enterprise brand strategy.



▲ 数控设备 Numerical control equipment



▲ 普通车床 Common Lathe



▲ 退火炉（热处理设备）
Annealing furnace (heat treatment equipment)

QUALITY GUARANTEE

品质保障



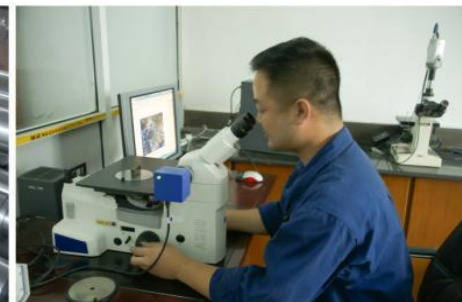
▲ 化学分析 Chemical Analysis



▲ 光谱分析 Spectral analysis



▲ 硬度检测 Hardness test



▲ 金相分析 Metallographic analysis



▲ 探伤检测 Flaw detection

以质量促品牌，提升了企业的核心竞争力，注重创新，争创知名商标，完善质量和环境管理体系。

打造自主知识产权，增加企业市场竞争力。扩张产能，扩大融资，做大做强，造就“百年大企”。

Promote brand with quality, enhance the core competitiveness of enterprises, focus on innovation, to create well-known trademarks, improve the quality and environmental management system.

We will build independent intellectual property rights and increase the competitiveness of the enterprise market. Expand capacity, expand financing, do big, make "100 years big enterprise".

CORPORATE PHILOSOPHY

领导关怀



湖州市市长钱三雄率市政府领导班子来我司调研年产5000吨高速钢轧辊项目

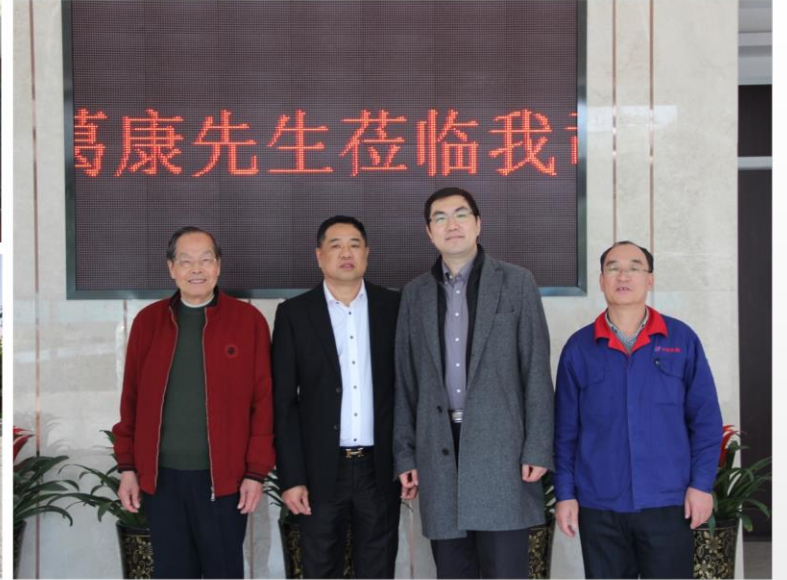
Huzhou Mayor Qian Sanxiong led the city government leading team to our company to investigate the annual production of 5,000 tons of high-speed Steel Rolling Project



德清县委书记一行考察我司在建项目

Secretary Wang of the Deqing County, Zhejiang County Party Committee and his delegation visited the projects under construction

