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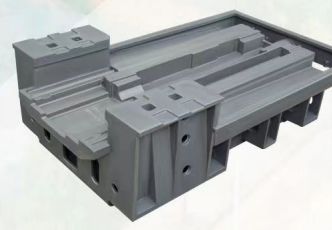
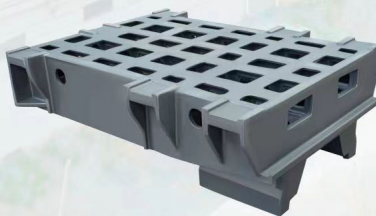
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中国铸造协会成立40周年庆祝活动

The 40th Anniversary Celebration of China Foundry Association

邀请函

INVITATION

2026年5月6-9日 中国·上海

P.52

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Fuyao Glass Established an Aluminum Parts Subsidiary in Chongqing

福耀玻璃在重庆成立铝件公司

Fuyao Glass Industry Group has recently expanded its presence in Chongqing by establishing a wholly owned subsidiary, Fuyao Aluminum Parts (Chongqing) Co., Ltd., with a registered capital of RMB85 million yuan. The new company will engage in the processing of non-ferrous metals, as well as the manufacturing and research and development of automotive components. This strategic move aligns with the growing demand for aluminum parts driven by the rapid development of new energy vehicles. As a major hub for the automotive industry, Chongqing hosts numerous automobile manufacturers and boasts a comprehensive industrial chain, offering favorable conditions for the growth of the new entity. In addition to core automotive parts production, the company's business scope extends to intelligent in-vehicle systems and new materials R&D, reflecting Fuyao Group's broader strategy of advancing into high-value-added sectors.

The establishment of this facility strengthens Fuyao's footprint in the automotive components sector, supports customer retention, facilitates expansion into new energy vehicle supply chains, and contributes to the ongoing development of Chongqing's automotive industry.

Fuyao Group first entered the Chongqing Wansheng area in 2001, and Fuyao Glass (Chongqing) Accessories Co., Ltd. has since evolved into a key southwestern production base, achieving an annual output capacity of 1.8 million sets of automotive glass and serving a diverse range of automakers, including those in the bulletproof glass and accessories markets. ■

福耀玻璃工业集团近期在渝拓展业务，全资设立福耀铝件（重庆）有限公司，注册资本 8500 万元，经营范围包括有色金属压延加工、汽车零部件制造与研发等。此次布局正值新能源汽车发展期，铝合金部件需求攀升。重庆作为汽车产业重镇，聚集众多车企及完整产业链，为新公司提供发展空间。新公司业务还涵盖智能车载设备、新材料研发等领域，体现福耀向高附加值领域拓展的战略。

该公司的成立将完善福耀在汽车零部件领域的布局，助力其巩固现有客户、拓展新能源车企订单，同时为重庆汽车产业注入活力。

福耀集团早在 2001 年便进入重庆万盛，福耀玻璃（重庆）配件有限公司已发展为年产 180 万套汽车玻璃的西南重要基地，产品覆盖多家车企及防弹玻璃、配件市场。■

Longma Holding Group's 200,000t Precision Casting Project for Wind Power has Begun Construction

龙马控股集团 20 万吨风电精密铸造项目开工

On July 13, 2025, Longma Holding Group (Baotou) officially launched its 200,000t wind power precision casting project in Baotou City, Inner Mongolia. Longma Holding Group is a comprehensive equipment manufacturing enterprise specializing in high-end mechanical manufacturing, including advanced casting, forging, welding, intelligent automation systems, and high-end CNC equipment production. The project is situated in the Metal

2025 年 7 月 13 日，龙马控股集团（包头）20 万吨风电精密铸造项目在内蒙古包头市开工。龙马控股集团是以高端机械制造及高端铸造、锻造、焊接、自动化智能制造以及高端数控装备制造为主导的综合性装备制造企业。龙马控股集团（包头）20 万吨风电精密铸造项目位于昆都仑区金属深加工产业园的蒙西（包头）风电装备制造产业

Deep Processing Industrial Park in Kundulun District, within the Mengxi (Baotou) Wind Power Equipment Manufacturing Industrial Base, with a total investment of RMB 2.5 billion. Upon completion and commissioning, it will enable localized production of key wind power components—such as hubs and bases—filling a critical gap in the wind power precision casting sector in the Mengxi region. Furthermore, the project will support Baotou City in establishing a complete industrial chain for onshore wind power equipment manufacturing, integrating component casting, blade production, tower fabrication, and full-unit assembly, thereby strengthening the city's role as a national hub for onshore wind power equipment manufacturing. ■

基地，项目总投资 25 亿元。

建成投产后，将实现风电核心部件（轮毂、底座等）本地化生产，填补蒙西地区在风电精密铸造领域的空白，助力包头市完成风电装备制造从零部件铸造—叶片生产—塔筒制造—整机组装的全产业链闭环，为建设全国重要的陆上风电装备产业基地提供有力支撑。■

Xusheng Group's Thailand Company Laid Foundation

旭升集团泰国公司奠基

On July 26, 2025, Xusheng Group's Thai subsidiary held a formal groundbreaking ceremony for its manufacturing base at the WHA Industrial Park in Rayong, Thailand. The event was attended by Mr. Xu Xidong, Vice President of Xusheng Group, Mr. Lin Guofeng, and representatives from key partner organizations, marking the official commencement of construction for Xusheng's Southeast Asia manufacturing base.

The Thailand project was initiated in November 2024. With efficient support from Thailand's Board of Investment (BOI) and local authorities, the planning and implementation phases were completed within just two months—a testament to the "Xusheng Speed." This milestone represents another significant advancement in Xusheng Group's global expansion strategy, following the establishment of its manufacturing facility in Mexico.

The new facility in Thailand will house Xusheng's core competencies in die-casting, forging, extrusion, and integrated manufacturing, enabling the overseas extension of its technological capabilities and deeper integration into the Southeast Asian new energy vehicle (NEV) industrial chain. Upon completion, the base is expected to serve as a strategic hub supporting Xusheng's vision of "Leading the world with technology and serving the world with manufacturing" in the ASEAN market, reinforcing its position as a pivotal node in the company's global operational network.

Xusheng's manufacturing base in Thailand is strategically situated in the core zone of the Eastern Economic Corridor (EEC), representing a total investment of 90 million USD (approximately 660 million RMB). The project will be developed in two phases and is designed to become an integrated smart manufacturing facility encompassing the entire production chain—from raw material melting to final product assembly. Upon full operation, the base is projected to achieve an annual output value exceeding 200 million USD and create approximately 500 local employment

2025 年 7 月 26 日，旭升集团泰国公司在泰国罗勇府 WHA 工业园举行了隆重的项目奠基仪式。集团副总裁徐曦东先生、林国峰先生以及重要合作伙伴代表等共同出席奠基仪式，宣告旭升东南亚智造基地建设正式启动。

泰国项目自 2024 年 11 月份启动筹备，得益于泰国投资促进委员会（BOI）及当地政府的高效支持，仅用两个月时间便完成规划落地，跑出“旭升速度”。此次奠基，是继墨西哥工厂后，旭升全球化战略的又一坚实步伐。泰国基地将承载旭升核心的压铸、锻造、挤压、集成四大工艺技术，实现技术实力的海外延伸，并深度融入东南亚新能源汽车产业链。它的建成，将为旭升“技术引领全球，制造服务世界”的愿景在东盟市场提供强力支撑，成为集团全球化布局的关键支点。

旭升泰国基地落子泰国东部经济走廊（EEC）核心区，总投资 9,000 万美元（约 6.6 亿人民币），规划两期建设。这里将建成贯通从原材料熔炼到成品组装的一体化智造基地。全面投产后，预计年产值超 2 亿美元，可提供约 500 个就业岗位，是旭升海外布局的重要里程碑。不仅将成为旭升海外最大智造基地，更将显著缩短东南亚客户交付周期，提升响应效率，有力强化旭升全球供应链韧性及本地化服务能力，为区域及全球市场提供更坚实的支撑。

泰国智造基地的建设，为旭升全球化布局开启了新程。未来，这里将化身服务东盟的新枢纽，深化区域协作，精准对接东南亚市场；同时担当全球供应链的重要节点，

opportunities. This development marks a significant milestone in Xusheng's international strategy. As the company's largest overseas smart manufacturing hub, it will substantially reduce delivery lead time for customers across Southeast Asia, enhance operational responsiveness, and strengthen the resilience and localized service capabilities of Xusheng's global supply chain, thereby providing more robust support to both regional and international markets. The establishment of this smart manufacturing base signifies a new phase in Xusheng's global footprint. In the long term, it is poised to evolve into a strategic hub serving the ASEAN region, deepening regional cooperation and enabling precise market penetration in Southeast Asia. Simultaneously, it will function as a critical node within the global supply chain, delivering faster response and enhanced operational resilience to international clients. Furthermore, it will serve as a platform for the overseas implementation of Xusheng's corporate values. Guided by professionalism and driven by a sense of responsibility, all team members will work collectively to build a distinguished chapter for Xusheng on this promising ground. (Source: Xusheng Group) ■

以更快的响应、更强的韧性服务国际客户；更重要的是，它将成为旭升价值观的海外实践场，全体同仁将以专业为基、责任为本，在这片热土上共同书写属于旭升的精彩篇章。■

（信息来源：旭升集团）

FAW-Fuwei Magnesium Alloy Wheel Base will Start Production

一汽富维车轮镁合金基地即将投产

Amid the growing trend toward lightweighting and sustainable development in the automotive industry, the FAW-Fuwei Magnesium Alloy Wheel Project has reached the final phase of production, reflecting the company's technological expertise and strategic foresight in lightweight materials and contributing to the industry's long-term sustainability. In March 2025, FAW-Fuwei announced its investment in establishing a magnesium alloy manufacturing base within the Changchun Automotive Economic and Technological Development Zone. As one of the pioneering domestic enterprises in semi-solid forming technology for magnesium alloys, this initiative aims to leverage Changchun's robust automotive industrial ecosystem and the group's research and development capabilities to advance the application of magnesium alloys in automotive components.