Create and enjoy together
Repay the society 共创共享 / 回报社会



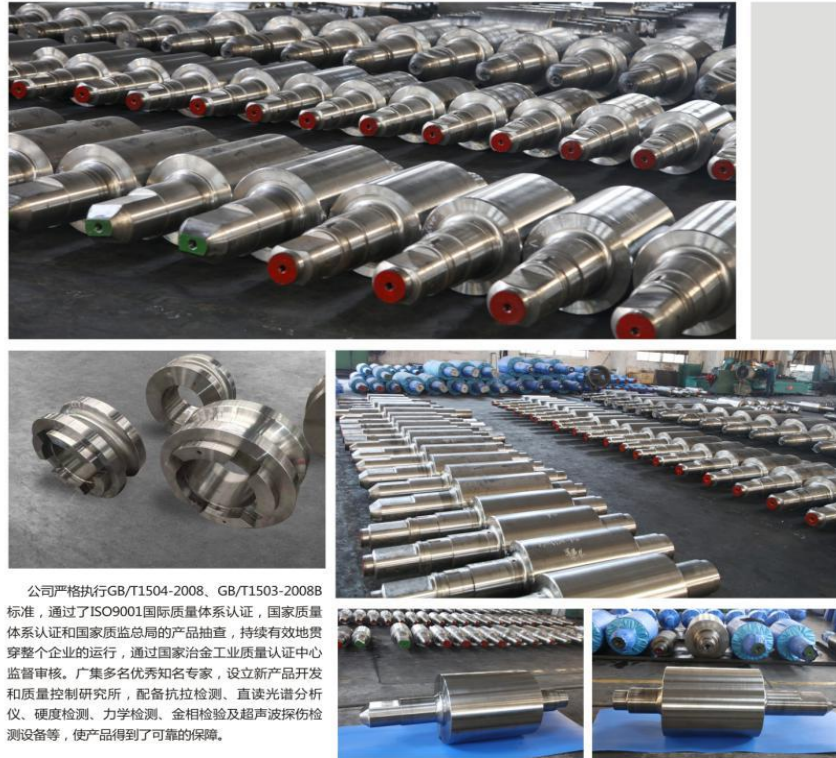
中杭轧辊以中国杭州为基点，产品辐射海内外，不断提高市场占有率和品牌知名度。产品远销世界各地，以一流的质量、优质的服务、立足于国际市场。

Zhonghang roll is based in Hangzhou, China, and its products radiate both at home and abroad, constantly increasing market share and brand awareness. Products exported to the world, with first-class quality, quality service, based on the international market.



OVERSEAS CUSTOMER
INSPECTION FACTORY

海外客户验厂



公司严格执行GB/T1504-2008、GB/T1503-2008B标准，通过了ISO9001国际质量体系认证，国家质量体系认证和国家质监总局的产品抽查，持续有效地贯穿整个企业的运行，通过国家冶金工业质量认证中心监督审核。广集多名优秀知名专家，设立新产品开发和质量控制研究所，配备抗拉检测、直读光谱分析仪、硬度检测、力学检测、金相检验及超声波探伤检测设备，使产品得到了可靠的保障。

The company strictly implements the GB/T1504-2008 and GB/T1503-2008B standards, has passed the ISO9001 International Quality System Certification, and has passed the national quality system certification, and has passed the product spot check of the State General Administration of Quality Supervision, continuously and effectively throughout the operation of the entire enterprise Through the National Gold Industry Quality Certification Center Supervision and audit. Set up a new product development and Quality Control Institute, equipped with tensile testing, direct-reading spectrum analyzer, Hardness testing, mechanical testing, metallographic testing and ultrasonic testing equipment, so that products have been reliable protection.

高速钢离心复合轧辊

■ 该类轧辊特征

高速钢轧辊材料中含有较高的钒、铬、钨、钼等合金元素，轧辊组织中碳化物的类型以MC型或M2C型为主。具有较好的热稳定性、较高的硬度、良好的耐磨性和淬透性，从辊身表面到工作层内部硬度几乎没有变化，从而保证了轧辊从外到内都具有同等良好的耐磨性。

High - speed steel roll material is high in vanadium, chromium, tungsten, molybdenum and other alloy elements. The type of carbide in roll is mainly MC or M2C. Has good thermal stability, high hardness, good wear resistance and hardenability, from internal to the work roll surface layer hardness almost no change, so as to ensure the roll from outside to inside are equally good abrasion resistance.

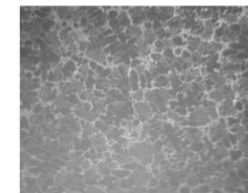
■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo	V	W
全称	代码										
高速钢	HSS	1.5-2.2	0.30-1.0	0.4-1.2	≤0.03	≤0.025	3.0-8.0	0.0-1.5	2.0-8.0	2.0-9.0	0.0-8.0
半高速钢	S-HSS	0.6-1.2	0.8-1.5	0.5-1.0	≤0.03	≤0.025	3.0-9.0	0.2-1.2	2.0-5.0	0.4-3.0	0.0-3.0

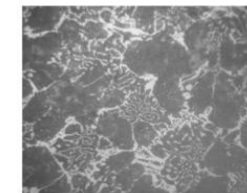
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm(N/mm ²)	
HSS	75-95	≥350	热轧带钢、棒材精轧；型钢万能轧机；高速线材预精轧
S-HSS	75-85	≥350	热轧带钢粗轧工作辊；冷轧带钢工作辊、中间辊

■ 高速钢金相组织



100X



400X

高铬离心复合铸铁轧辊

■ 该类轧辊特性

高铬复合轧辊工作层含有6~25%的铬合金，芯部为高强度球墨铸铁。根据含碳量的不同，分为高铬铸钢轧辊和各个铸铁轧辊。由于大量铬元素的作用，组织中碳化物呈M7C3型，硬度高，韧性和耐磨性好，且基体组织中含金含量高，并经特殊热处理，具有良好的高温综合机械性能。用于带钢热轧时，可根据使用架次、水冷条件选用高铬铸钢、高铬铸铁轧辊。高铬复合轧辊可用于冷轧机，平整机工作辊，并可制作辊环类产品。

The high chromium composite roll contains chromium alloy 6~25%, and the core is high strength nodular cast iron. According to the difference of carbon content, the high chromium cast steel roller and each cast iron roller are divided into high chromium cast steel roll and different cast iron roller. Due to the large number of chromium carbides, was M7C3 type, high hardness, toughness and good wear resistance, high gold content and in the matrix, and with a special heat treatment, high temperature has good comprehensive mechanical properties. High chromium cast steel and high chromium cast iron roller can be used for hot rolling of strip steel according to use conditions and water cooling conditions. High chromium composite roll can be used in cold rolling mill, temper mill roll, and roll ring products can be produced.

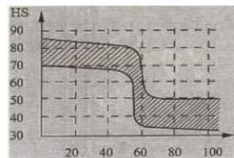
■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo	V
全称	代码									
高铬离心复合 I	Hcr I	2.30-3.30	0.30-1.00	0.50-1.20	≤0.10	≤0.05	12.00-15.00	0.70-1.50	0.70-1.50	0.00-1.60
高铬离心复合 II	Hcr II	2.30-3.30	0.30-1.00	0.50-1.20	≤0.10	≤0.05	15.01-18.00	0.70-1.50	0.70-1.50	0.00-1.60
高铬离心复合 III	Hcr III	2.30-3.30	0.30-1.00	0.50-1.20	≤0.10	≤0.05	18.01-22.00	0.70-1.50	1.51-3.00	0.00-1.60

■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
Hcr I	60-75	≥350	热带钢、立棍、平整、中厚板轧机、冷带钢轧机、型钢万能轧机辊环。
Hcr II	65-80	≥350	
Hcr III	75-90	≥350	

■ 硬度分布曲线示例



距表面距离 (mm)



HCr-1, 2, 3 工作层500×金相组织

贝氏体球墨铸铁轧辊

■ 该类轧辊特性

贝氏体球墨离心复合采用离心铸造法，在铸态下直接获得针状组织球墨铸铁轧辊。因其加入了锰、铬、镍、钼等合金元素，故外层具有相当高的冶金性能，辊身工作层的石墨数量在深度方向几乎无变化，因而工作层具有高强度、韧性好和硬度高及硬度度落差小的特性。轧辊硬度主要取决于集体组织类型，及贝氏体或马氏体，贝氏体球墨铸铁轧辊有良好的耐磨性能、抗事故能力，其内层为高强度球铁。

The centrifugal casting process of the bainite was obtained by centrifugal casting, and the roller was obtained directly under the casting state. Because of the added alloy element such as manganese, chromium, nickel, molybdenum, the metallurgical properties of the outer layer is rather high, the work layer of roller almost no change in the depth direction, the number of graphite and working layer with high strength, good toughness and high hardness and degree of hardness drop small features. The hardness of rollers mainly depends on the type of collective organization, the bainite or martensite, the bainite ductile iron rollers have good wear resistance and accident resistance, and the inner layer is the high strength ball iron.