This industrial base houses China's first fully digital semi-solid injection molding production line, with an estimated annual output value of 80 million yuan. The facility integrates comprehensive functions including research and development, pilot production, manufacturing, and verification. The 850-ton machine is capable of producing components such as instrument panel brackets and steering wheel skeletons, while the 3600t machine supports the production of larger parts, including door inner panels and sub-dash skeletons. A complete quality control system has been implemented to ensure product consistency and reliability.■

在汽车产业轻量化、绿色化转型浪潮中，一汽富维车轮镁合金基地已进入投产冲刺阶段，这一进展彰显了企业在轻量化领域的技术积累与战略远见，为行业可持续发展注入动力。

2025年3月，一汽富维宣布斥资在长春汽车经济技术开发区建设镁合金基地。作为国内较早涉足镁合金半固态成型技术的企业，此举旨在依托长春汽车产业生态与集团研发资源，推动镁合金在汽车零部件领域的应用。

该基地拥有国内首条全数字化半固态注射成型产线，预计年产值8000万元，研发、试制、生产、验证功能于一体。其中850T产线可生产仪表板支架、方向盘骨架等；3600T产线可生产门内板、副仪表板骨架等产品，具备完善质量管控体系。■

The Second Phase of the Aluminum Alloy Wheel Project of LIZHONG Group's Factory in Mexico expected to go into Production

立中集团墨西哥工厂铝合金车轮项目二期即将投产

On August 19, 2025, LIZHONG Group stated that the second phase of its 3.6 million ultra-lightweight aluminum alloy wheels project in Mexico, with an annual production capacity of 1.8 million wheels, is expected to come into operation in the third quarter of 2025. LIZHONG (Mexico) Variable Capital Responsibility Limited Liability Company, a wholly-owned subsidiary of LIZHONG Group, was established in 2020 and focuses on the research and development and manufacturing of high-end aluminum alloy wheels. Its factory is located in the Interpuerto Industrial Park in Monterrey, Nuevo León, Mexico, 15 kilometers from the center of Monterrey, 30 kilometers from Monterrey Airport, and approximately 200 kilometers from the US border city of Laredo. The entire project covers an area of 188,600 square meters, with a total investment of 263 million US dollars. The factory building area is approximately 80,000 square meters, and the planned annual production capacity of aluminum alloy wheels is 6 million.

With the commissioning of the second phase in the third quarter of 2025, LIZHONG Group's aluminum alloy wheel production capacity in Mexico will be further enhanced, better meeting market demands and consolidating its market position in the global aluminum alloy wheel sector. ■

2025年8月19日，立中集团表示，公司墨西哥年产360万只超轻量化铝合金车轮项目二期180万只预计于2025年三季度投产。

立中（墨西哥）可变资本责任有限公司作为立中集团的全资子公司，于2020年投资成立，专注于高端铝合金车轮的研发与制造。其工厂地理位置优越，位于墨西哥新莱昂州蒙特雷市海关（Interpuerto）工业园区，距蒙特雷市中心15公里，距蒙特雷机场30公里，距美国边境城市拉雷多市约200公里。整个项目占地面积18.86万平方米，总投资达2.63亿美元，工厂建筑面积约8万平方米，规划铝合金车轮年产能600万只。

随着二期项目在2025年三季度的投产，立中集团在墨西哥的铝合金车轮产能将进一步提升，也将更好地满足市场需求，巩固其在全球铝合金车轮领域的市场地位。■

Xinan Technology in Thailand has Launched its first Batch of Intelligent Foundry Equipment

锡南科技泰国工厂智能铸造装备首发

On August 8, 2025, Wuxi Forland Technology Co., Ltd. held the inaugural launch ceremony for its intelligent foundry equipment at its manufacturing facility in Thailand. The event marked the official debut of the industry's first fully automated core-making production line, specifically engineered for turbocharger core components. This milestone showcases Forland's technological expertise accumulated over two decades and underscores its contribution to advancing China's high-end foundry equipment toward intelligent and sustainable development.

The executive teams of Xinan Technology and Forland Technology, along with representatives from China Foundry Association, Bühler Group, Norican Group, Shanghai Fanuc and

2025年8月8日，无锡福兰德科技有限公司举行锡南科技泰国工厂智能铸造装备首发仪式。行业首创的全自动制芯生产线正式亮相，该生产线专为涡轮增压器核心零部件打造，凝聚福兰德二十余年技术沉淀，推动中国高端铸造装备向智能化、绿色化升级。

锡南科技与福兰德科技高管团队，联合中国铸造协会、布勒集团、诺瑞肯集团、上海发那科等产业链伙伴及媒体代表共同见证。中国铸造协会执行副会长高巍、诺瑞肯亚太区高级副总裁魏宝华向福兰德赠送礼物，肯定其创新成果。

other industry partners and media, jointly witnessed the event. Mr. Gao Wei, Executive Vice President of China Foundry Association, and Mr. Wei Baohua, Senior Vice President of Norican Asia-Pacific, presented gifts to Forland, affirming its innovative achievements.

The newly launched intelligent core-making production line has garnered significant attention due to its industry-leading innovation. By integrating advanced core-making machines, sand-feeding systems, robotic loading and unloading units, and a proprietary intelligent control system, it establishes a highly automated manufacturing solution. Mr. Wang Wenyi, Chairman of Forland, highlighted three major technological advancements: a 40% reduction in footprint per production line alongside a 30% improvement in efficiency, enabling multi-station mixed-model production; an approximately 40% increase in residual sand recovery through the mold frame's 180-degree flipping technology, supporting sustainable manufacturing practices; and the integration of AI algorithms for real-time equipment monitoring, ensuring uninterrupted 24-hour operation. He emphasized, "This represents a pivotal milestone in the company's transition from standalone equipment supply to comprehensive turnkey solutions, and will continue to drive the industry toward greater flexibility and low-carbon development."

As a core equipment supplier for Xinan Technology's Thailand manufacturing facility, the collaboration between two parties has advanced to a new phase. Since the partnership commenced in 2021, Forland's core-making production line has demonstrated stable and reliable performance at Xinan Technology's Wuxi base. Gu Dengfeng, Deputy General Manager of Xinan Technology, stated, "The Thailand facility serves as a strategic hub for our global expansion. Forland's intelligent manufacturing solutions will significantly enhance the competitiveness of our overseas production capabilities." With over three decades of expertise in automotive lightweighting technologies, Xinan Technology achieved a revenue of 1.066 billion yuan in 2024. The Thailand plant is scheduled to commence operations in 2026, with a strategic focus on supplying high-precision components to Southeast Asian and international markets.

Mr. Gao Wei, Executive Vice President of China Foundry Association, remarked: "Forland has established an intelligent benchmark for China's foundry equipment industry and stands as a prominent exemplar of the 'Made in China 2025' initiative. Its modular design is poised to drive the sector's transition toward green and low-carbon development."