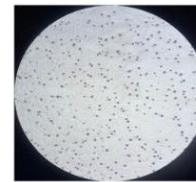
■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo	Mg
全称	代码									
贝氏体球墨离心复合 I	SGA I	2.9-3.6	1.2-2.2	0.2-0.8	≤0.10	≤0.03	0.2-1.0	3.01-3.5	0.5-1.0	≥0.04
贝氏体球墨离心复合 II	SGA II	2.9-3.6	1.0-2.0	0.2-0.8	≤0.10	≤0.03	0.3-1.5	3.51-4.5	0.5-1.0	≥0.04

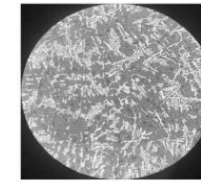
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
SGA I	60-80	≥350	方/圆坯初轧机，大中小型型钢、线材、窄带钢轧机、高速线材预精轧。
SGA II	55-78	≥350	

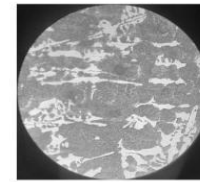
■ 贝氏体球墨离心复合II辊身金相组织



未侵蚀100×



侵蚀后100×



侵蚀后400×

珠光体球墨铸铁轧辊

■ 该类轧辊特征

珠光体球墨铸铁轧辊以珠光体为基体，工作层为少量球状石墨冷硬层，辊身具有一定的硬度及耐磨性。硬度落差小，轧辊抗拉强度高，具有耐高温性能和抗事故性能。

The pearlite ductile iron rollers are based on pearlite and the working layer is a small amount of spherical graphite cold hard layer. The roll body has certain hardness and abrasion resistance. Low hardness, high tensile strength, high temperature resistance and accident resistance.

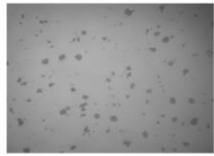
■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo	Mg
全称	代码									
珠光体 I	SGP I	2.9-3.6	1.4-2.2	0.4-1.0	≤0.15	≤0.03	0.1-0.6	1.5-2.0	0.2-0.8	≥0.04
珠光体 II	SGP II	2.9-3.6	1.2-2.0	0.4-1.0	≤0.15	≤0.03	0.2-1.0	2.01-2.5	0.2-0.8	≥0.04
珠光体 III	SGP III	2.9-3.6	1.2-2.0	0.4-1.0	≤0.15	≤0.03	0.2-1.2	2.51-3.0	0.2-0.8	≥0.04

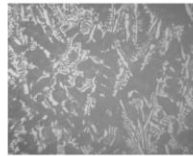
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
SGP I	45-55	≥450	方/板坯粗轧机，大中型型钢、线材、窄带钢轧机
SGP II	55-65	≥450	
SGP III	62-72	≥450	

■ 珠光体球墨金相组织



未侵蚀100×



侵蚀后100×



侵蚀后400×

合金球墨铸铁轧辊

■ 该类轧辊特性

合金球墨铸铁轧辊工作层为少量球状石墨的冷硬层，辊身具有一定硬度，硬度落差小。轧辊强度高，耐高温性能和抗事故性能。

The working layer of alloy ductile iron rollers is a cold hard layer with a small amount of globular graphite, which has a certain hardness and a low hardness. High roller strength, high temperature resistance and accident resistance.

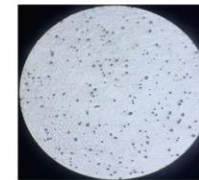
■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo	Mg
全称	代码									
铬钼球墨无限冷硬	SGII	2.9-3.6	0.8-2.5	0.4-1.2	≤0.25	≤0.03	0.2-0.6	-	0.2-0.6	≥0.04
镍铬钼球墨无限冷硬	SGIV	2.9-3.6	0.8-2.5	0.4-1.2	≤0.25	≤0.03	0.2-0.6	0.5-1.0	0.2-0.8	≥0.04
镍铬钼球墨无限冷硬	SGV	2.9-3.6	0.8-2.5	0.4-1.2	≤0.20	≤0.03	0.3-1.2	1.01-2.0	0.2-0.8	≥0.04

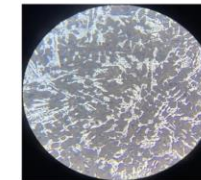
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
SGII	50-70	≥320	棒、线材、型钢轧机粗、中轧机架。
SGIV	55-70	≥320	棒、线材、型钢轧机粗、中轧机架。
SGV	60-70	≥320	型钢、棒、线材中轧。
Q2QL	60-70	≥350	型钢、棒、线材中轧。

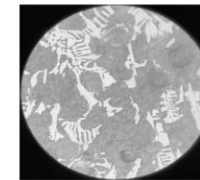
■ 铬钼球墨无限冷硬金相组织



未侵蚀100×



侵蚀后100×



侵蚀后400×

合金无限冷硬铸铁轧辊

■ 该类轧辊特性

合金无限冷硬铸铁轧辊，无限冷硬铸铁轧辊采用卧室离心复合铸造工艺生产，工作层为Ni-Gr-Mo无限冷硬铸铁，芯部为高强度球铁。石墨均匀分散在整个辊身截面，其数量和尺寸随深度而增加。由于添加了锰、铬、镍、钼等合金元素，加上少量细小石墨的存在，不仅提高了轧辊的抗剥落性、抗热裂性和抗磨损等性能，而且辊身工作层硬度落差小且硬度高、耐磨性好。

Alloy infinite cold hard cast iron rollers, infinite cold hard cast iron rollers adopt the chamber centrifugal compound casting process production, working layer is Ni-Gr-Mo cold hard cast iron, core is high strength ball iron. The graphite is evenly distributed across the entire roll section, and its quantity and size increase with depth. Because of the added alloy element such as manganese, chromium, nickel, molybdenum, coupled with the existence of a small amount of fine graphite, not only improve the roll's resistance to spalling, thermal crack resistance and resistance to wear, such as performance, and the work layer of roller hardness drop small and high hardness, good wear resistance.

■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo
全称	代码								
镍铬钼无限冷硬离心复合II	ICII	2.90-3.60	0.60-1.20	0.40-20-1.	≤20.5	≤0.08	0.70-1.20	1.01-2.00	0.20-0.60
合冷硬离心复钼无限铬镍III	ICIII	2.90-3.60	0.60-1.20	0.40-120.	≤0.10	≤0.05	0.70-1.20	2.01-3.00	0.20-1.00
高镍铬钼无限冷硬离心复IV	ICIV	2.90-3.60	0.06-1.50	0.40-120.	≤0.10	≤0.05	1.00-1.20	3.01-4.80	0.20-1.00

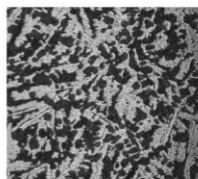
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
ICII	55-72	≥350	小型型钢、窄带钢轧机、中厚板、平整、热带钢轧机。
ICIII	65-78	≥350	
ICIV	70-83	≥350	

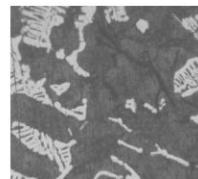
■ 高镍铬钼无限冷硬离心复合IV辊身金相组织



未侵蚀100×



侵蚀后100×



侵蚀后400×

合金冷硬铸铁轧辊

■ 该类轧辊特性

合金冷硬铸铁轧辊是添加Ni、Cr、Mo合金元素的办法制造的一种铸铁轧辊，辊身工作层为一定厚度的纯白口层，基体组织内基本上没有游离态石墨，纯白口层组织为索式体、马氏体、贝氏体，因而其硬度高，具有优良的耐磨损性能。辊颈具有高的强韧性，表现出良好的稳定性和抗事故性。

Alloy chilled cast iron roll is the addition of Ni, Cr, Mo alloy elements to make a cast iron roll, roll to work for a certain thickness of layer of pure white mouth, almost no free graphite matrix organization, pure white layer tissue for cable type body, horse type, bay type, and its high hardness, excellent wear resistance. The roll neck has high toughness, good stability and accident resistance.