Founded in 2010, Wuxi Forland Technology Co., Ltd., a high-tech enterprise based in Jiangsu Province, specializes in the research, development, and manufacturing of automated aluminum alloy casting production lines. The company's product portfolio includes various core-making and gravity casting production lines. It has successfully delivered multiple turnkey projects to clients in Mexico and Europe. The recent launch of its intelligent core-making production line reinforces its leadership in the industry and underscores its dedication to technology-driven innovation and global service excellence. Going forward, Forland will continue to advance technological innovation and collaborate with partners to promote the intelligent and sustainable development of China's foundry industry, showcasing the innovative capabilities of Chinese enterprises on the international stage. ■

本次发布的智能制芯生产线以“行业首创”成为焦点，整合先进制芯机、加砂系统、机器人上下料系统及自主研发智能控制系统，构建高度自动化生产体系。

福兰德董事长王文毅指出三大技术突破：单线占地减少 40% 的同时效率提升 30%，支持多工位混线生产；通过模架 180 度翻转技术提升余砂回收率近 40%，践行绿色理念；集成 AI 算法实现设备状态实时监控，确保 24 小时稳定运行。他强调：“这是公司从单机设备向整线解决方案转型的关键成果，将持续推动行业柔性化、低碳化升级。”

作为锡南科技泰国工厂核心设备供应商，双方合作迈入新阶段。自 2021 年合作以来，福兰德制芯线已在锡南科技无锡基地稳定运行。锡南科技副总经理顾登峰表示：“泰国基地是全球化战略支点，福兰德智能化解决方案将提升海外产能竞争力。”锡南科技深耕汽车轻量化领域三十余年，2024 年营收 10.66 亿元，泰国工厂预计 2026 年投产，专注东南亚及国际市场精密部件供应。

中国铸造协会执行副会长高巍评价：“福兰德为中国铸造装备业树立智能化标杆，是‘中国制造 2025’的优秀缩影，其模块化设计将推动行业绿色低碳转型。”

成立于 2010 年的无锡福兰德科技，作为江苏省高新技术企业，专注铝合金铸造自动化生产线研发制造，产品涵盖多种制芯生产线及重力铸造线，已向墨西哥、欧洲交付多个“交钥匙”工程。此次智能制芯生产线发布，巩固其行业领先地位，彰显技术驱动、服务全球的担当。未来，福兰德将持续创新，携手伙伴推动中国铸造行业智能化、绿色化发展，展现中国企业全球创新风采。 ■

Old Base, New Insights: The 2025 Northeast Asia International Foundry Exhibition Concluded

老基地 新答卷——2025 东北亚国际铸造及热加工展览会圆满落幕



The 2025 Northeast Asia International Foundry Exhibition, lasted for four days from September 1-4, 2025, together with the 23rd China International Equipment Manufacturing Expo, came to a close at the Shenyang International Exhibition Center. Exhibitors and visitors received industry knowledge and resources, and were filled with warm expectations for win-win cooperation. With the mission of "building a new pattern of the foundry industry in Northeast Asia and promoting the transformation and upgrading of the old industrial base", they have been inspired with more driving forces for the industry development.

As an important part of the 23rd Manufacturing Expo, the 2025 Northeast Asia International Foundry Exhibition, with "foundry" at its core, gathered over 200 high-quality foundry enterprises from China, Japan, South Korea, Russia and other countries, achieving a wide layout covering the whole nation and radiating to Northeast Asia. During the four-day exhibition period, a batch of industry innovation achievements and technical solutions

2025年9月1-4日，为期4天的2025东北亚国际铸造及热加工展览会同第二十三届中国国际装备制造业博览会，在沈阳国际展览中心落下帷幕。展商与观众满载行业新知与资源收获，怀揣合作共赢的温热期许，以“构建东北亚铸造双链新格局、促进老基地产业转型再升级”为使命，为行业前行蓄积更多奋进力量。

作为第二十三届制博会的重要组成部分，2025东北亚国际铸造展以“铸造”为核心，汇聚中、日、韩、俄等国200余家优质铸造企业，实现覆盖全国、辐射东北亚的广泛布局。四天展期内，集中呈现了一批具有国际领先水平的行业创新成果与技术解决方案，成功构建起从原料生产到终端销售的全产业链信息互通生态。展会精准锚定制造业全链条发展需求——聚焦汽车制造、高端机床装备、轨道交通装备

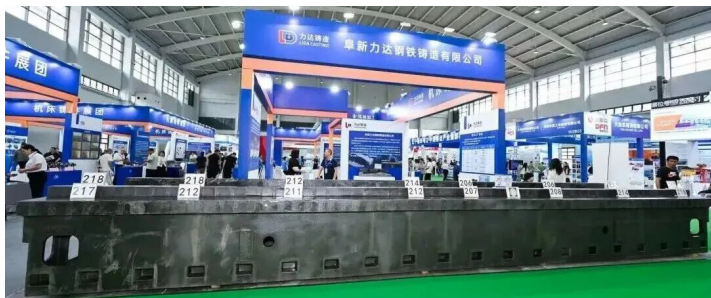
with international leading levels were presented, successfully building an information exchange ecosystem covering the entire industrial chain from raw material production to terminal sales. The exhibition precisely targeted the development needs of the entire manufacturing chain - focusing on key areas such as automotive manufacturing, high-end machine tool equipment, and rail transit equipment. It gathered the backbone forces of the industry through professional exhibition areas and planned the development direction of the industry through diverse activities, successfully building an international trade platform integrating exhibition and display, high-end dialogue, and resource connection for industry peers. It has achieved fruitful results in breaking regional barriers, promoting industrial cooperation, optimizing trade circulation, and assisting regional coordinated development, building a "bridge" for industrial upgrading in all-round revitalization and gathering strong synergy for deepening economic linkage and sharing development opportunities among Northeast Asian countries.

A 27t bedplate casting presented by Fuxin Lida, measuring 9600mmx2200mmx1000mm, emerged as a centerpiece due to its exceptional strength, rigidity, precision, and superior machinability. Fu'an Heavy Industry showcased a 6.6t bogie casting characterized by a highly complex geometry and a minimum wall thickness of just 17mm, serving as a "living testament" to the company's advanced foundry capabilities. Yunhe Machinery exhibited two critical component-a 2.4t rear support and a 1.4t wheel hub-both fabricated from high-performance alloy steel with tensile strength exceeding 620 MPa, demonstrating outstanding resilience under extreme operational conditions. Shenyang Yinfeng displayed a 4.1t slide rest casting, a core element of high-precision machine

等关键领域，以专业展区凝聚产业中坚力量，以多元活动谋划产业发展方向，为行业同仁成功搭建起一个集展览展示、高端对话、资源对接于一体的国际化商贸平台，在打破地域壁垒、推动产业合作、优化贸易流通、助力区域协同发展等方面取得了丰硕成果，为全方位振兴搭建起产业升级的“桥梁”，也为东北亚各国深化经济联动、共享发展机遇凝聚起强大合力。

阜新力达带来的 27 吨巨型床身铸件，尺寸达 9600mm×2200mm×1000mm，凭借其高强度、高刚度、高精度和优异的加工性能，成为全场瞩目的焦点；福鞍重工展出的 6.6 吨转向架铸件，结构复杂、最薄壁厚仅 17mm，堪称铸造工艺与技术实力的“活名片”；运河机械带来的 2.4 吨后支承铸钢件和 1.4 吨的轮毂铸钢件，分别采用高性能合金钢材质，抗拉强度均超 620MPa，具备极强的极端工况适应性；沈阳银丰展出的重达 4.1 吨的滑枕铸件，作为高精度机床核心部件，实现了多项工艺突破，展现了领先的表面与内在质量控制能力……各类高精尖成果错落陈列，不仅让观众直观触摸到铸造产业横跨汽车、机床、轨道交通等领域的多元发展脉络，更以“重磅感”十足的姿态直击人心，参会者驻足观摩、俯身细察，交流声、赞叹声此起彼伏，持续点燃现场的互动热度。

供需双方在此汇聚、碰撞、交流：从需求痛点的坦诚沟





tools, which achieved multiple technological advancements and exemplified industry-leading control over both surface and internal quality. The systematic presentation of high-precision and innovative castings enabled attendees to gain direct insight into the diversified advancement of the foundry sector across key industries such as automotive, rail transit, and machine tools, leaving a powerful impression through both technical substance and physical presence. Visitors engaged in close inspection and active discussion, fostering a dynamic and interactive atmosphere throughout the exhibition venue.

Here, suppliers and buyers converge, engage, and collaborate—ranging from candid discussions on pressing demand-side challenges to in-depth exchanges of industry expertise, and from aligning on cooperative frameworks to formalizing mutually beneficial agreements. Each interaction serves to energize the industrial ecosystem. The 2025 Northeast Asia Foundry Industry Chain Collaborative Development Forum, the High-

通到行业经验的深度分享，从合作共识的凝聚达成到意向签约的握手共赢，每一次互动都在激活产业动能，2025 东北亚铸造产业链协同发展论坛、硅砂产业高质量发展会议、轨道交通铸造技术创新研讨会、东北三省一区精密铸造转型升级发展论坛、机床铸件材料创新与工艺升级专题研讨会等系列精彩活动，与专业展区深度联动，汇聚顶尖专家，以前瞻思维激荡思想火花，共探产业高质量发展新路径。

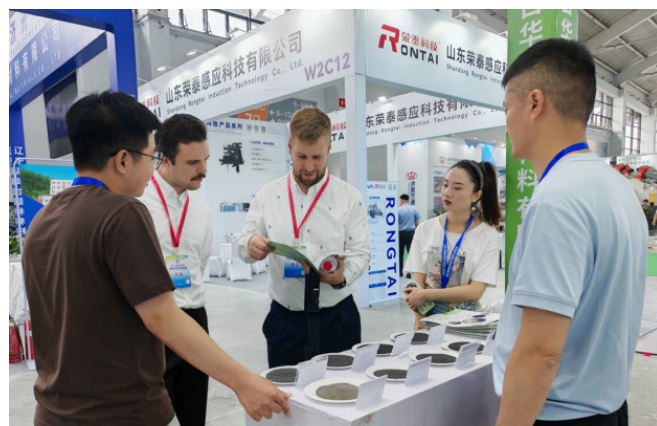
当前，东北亚协同发展浪潮澎湃，如何以技术破局重塑铸造业在大型装备核心部件、高复杂度铸件领域的效率优势与品质核心竞争力？如何共建产业生态，进而依托区域协同合力实现全球价值链攀升，完成从低端铸件产能输出到高端铸造品牌与核心技术价值输出的关键跃迁？这些关乎产业未来的核心问题，在这里提出，也在这里被解答。



Quality Development Conference of the Silica Sand Industry, the Innovation and Technology Seminar on Rail Transit Foundry, the Development Forum on Precision Foundry Transformation and Upgrading, and the Special Seminar on Material Innovation and Process Optimization in Machine Tool Castings—along with a series of related events—are closely integrated with specialized exhibition zones, bringing together leading experts and fostering intellectual exchange through forward-looking insights to collectively explore pathways for high-quality industrial advancement.

Currently, the momentum of coordinated development in Northeast Asia is gaining strength. How can technology be leveraged to enhance efficiency and strengthen the quality-driven core competitiveness of the foundry industry, particularly in the production of core components for large-scale equipment and high-complexity castings? Furthermore, how can a collaborative industrial ecosystem be established to harness regional synergies, ascend the global value chain, and achieve a strategic transformation—from exporting low-end casting capacity to delivering high-end casting brands and advanced core technologies? These critical questions, central to the future of the industry, are not only posed but also addressed within this context.

With a more open mindset and resolute determination, China Foundry Association will continue to strengthen platform development, consistently stimulate industrial innovation, support the industry in enhancing its global influence and voice, and reinforce the platform's cohesive strength. Together, let us move forward hand in hand, driven by innovation and united through collaboration, ensuring that the momentum generated by this significant event carries forward into every step of our shared future. We would like to extend our sincere gratitude once again to all partners, exhibitors, and professionals in the foundry industry who have participated in and supported this exhibition. It is through your continued trust and support that China Foundry Association's service platform has been continuously refined and advanced. ■



中铸协将以更开放的姿态、更坚定的步伐，深耕平台搭建，持续激活产业创新动能，助力行业提升全球话语权与影响力，凝聚起平台的强大向心力。让我们携手同行，以创新为引擎，以协同为纽带，让这份盛会的力量，延续至未来的每一步前行里。再次感谢所有合作伙伴、参展商以及莅临和关注展会的铸造业同仁们，正是有你们一如既往的支持，才使得中铸协这一服务平台得到了持续提升与发展。■

Bruce Dienst Receives Peter L. Simpson Gold Medal at CastExpo 2025

Bruce Dienst 于 CastExpo 2025 荣获 Peter L. Simpson 金奖



在 2025 年美国铸造展 CastExpo 及铸造大会上, Bruce Dienst 荣获了享有崇高声誉的 Peter L. Simpson 金奖。这一奖项具有特殊意义,因为它以布鲁斯的曾曾祖父 Peter L. Simpson 命名,即辛普森技术公司的创始人。作为金属铸造领域备受尊敬的专业人士,迪恩斯特在接受该奖项时发表

了一场充满激情且鼓舞人心的演讲。他在演讲中回顾了自己及家族成员在过去近 50 年中对该行业的持续投入,并强调了铸造行业“大家庭”的特质。他指出:

“我们彼此依赖、相互支持,这正是该行业真正独特而值得骄傲的地方。”

Dienst, a highly respected figure in the metalcasting world, delivered an emotional and inspiring speech as he accepted the honor. Reflecting on nearly five decades of personal and family involvement in the industry, Dienst spoke about the "family of families" that characterizes the foundry community. "We depend on and support each other—that's what makes this industry truly remarkable," he said.

他的曾曾祖父 Peter L. Simpson 于 1848 年出生于苏格兰的博内斯,为这一家族传承奠定了基础。年轻时,他横渡大西洋,并于 1912 年在美国芝加哥创立了辛普森技术公司。如今,辛普森技术公司作为诺瑞肯集团的重要组成部分,继续秉承这一传统,致力于在全球金属铸造行业中推动技术创新、保证产品质量并建立稳固的合作伙伴关系。

His great-great-grandfather Peter L. Simpson, born in 1848 in Bo'Ness, Scotland, laid the foundation for this legacy, crossing the Atlantic as a young man and eventually founding Simpson Technologies in Chicago in 1912. Today, Simpson Technologies proudly continues this legacy as part of the Norican Group, maintaining its commitment to innovation, quality, and partnership within the global metalcasting industry.

Bruce Dienst 本人在该领域作出了卓越贡献,包括于 2015 年担任美国铸造协会主席,成为其家族中第四位担任该职务的成员。他一生致力于行业引领、技术创新与行业发展,如今荣获该行业最高荣誉之一,实至名归。

Bruce Dienst himself has made significant contributions to the sector, including serving as AFS President in 2015, becoming the fourth generation of his family to hold that role. His lifetime of leadership, innovation, and commitment to advancing the foundry industry was now fittingly crowned with one of the industry's highest honors.

铸造星球 (Foundry-Planet) 谨向 Bruce Dienst 荣获 Peter L. Simpson 金奖表示热烈祝贺。这一殊荣不仅是对其个人杰出成就的高度认可,也象征着—个荣耀家族传统的延续,这一传统持续影响并塑造着金属铸造行业的未来。■

Foundry-Planet congratulates Bruce Dienst on receiving the Peter L. Simpson Gold Medal—a recognition not only of his individual achievements but of a proud family tradition that continues to shape the future of metalcasting. ■

Ferrexpo and Eirich—The Success Story of a Ukrainian-German Partnership

Ferrexpo 与爱立许——乌克兰企业与德国企业的成功合作

For a quarter of a century, there has been a deep connection between the production company in Ukraine and the mixing machine experts from Hardheim, Germany. Together, they have realized and continue to realize major projects to improve quality. Above all, however, this partnership shows that experienced experts always find successful solutions even under the most difficult circumstances – and that true partnership goes beyond business, especially in times of war and crisis.

Ferrexpo, based in Horishni Plavni, Ukraine, is the world's third-largest exporter of iron ore pellets. Iron ore is one of the materials that form the foundation of our modern lives, as it is used in steel production. Steel is indispensable in many sectors, from construction to the manufacturing of cars and wind turbines, to everyday items such as kitchen utensils. Since 1970, Ferrexpo has been producing iron ore pellets, delivering one of the building blocks for many industries and aspects of life.

Ferrexpo and Eirich: Ensuring Quality Through Partnership

Despite the ongoing state of war in Ukraine, Ferrexpo continues its successful path, further expanding its business and improving the quality of its core product. This is possible in large part thanks to the special partnership that Ferrexpo has shared with the German company Eirich for 25 years. Together with Eirich, a global leader in solutions for processing raw materials, Ferrexpo has overcome major

25 年来，乌克兰的一家制造企业与德国哈德海姆的搅拌技术专家企业保持着密切的合作关系。双方携手完成了多项重大合作项目，并持续致力于进一步提升产品质量。更重要的是，这种合作关系充分体现了经验丰富的专业团队即使在最严峻的环境下，也能够共同寻找并实施成功的解决方案。同时，这也印证了一个事实：真正的伙伴关系超越了单纯的商业利益，尤其在战争与危机时期更显其价值。

位于乌克兰霍里什尼·普拉夫尼的 Ferrexpo 公司是全球第三大铁矿石球团矿出口商。铁矿石是构成我们现代生活基础的材料之一，用于钢铁生产。钢铁在许多领域不可或缺，从建筑到汽车和风力涡轮机的制造，再到厨房用具等日常用品。自 1970 年以来，Ferrexpo 公司一直在生产铁矿石球团矿，为众多行业和生活应用提供重要支撑。

Ferrexpo 与爱立许：携手合作，共筑品质保障

尽管乌克兰局势持续动荡，Ferrexpo 仍保持发展态势，不断拓展业务并提升核心产品品质。这在很大程度上得益于 Ferrexpo 与德国爱立许公司长达 25 年的特殊合作关系。作为全球领先的原材料加工解决方案供应商，爱立许与 Ferrexpo 共同携手，数十年

来不断跨越重大里程碑。

得益于德国的可靠合作伙伴，Ferrexpo 即便在战争期间也能继续推进合作项目。两家公司的合作始于 2000 年左右，当时 Ferrexpo 决定对其球团厂进行现代化改造，旨在生产欧洲最优质的球



milestones for decades.

Thanks to its reliable partner in Germany, Ferrexpo is able to continue joint projects even during the war. The cooperation between the two companies began around the year 2000, when Ferrexpo decided to modernize its pelletizing plant with the aim of producing the best pellets in Europe. Eirich, as an expert in advanced technologies for mixing, granulating, dispersing, and tempering, became a partner in this endeavor for the first time.

To meet the increasing quality demands of steel producers and strengthen its market position, Ferrexpo wanted to ensure particularly high mixing quality of the concentrate. The mixing coefficient – i.e., the degree of homogenization – was to be at least 98%. The choice therefore fell on the use of an Eirich intensive mixer.