■ 化学成份%

国家标准		C	Si	Mn	P	S	Cr	Ni	Mo
全称	代码								
镍铬钼冷硬离心复合III	CCIII	2.90-3.60	0.20-0.80	0.20-1.00	≤0.40	≤0.08	0.50-1.50	2.01-3.00	0.20-0.60
镍铬钼冷硬离心复合IV	CCIV	2.90-3.60	0.25-0.80	0.20-1.00	≤0.40	≤0.08	0.50-1.70	3.01-4.50	0.20-0.60

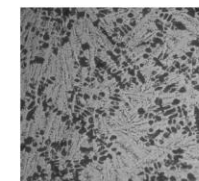
■ 物理性能及应用范围

代码	物理性能		适用范围推荐用途
	辊身硬度(HSD)	辊颈抗拉强度Rm (N/mm ²)	
CCIII	65-80	≥350	小型型钢、线材、热轧薄板、平整轧机。
CCIV	70-85	≥350	

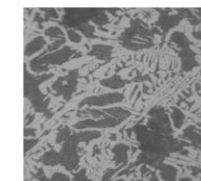
■ 镍铬钼冷硬离心复合IV金相组织



未侵蚀100×



侵蚀后100×



侵蚀后400×

SERVICE COMMITMENT

服务承诺

公司拥有一支专业的售后服务团队，人员素质高，技术经验丰富，检测仪器先进。公司坚持树立科学发展观，深入用户，实行零距离技术交流，开展“一对一”量身定做的制作服务，追求产品个性化，差异化，实现制造业生产型向服务型转变，跟踪产品使用评价机制，奉行用户满意工程，切实做好售后用户零投诉工作。

The company has a professional The ADJUSTER team, high-quality personnel, technical experience, advanced detection equipment. The company persists in establishing Scientific Outlook on Development, reaching out to users, carrying out zero-distance technology exchange, developing "one-to-one" tailor-made production services, pursuing product individualization and differentiation, and realizing the transformation from manufacturing production to service-oriented Tracking the use of product evaluation mechanism, the implementation of customer satisfaction engineering, effectively do a good job after-sales customer zero complaints.

01 公司严格执行合同规定的各项技术协议条款，保证按双方约定期限交货。

The company strictly implements the terms of the technical agreement stipulated in the contract and guarantees delivery within the time limit agreed by both parties.

03 根据用户需要，及时赶往现场负责轧辊图纸制作、轧辊材质及硬度（HSD）的机架配置，指导轧辊使用的注意事项和技术经验交流。

According to customer's needs, go to the site in time to be responsible for roll drawing, roll material and hardness (HSD) stand configuration, guide roll use of attention and technical experience exchange.

05 用户质量异议信息反馈后，公司召集相关技术人员及时分析，三天内将质量异议原因反馈给用户。

After the feedback of Customer Quality Objection Information, the company convenes the relevant technical personnel to analyze it in time, and feedback the reason of quality objection to the customer within three days.

06 双方对质量异议反馈分析原因有争议的，公司组织高层领导前往用户友好协商达成共识，得到圆满解决。

If the two sides have a dispute on the quality objection feedback analysis, the company will organize senior leaders to go to the user friendly consultation to reach a consensus and reach a satisfactory solution.

02 产品质量保证符合合同双方约定标准交货，提供售后一年质量异议服务。

Product Quality Assurance in line with the contract both sides agreed standard delivery, to provide one-year after-sales quality objection service.

04 轧辊售后用户在外观验收及产品使用时，若发生质量异议问题，接到用户通知电话沟通不成的，立即安排售后相关专业服务技术人员赶赴现场。

- ① 500公里以内24小时赶到现场。
- ② 500~1000公里以内48小时赶到现场。
- ③ 超过1000公里72小时以内赶到现场。

Roll after-sale users in the appearance of acceptance and use of products, if the quality of the problem, received a call from users can not communicate, immediately arrange after-sale related professional service technical personnel rushed to the scene.

- ① Within a 24-hour radius of 1,500 kilometers.
- ② Within a 48-hour radius of 2,500 to 1,000 kilometers.
- ③ Over 1,000 kilometers, less than 72 hours.

Create and enjoy together
Repay the society 共创共享 / 回报社会