Challenges Create Bonds

In every joint project Ferrexpo and Eirich carried out in the following years, the commissioning of the new mixers went according to plan and on time, with no production downtime. To date, over 20 million tons of iron ore concentrate have been processed with the first mixer installed by Eirich – and it continues to run successfully.

These excellent results should not overshadow the effort and challenging circumstances involved: for the transport of some mixers, a Ukrainian highway had to be temporarily rerouted. Lifting the D31/7 mixer to a height of 30 meters on site took more than 8 hours. During commissioning, manual labor was sometimes needed to shovel several tons of concentrate out of the mixer. Some Eirich supervisors still recall how they shared dinner and watched the World Cup with their Ukrainian colleagues – still in their work clothes. From the very beginning, this collaboration forged a close bond between the companies on a much more human level than is usually possible in a mere client-contractor relationship.

Not Even War Can Stop the Pursuit of Excellence

Unfortunately, conditions for the long-standing cooperation between Ferrexpo and Eirich changed in the 2020s. Most of a large-scale project already underway had to be halted: four DW40 mixers, each with a throughput capacity of over 1,000 tons/hour, as well as conveyors and control systems, had been delivered but not yet commissioned. In mid-2023, the first of the four mixers was successfully commissioned remotely with guidance from an Eirich supervisor in Germany. Mixers two and three followed, and the last mixer was also commissioned in 2024.

Despite the extraordinary circumstances, the end result is impressive: the plant in Ukraine represents a unique solution and is equipped with the best equipment in the world. Eirich supervisors remain in continuous contact with the customer and provide extensive support. In 2023, over 300,000 tons of concentrate were already processed in the first mixer, and more than 1,000,000 tons in 2024.

During the war, Ferrexpo also built a concentrate storage

团矿。爱立许作为混合、造粒、分散和调质等先进工艺技术的专家，首次成为这一项目的合作伙伴。

为满足钢铁生产商日益提高的质量要求并巩固其市场地位，Ferrexpo 希望确保精矿的混合质量特别高。混合系数，即均质化程度，至少要达到 98%。因此，最终选择了使用爱立许强力混合机。

挑战铸就友谊

在接下来的几年里，Ferrexpo 与爱立许合作的每一个项目中，新搅拌机的调试都按计划按时完成，没有造成生产中断。迄今为止，爱立许安装的第一台搅拌机已处理了超过 2000 万吨的铁精矿，且仍在顺利运行。

这些出色的成绩不应掩盖其中的努力和艰难的环境：为运输部分搅拌机，乌克兰的一条公路不得不临时改道。在现场将 D31/7 搅拌机吊起至 30 米的高度耗时超过 8 个小时。在调试期间，有时需要人工将几吨精矿从搅拌机中铲出。一些爱立许的主管仍记得他们与乌克兰同事在工作服未脱的情况下共进晚餐并观看世界杯的情景。从一开始，这种合作就在比单纯的客户与承包商关系更人性化的层面上，为两家公司建立了紧密的联系。

即使战争也无法阻挡追求卓越的脚步

Ferrexpo 与爱立许之间长期合作的背景在 21 世纪 20 年代发生了变化。一个大型项目中大部分已开展的工作不得不暂停：四台 DW40 混合机，每台每小时处理能力超过 1000 吨，以及输送机和控制系统，已交付但尚未投入使用。2023 年中，在德国爱立许公司主管的远程指导下，四台混合机中的第一台成功投入使用。随后，第二台和第三台也相继投入使用，最后一台混合机于 2024 年投入使用。

尽管情况特殊，但最终结果令人印象深刻：乌克兰的这家工厂代表了一种独特的解决方案，并配备了世界上最先进的设备。爱立许主管与客户保持着持续的联系，并提供广泛的支持。2023 年，第一台混合机已处理了超过 30 万吨的精矿，2024 年处理量超过 100 万吨。

在战争期间，Ferrexpo 还建造了一个精矿储存设施，两个球化车间目前正在建设中。该公司还计划

facility, with two pelletizing departments currently under construction. The company also plans to install Haver-Boecker pelletizing discs and is confidently moving toward its goal of producing 18 million tons of the best pellets in Europe. Steel manufacturers from Japan, South Korea, Austria, Germany, and the UAE are happy to buy these high-quality products.

Ferrexpo Relies on Eirich – In All Circumstances

However, there are some devices in the plant outside of Eirich's scope that Ferrexpo specialists are highly dissatisfied with. As their functionality affects the quality of the final product, the pellet manufacturer now wants to obtain these devices from Eirich as well. Initial project planning discussions began in early 2025. Thus, the successful cooperation between the two companies continues across borders and barriers.

Email eirich@eirich.de

Web: www.eirich.de. ■

安装 Haver-Boecker 造球机，并满怀信心地朝着在欧洲生产 1800 万吨优质球团矿的目标迈进。来自日本、韩国、奥地利、德国和阿联酋的钢铁制造商都乐于购买这些高品质的产品。

Ferrexpo 公司始终信赖爱立许——无论在何种情况下

然而，工厂中有一些设备不在爱立许的业务范围内，但 Ferrexpo 的专家们对这些设备非常不满。由于这些设备的功能会影响最终产品的质量，这家球团制造商现在也希望从爱立许那里获得这些设备。初步的项目规划于 2025 年初开始。因此，两家公司之间的成功合作跨越了国界和障碍。■

Ha Group and Voxeljet: 3D Printing with Extended Warranty

欧区爱集团与维捷的战略合作：延长保修服务的 3D 打印技术服务

The 3D printing machine manufacturer voxeljet and Hüttenes-Albertus, a specialist in foundry chemistry, have been working together for many years to develop efficient and reliable solutions for additive manufacturing. By precisely aligning the binder system with the printing process of voxeljet's machines, customers now benefit from additional advantages, such as an exclusive extended warranty for the qualified voxeljet Furan Binder system. This partnership offers customers added security in implementing their projects.

Security & Partnership

High-quality standards, certified processes, and testing redundancy ensure consistent binder quality within tight tolerance ranges, enabling an extended warranty on the voxeljet Furan Binder system. As a result, the quality of the print results remains consistently stable. Additionally, customers can access fast support from the technical representatives of both partners for any questions or requirements.

Customers can order materials through voxeljet's international locations, with direct delivery from Hüttenes-Albertus. Local inventory at HA Group's sites shortens

3D 打印设备制造商维捷 voxeljet 与铸造化学品领域的领先企业欧区爱集团 Hüttenes-Albertus 长期合作，致力于开发高效且可靠的增材制造解决方案。通过将欧区爱集团的粘结剂系统与维捷的打印技术精准匹配，客户现可享受包括经认证的维捷呋喃粘结剂系统独家延长保修服务在内的多项附加优势。该战略合作显著提升了客户项目实施过程中的稳定性与可靠性保障。

安全与合作

高标准的质量规范、经认证的工艺流程以及多重测试验证机制确保了粘结剂在严格公差范围内保持一致的质量，从而为维捷呋喃粘结剂系统提供更长的保修周期。因此，打印输出质量得以持续稳定。此外，客户可随时向合作伙伴的技术代表咨询相关技术问题或服务需求，获得快速响应与支持。

客户可通过维捷的国际服务网点订购相关材料，



restocking time and ensures the availability of the binder system.

Voxeljet Furan Binder System: Performance That Impresses

Both companies share the goal of supporting customers in digitizing core and mold manufacturing processes. The development of the voxeljet Furan Binder system incorporates more than 20 years of experience in developing 3D printing binder systems. The results have been validated and offer the following benefits:

Environmental, Workplace, and Component Quality Benefits:

- Free from resorcinol
- Free from bisphenol A
- Free from nitrogen

Product Quality:

- Qualified manufacturing processes: Selected raw materials, tight production tolerances, and testing redundancy ensure high-quality standards.
- Longer printhead lifetimes: The voxeljet Furan Binder system helps extend the life of printheads and reduce maintenance costs.
- Proven for over 10 years on the market: The voxeljet Furan Binder system has been successful internationally and is based on over 60 years of experience in Furan binder development.
- Made in Germany: The voxeljet Furan Binder system is exclusively manufactured in Germany and distributed worldwide.

产品将由欧区爱直接发货。得益于欧区爱集团各区域站点的本地化库存配置，补货周期得以显著缩短，同时有效保障了粘结剂系统的稳定供应。

维捷呋喃粘结剂系统展现出卓越的性能表现

两家公司均致力于支持客户实现芯核及模具制造工艺的数字化转型。维捷呋喃粘结剂系统的研发融合了逾 20 年在 3D 打印粘结剂系统领域的技术积累，其成果已通过实践验证，具备以下优势：

环境、工作场所及组件的质量优势：

- 不含间苯二酚
- 不含双酚 A
- 不含氮化物

产品质量：

合格的制造工艺：精选原材料、严格的生产公差以及冗余测试确保了高标准的质量。

喷头使用寿命更长：维捷呋喃粘结剂系统助于延长喷头的使用寿命并降低维护成本。

市场验证超过 10 年：维捷呋喃粘结剂系统在国际上已取得成功，并基于 60 多年的呋喃粘结剂开发经验。

德国制造：维捷呋喃粘结剂系统仅在德国制造，并在全球范围内销售。

Service:

- Worldwide availability and support: With the international presence of HA Group and voxeljet, customers worldwide have access to materials and comprehensive support.
- On-site application technicians: A specialized technician is available on-site to assist with the implementation and use of 3D printing when needed.
- Training: Customers can receive hands-on training on production printers at the HA Center of Competence and the voxeljet Academy to optimize system usage.

Economic Benefits:

- Fast, reliable, ready-to-use: Customers can receive a new printhead within just four weeks from voxeljet to minimize downtime.
- Responsibility: If a damage caused by the binder occurs within the warranty period after the installation of a new printhead, customers will receive uncomplicated and prompt replacement, considering the operational time.
- Clear cost structure: For the first nine months, customers benefit from a transparent discount structure and reliable service thereafter.

Partnership for the Future of Manufacturing

The collaboration between voxeljet and the HA Group marks an important step in advancing 3D printing for the foundry industry. By combining decades of experience with advanced expertise in the voxeljet Furan Binder system, companies can benefit from a high-performance binder system that maximizes process security. Additionally, the extended warranty and reliable service provide extra security for their production processes. In the event of an unexpected printhead failure, a fast and cost-effective replacement is offered to reduce downtime. This partnership demonstrates how companies can develop solutions together that meet industry demands while being more efficient and environmentally friendly. ■

服务:

- 全球供货与支持: 凭借欧区爱集团和维捷的国际影响力, 全球客户都能获得材料及全面的支持服务。
- 现场应用技术人员: 如有需要, 可安排专业技术人员到现场协助客户实施和使用 3D 打印技术。
- 培训: 客户可在欧区爱技术中心和维捷学院接受打印机的实操培训, 以优化系统使用。

经济优势:

- 快速、可靠、即用即取: 客户在安装新喷头后, 仅需四周即可从维捷公司收到新喷头, 从而将停机时间降至最低。
- 责任保障: 若在新喷头安装后的保修期内因粘结剂造成损坏, 客户将根据运行时间获得简便快捷的更换服务。
- 清晰的成本结构: 在最初的九个月内, 客户可享受透明的折扣体系, 此后则可获得可靠的服务。

面向制造业未来的合作

维捷与欧区爱集团的合作标志着在铸造行业推进 3D 打印技术方面迈出了重要一步。通过将数十年的经验与维捷呋喃粘结剂系统的先进专业知识相结合, 企业能够受益于高性能粘结剂系统, 从而最大程度地提高工艺安全性。此外, 延长的保修期和可靠的服务为企业的生产流程提供了额外保障。若喷头意外出现故障, 将提供快速且经济高效的更换服务, 以减少停机时间。这一合作表明, 企业能够携手开发出既满足行业需求又更高效、更环保的解决方案。■

Open House At Frech – Presentation Of The Gdk4800next

富来开放日——GDK4800next 展示会

Open House At Frech – Presentation Of The Gdk4800next

Oskar Frech GmbH + Co. KG recently hosted its Open House at its Plüderhausen facility. Numerous customers and

全压铸工艺链的创新实例

奥斯卡·富来公司最近在其普吕德豪森工厂举办了开放日活动。众多客户和行业专业人士借此机会亲

industry professionals seized the opportunity to gain a firsthand impression of the innovation, precision, and passion that have defined the company for decades.

Today, FRECH is a globally active family-owned business with a pioneering and comprehensive product portfolio. The company covers the entire spectrum of die casting technology — from machines to tooling systems to spray and die temperature control solutions. This offering is complemented by specialized training programs and a 24-hour service network, underscoring FRECH's commitment to the highest technological and quality standards. As a global leader in zinc, magnesium, and aluminum die casting, FRECH delivers customized solutions to meet the diverse and evolving needs of the industry.

Guests enjoyed a varied program featuring high-level expert presentations, impressive live demonstrations of the latest technologies, and numerous opportunities for professional exchange.

A highlight of the day was the premiere of the new GDKnext, developed in close cooperation with the German Tier 1 supplier Handtmann. A particular milestone was the live announcement of the production release of another GDK4800next by Albert Handtmann Metallgusswerk GmbH & Co. KG — a strong signal of innovation and successful partnership. Heiko Pfeiffer from Handtmann emphasized the intensive and effective collaboration between the development teams of both companies.

The GDK4800next at a Glance

A more detailed overview of the highlights and advantages of the GDK4800next will follow in a separate article. For now, here is a brief outline:

Highly dynamic casting unit: Extremely fast plunger acceleration of up to 650 m/s², pressure build-up times as low as 21 ms, high dynamic casting forces; universally adaptable for all component requirements.

Reduced footprint: Smaller installation area with large opening strokes and minimized opening/closing times.

Energy efficiency: Significantly lower energy consumption and connection power.

Optimized opening force: 40% higher opening force over the entire stroke — ideal for three-plate die technology.

Highest positioning accuracy: Precise and flexible programming of opening and closing movements.

Reduced cooling water consumption: Up to 50% less water consumption thanks to innovative drive concepts.

New hydraulic concept: Tank volume reduced by approximately 40%.



身体验了这家企业数十年来一直秉持的创新精神、精准工艺和满腔热忱。

如今，富来已成为一家全球性的家族企业，拥有开创性的完整产品组合。该公司涵盖了整个压铸技术领域——从机器到模具系统、喷雾和模具温度控制解决方案。其产品线还辅以专业的培训项目和 24 小时服务网络，彰显了富来对最高技术及质量标准的不懈追求。作为锌、镁和铝压铸领域的全球领导者，富来提供定制化解决方案，以满足行业多样化和不断变化的需求。

嘉宾们参与了丰富多彩的活动，包括高水平的专家演讲、令人印象深刻的新技术演示以及众多的交流机会。

活动亮点之一是与德国一级供应商汉特曼公司密切合作开发的新一代 GDKnext 产品的首次亮相。此外，阿尔伯特·汉特曼金属铸造公司现场宣布 GDK4800next 正式投入生产，标志着双方合作的又一重要里程碑，充分彰显了技术创新与战略合作的显著成果。汉特曼公司的海科·普费弗充分肯定了双方研发团队之间紧密且高效的协作关系。

GDK4800next 产品亮点

有关 GDK4800next 的更多亮点和优势将在另一篇文章中详细介绍。目前，先简要将其概述如下：

高动态压射单元：极快的压射冲头加速度高达 650 米/秒²，压力建立时间低至 21 毫秒，高动态压射力；适用于所有部件要求的通用性。

占地面积更小：安装面积更小，开模行程大，开合模时间最短。

能源效率更高：能耗和连接功率显著降低。

开模力优化：整个行程中开模力提高 40%——非常适合三板模技术。

定位精度最高：开合模运动的精确灵活编程。

冷却水消耗减少：得益于创新的驱动概念，水耗降低多达 50%。

新的液压概念：油箱容积减少约 40%。

首席运营官亚历山大·F·马克斯博士 (Dr.-Ing. Alexander F. Marks) 与其同事尤尔根·兰帕特 (Jurgen Lamparter) 和托比亚斯·尤斯特 (Tobias

CCO Dr.-Ing. Alexander F. Marks, together with his colleagues Jürgen Lamparter and Tobias Just expressed great satisfaction with the success of the event. Especially in economically challenging times, the strong turnout was seen as a very positive sign.

The event focused on the entire die casting process chain. Presentations by:

Roger Rapp (MELTEC Industrieofenbau GmbH), – Innovative furnace technology and vacuum dosing for large-scale casting

Norbert Obermair (ROBAMAT Automatisierungstechnik GmbH) – Innovative temperature management systems to cast large structural castings

Dirk Könsgen (Maschinenbau Böhmer GmbH), – Flexible spraying technology for large castings with the BÖHMER Megabox

Lisa Aulbach (Aulbach Automation GmbH) – Challenges and trends in the trimming process of large structural die castings parts

Norbert Feth (FRECH ZPF GmbH) – Innovative temperature management systems to cast large structural castings

Martin Afkam (VDS SA) – Efficient vacuum process for structure or big casting parts rounded out the program, offering valuable insights into all stages of production.

All in all, a highly successful event marked by excellent organization, valuable information, and an inspiring atmosphere — a strong signal for the future. ■

Just) 对此次活动的成功举办表示非常满意。尤其是在经济形势严峻的时期，如此高的参与度被视为一个非常积极的信号。

该活动聚焦于整个压铸工艺链。演讲嘉宾包括：

· 罗杰·拉普 (MELTEC 工业炉具制造有限公司) ——大型铸件的创新炉具技术和真空定量浇注。

· 诺伯特·奥伯迈尔 (ROBAMAT 自动化技术有限公司) ——大型结构铸件的创新温度管理系统

· 迪尔克·康斯根 (马希纳布劳·博赫默有限公司) ——大型铸件的灵活喷涂技术，采用博赫默 Megabox

· 莉萨·奥尔巴赫 (奥尔巴赫自动化有限公司) ——大型结构压铸件修整工艺的挑战与趋势

· 诺伯特·费斯 (富来 ZPF 有限公司) ——大型结构铸件的创新温度管理系统

· 马丁·阿夫卡姆 (VDS 有限公司) ——结构件或大型铸件的高效真空工艺，为整个生产流程提供了宝贵的见解。

总之，这是一次非常成功的活动，组织出色、内容丰富、鼓舞人心——释放出未来发展的强烈信号。■



Ten Years of Strong Partnership: Laempe Mössner Sinto and Sintokogio Celebrate Anniversary of Strategic Alliance

十年联手、强强合作：兰佩·莫斯纳·新东与新东工业庆祝战略联盟十周年

(from left to right): Rudolf Wintgens, Kenichi Furuya, Andreas Mössner, Atsushi Nagai, André Klimm

Exactly ten years ago, in May, 2015, the world market leader in core manufacturing technology, Laempe & Mössner GmbH, and the Japanese foundry machinery world market leader Sintokogio Ltd (TYO: 6339) announced their strategic partnership. Today, a decade later, Laempe Mössner Sinto GmbH can look back on a successful cooperation that has created technological progress, global market presence and sustainable synergies.

“Our partnership with Sintokogio was a milestone in the development of our company. Together, we have succeeded in opening up new markets, implementing innovations more quickly and strengthening our value proposition globally,” explains Andreas Mössner, Managing Partner of Laempe Mössner Sinto. “Our shared commitment to quality, precision and reliability still unites us today.”

The investment of the listed Japanese technology group in the former Laempe & Mössner GmbH in 2015 marked the beginning of a new phase of internationalization. Since then, the traditional family business with its headquarters in Meitzendorf (Saxony-Anhalt) has operated under the name Laempe Mössner Sinto GmbH. While the Mössner family remains the majority shareholder, the company has used the partnership to expand its international sales locations, particularly in Asia.

Ten years of partnership with Sinto - a special milestone

The beginning of May was all about international cooperation: the Laempe Mössner Sinto shareholders' meeting took place at the Meitzendorf site. At the same time, the tenth anniversary of the global partnership was celebrated - a collaboration that sets standards worldwide.

Another highlight was the visit of Japanese customers who traveled to Meitzendorf for the successful pre-acceptance of three LFB50 core shooting systems and for

2015年5月，全球砂芯制造技术领域的市场领导者兰佩·莫斯纳有限公司 (Laempe & Mossner GmbH) 与日本铸造机械行业的领军企业新东工业株式会社 (Sintokogio Ltd., 东京证券交易所代码: 6339) 正式宣布建立战略合作伙伴关系。值此合作十周年之际，双方合资企业——兰佩·莫斯纳·新东有限公司 (Laempe Mossner Sinto GmbH) 回顾了这一长期合作所取得的显著成果，包括技术能力的持续提升、全球市场影响力的扩大以及在运营与研发方面实现的可持续协同效应。

“我们与新东工业的合作是公司发展历程中的一个里程碑。携手合作，我们成功开拓了新市场，更快地实现了创新，并在全球范围内强化了我们的价值主张，”兰佩·莫斯纳·新东公司的管理合伙人安德烈亚斯·莫斯纳解释道，“我们对质量、精度和可靠性的共同承诺至今仍使我们团结一致。”

2015年，该日本上市科技集团对原兰佩 & 莫斯纳有限公司的战略投资，标志着其国际化进程进入全新阶段。此后，这家总部位于萨克森-安哈尔特州梅岑多夫的传统家族企业正式更名为兰佩·莫斯纳·新东有限公司。尽管莫斯纳家族仍为公司主要股东，但依托此次战略合作，企业显著拓展了国际销售网络，尤其在亚洲市场的布局得以进一步深化。

与新东公司合作十年——特殊的里程碑

五月伊始，国际合作备受瞩目。兰佩 & 莫斯纳有限公司与新东公司在梅岑多夫工厂举行了会议，标志着双方携手合作十周年的重要里程碑。十年合作不仅巩固了双方在全球铸造设备领域的战略伙伴关系，更树立了跨国协作的典范。期间，日本客户代表团到访



initial training sessions. A strong sign of trust, quality and international cooperation - and of the close connection between partners on two continents.

Global synergies, local progress

Among other things, the partnership enabled direct access to the production and sales networks of the Sinto Group, which is currently represented by over 60 affiliated and associated companies in 20 countries. At the same time, Laempe Mössner Sinto contributed its technological leadership in core-making technology. Since then, joint development projects and a growing transfer of know-how have been part of everyday cooperation - to the benefit of both partners and their customers in the foundry industry.

Looking ahead

“After ten years, we are not only taking stock, but also looking to the future,” emphasizes Atsushi Nagai, President of Sintokogio. “The industry is facing major technological upheavals - from digitalization to sustainability. Together, we are ideally positioned to tackle these challenges.” ■

梅岑多夫工厂，成功完成了三套 LFB50 冲芯系统的预验收工作，并参与了初步操作培训。此次访问充分体现了客户对产品质量的高度认可，彰显了双方基于信任的长期合作关系，也进一步强化了跨洲际合作伙伴之间的紧密协作。

全球协同，本地发展

通过全球协同与本地化发展相结合，此次合作使兰佩·莫斯纳·新东公司得以直接接入新东集团覆盖 20 个国家的生产和销售网络，该网络目前包含 60 余家附属及关联企业。与此同时，兰佩·莫斯纳·新东公司凭借其在制芯技术领域的技术领先优势为合作提供有力支撑。此后，双方持续开展联合研发项目，并实现了技术知识的双向转移，相关合作机制已逐步常态化。这一协作模式不仅强化了双方的战略伙伴关系，也为铸造行业客户带来了显著价值。

展望未来

新东工业社长永井淳表示：“经过了 10 年合作，我们不仅在总结过去，更在规划未来。当前行业正经历从数字化转型到可持续发展的重要技术变革。通过紧密协作，我们有信心有能力应对这些挑战。” ■

DISA's New Test Foundry to Bring Green Sand Molding Process to More Aluminum, Steel, Brass Applications

迪砂新建的试验厂将湿型砂铸造工艺拓展应用于更多铝、钢及黄铜制品的生产

DISA (Taastrup, Denmark) a technology of AFS Corporate Member The Norican Group, recently announced construction of a new test foundry in Denmark to support producers of aluminum, steel, brass, and bronze castings in adopting the highly-efficient green sand molding process.

The test foundry will run production trials for new and existing castings to prove the green sand process meets both casting specifications and cost expectations. By conducting intensive, end-to-end process development using its complete green sand line DISA hopes to challenge the industry mindset that certain castings must be made with certain technologies. Foundries can also submit sand samples to test Simpson sand reclamation and find out what percentage can be reused. ■

丹麦塔斯特鲁普的迪砂公司 (DISA) 是美国铸造协会会员企业诺瑞肯集团的技术公司, 该公司近期宣布将在丹麦建造一座新的测试铸造厂, 以支持铝、钢、黄铜和青铜铸件生产商采用高效环保的湿型砂铸造工艺。

测试铸造厂将开展新旧铸件的生产试验, 旨在验证湿型砂工艺在满足铸造技术规范的同时, 亦能达到预期的成本控制目标。通过充分发挥其完整的湿型砂生产线优势, 实施全面的端到端工艺开发, 迪砂致力于突破行业内关于特定铸件必须依赖特定工艺的固有认知。此外, 该铸造厂还可提交砂样以评估辛普森砂再生技术的适用性, 并测定可循环利用砂的比例。■

Doncasters' Groton Expansion Commissions New Shell Line

Doncasters 公司的格罗顿工厂投资扩建壳型生产线

Doncasters announced the commissioning of a brand-new, fully automated shell line at its Groton, Connecticut facility—a major milestone within its 2025 Performance Improvement Plan and a key advancement in the company's long-term manufacturing strategy.

The \$13 million capital investment expands the Groton site's operational footprint by 17,000sq. ft and introduces next-generation automation and environmental control systems. Equipped with three high-precision 6-axis robots and the IC-Crystal Shell Management System, the new line significantly enhances production capacity, part quality, and operational reliability. “Our new fully automated shell system isn't just a machinery upgrade—it's a strategic leap forward,” said Mike Looney, general manager at Doncasters Groton. According to Looney, the investment will allow the company to take on more complex, high-volume aerospace projects. ■

Doncasters 公司宣布其位于康涅狄格州格罗顿的工厂一条全新的全自动铸壳生产线已投入使用——这是其 2025 年绩效提升计划中的一个重要里程碑, 也是公司长期制造战略中的关键进展。

1300 万美元的资本投入使格罗顿工厂的运营面积增加了 17000 平方英尺 (1580 平方米), 并引入了新一代自动化与环境控制系统。新生产线配备了三台高精度六轴机器人及 IC 晶壳管理系统, 显著提升了生产能力、零部件质量以及运营可靠性。Doncasters 公司格罗顿工厂总经理迈克·卢尼表示: “我们全新的全自动壳体系统不仅是一项设备升级, 更是一次战略性的重大飞跃。”他指出, 此项投资将使公司具备承接更高复杂度与更大规模航空航天项目的的能力。■

Kimura Foundry America acquires VIP Tooling

木村铸造美国公司收购 VIP 工具公司

AFS member Kimura Foundry America (Shelbyville, Indiana), a U.S. provider of rapid prototype castings, recently announced the acquisition of VIP Tooling, a precision tooling and CNC machining company also based in Shelbyville. According to the company, the integration brings together advanced casting and machining capabilities--enabling faster lead times, tighter process control, and cost efficiencies for customers in key industries including automotive, energy, and industrial manufacturing.

“By combining our cutting-edge 3D-printed casting technologies with VIP’s precision machining capabilities, we’re simplifying the supply chain for our customers, improving lead times, and accelerating innovation across U.S. manufacturing,” said Michiya Kajiwara, president of Kimura Foundry America, a U.S. subsidiary of Kimura Group, a casting manufacturer in Japan. ■

美国铸造协会会员企业木村铸造美国公司（位于印第安纳州谢尔比维尔）近日宣布，已收购同处谢尔比维尔的 VIP 工具公司。作为一家专注于精密模具制造与数控加工的企业，VIP 工具公司将使木村铸造美国公司实现先进铸造技术与高精度加工能力的深度融合。此次整合旨在为汽车、能源及工业制造等关键领域的客户提供更短的交付周期、更高的工艺控制精度以及更具竞争力的成本优势。木村铸造美国公司总裁 Michiya Kajiwara 表示：“通过将我们先进的 3D 打印铸造技术与 VIP 公司的精密加工能力相结合，我们不仅能够优化客户的供应链流程，还将进一步推动美国本土制造业的创新进程。”该公司隶属于日本木村集团，是其在美国设立的全资子公司。■

Waupaca Foundry Earns GM Supplier Quality Excellence award for the Second Consecutive Year

沃帕卡铸造厂连续两年荣获通用汽车供应商质量卓越奖

Waupaca Foundry Plant 4 in Marinette, Wisconsin, has been recognized with the 2024 General Motors Supplier Quality Excellence Award (SQEA), marking the third time the company has received this prestigious honor, following recognition in 2018 and 2023.

The SQEA recognizes GM’s top-performing manufacturing suppliers that meet or exceed rigorous criteria for quality, reliability, and operational excellence. To qualify, suppliers must demonstrate zero defects, 100% on-time delivery, and full compliance with GM’s production standards.

Plant 4 produces ductile iron castings used in automotive engines, suspensions, braking systems, and drivelines across multiple GM platforms in North America. ■

位于威斯康星州马里内特的沃帕卡铸造厂 4 号工厂荣获 2024 年通用汽车供应商质量卓越奖 (SQEA)，是公司第三次获此殊荣，此前曾于 2018 年及 2023 年两次获得该奖项。该奖项旨在表彰在制造领域表现卓越的通用汽车供应商，其评选标准涵盖质量管控、交付可靠性及运营卓越性等方面，要求供应商全面达到或超越通用汽车设定的严苛指标。获奖供应商须实现零缺陷生产、100% 准时交付，并严格遵循通用汽车的全部生产规范。该工厂所生产的球墨铸铁零部件广泛应用于通用汽车在北美多个车型平台的动力总成、悬架系统、制动系统及传动系统中。■

How Loramendi and Clow Valve Are Redefining Core-Making for the Waterworks Industry in the U.S.

洛拉门迪与克洛阀门在美国重新定义水务企业的铸芯制造工艺



当美国的消防栓和阀门的百年制造商克洛阀门公司着手对其制芯生产线进行现代化改造时，他们寻找的不只是新的设备，更是一位值得信赖的合作伙伴来推动真正的变革。由此，开启了与洛拉门迪公司的合作。

面临的挑战：满足精度要求而不牺牲正常运行时间

When Clow Valve Company, a historic manufacturer of hydrants and valves for U.S. water infrastructure, set out to modernize its core-making line, it wasn't just looking for a machine it was looking for a trusted partner to drive real operational change. That's when Loramendi stepped in.

The Challenge: Scaling Precision Without Sacrificing Uptime

Clow Valve needed to meet growing demand while upholding the tight tolerances and durability expected of its components. But traditional systems posed real barriers: long changeovers, inconsistent core quality, and sand contamination in guiding zones — undermining both efficiency and consistency. They needed speed, precision, cleanliness — and above all, reliability.

The Solution: A Smarter, Cleaner, Fully Adaptable Core Making System

Loramendi and Clow Valve worked side by side to implement a fully integrated, turnkey solution — more than a machine, a transformation:

A fully automated core making process, from tooling insertion to ejection.

Quick change tooling adaptable to both horizontal and vertical core boxes, with 100% automation and no manual interventions.

Smart head and mesh change systems for seamless

不断增长的需求，同时保持其部件所要求的严格公差和耐用性。但传统的生产系统带来了切实的困难：换模时间长、芯体质量不稳定以及导向区的砂粒污染——这既影响了效率又破坏了稳定性。他们需要速度、精度、清洁度——最重要的是可靠性。

解决方案：更智能、更清洁且完全可适应的芯盒成型系统

洛拉门迪与克洛阀门公司携手合作，共同开发出一套高度集成的交钥匙解决方案——该方案不仅是一台设备，更代表了一次行业变革。系统具备以下核心特性：

全自动芯盒成型流程，涵盖从模具装入到芯盒脱模的全过程；

支持水平与垂直芯盒的快速换模，实现 100% 自动化操作，无需人工干预；

配备智能化射头与网板更换系统，可无缝适配不同零件的尺寸与几何结构；

采用非流态化射砂技术，确保型砂均匀填充与优异的紧实效果，显著提升工艺稳定性；

集成智能砂处理系统，支持多配方管理，并能自动、智能地与射芯机协同运行。通过高精度粘结剂计量控制

adaptation to different part sizes and geometries.

Non-fluidized core shooting technology, achieving optimal compaction with outstanding process stability.

Smart sand plant with multi-recipe capability, enabling automatic and intelligent connection with the core shooters. It ensures the best mixing quality on the market through high-precision binder dosing ($\pm 0.5\%$) and offers efficient process control for consistent core quality.

Clean by Design: Where Maintenance Meets Precision

From day one, Clow Valve's team noticed the difference. The system didn't just perform — it stayed clean and efficient, cycle after cycle:

A dedicated blow plate cleaning system allowed access to nozzles without interrupting production.

An integrated sand cleaning system that removes residual sand without dispersing it over the guiding components — protecting them from wear and setting a clear distinction from conventional designs.

A vertical box cleaning station, ergonomically designed, gave full access to the tooling and included integrated filters — streamlining maintenance like never before.

The Result: More Than Performance — Peace of Mind

Clow Valve didn't just achieve higher productivity — it gained:

Stability in every shift.

Confidence in every core.

A solution built for growth.

Maintenance cycles dropped.

A Partnership Forged in Real-World Results

This is what Loramendi calls “engineering with purpose.”

By deeply understanding its partner's environment and adapting every feature to real operational needs, Loramendi didn't just deliver a machine — it delivered transformation.

Because today, success isn't about specs. It's about solving real problems, with real results, for real companies.

A Milestone Event: CastExpo 2025

This story took center stage at CastExpo 2025 in Atlanta, Georgia, where Loramendi shared the results of its collaboration with Clow Valve as a clear example of purpose-driven innovation. The event also marked a special milestone: more than 30 years of Loramendi Inc. supporting customers across North America. It was the perfect setting to connect with industry professionals, showcase real-world solutions, and reinforce Loramendi's presence as a global leader in core making technology. ■

(精度达 $\pm 0.5\%$)，保障行业内领先的混合质量，结合高效的工艺监控机制，全面确保芯盒产品质量的一致性与可靠性。

清洁设计：精准维护的典范

自项目启动之初，克洛阀门团队便察觉到该系统的显著优势。该系统不仅运行性能卓越，更在持续循环作业中始终保持清洁与高效：

配备专用吹板清洁系统，可在不停机状态下对喷嘴进行有效清洁，确保生产连续性；

集成式砂粒清除系统可彻底去除残留砂粒，避免其扩散至导向部件，从而显著降低磨损风险，相较传统设计具有明显改进；

采用符合人体工程学的垂直箱式清洁站，支持对模具的全方位接触，并配备集成过滤装置，大幅简化维护流程，提升操作便捷性。

结果：超越性能提升——更可靠的克洛阀门解决方案

克洛阀门公司不仅显著提升了生产效率，实现了以下关键优势：

实现各班次的稳定运行

确保每个砂芯作业的可靠性

提供面向未来发展的定制化解决方案

缩短设备维护周期

在实际成果基础上建立的合作关系

正是洛拉门迪所提出的“针对性的工程设计”的核心体现。通过深入理解合作伙伴的运营环境，并将各项功能精准匹配其实际需求，洛拉门迪所提供的不仅是一台设备，更是一场系统性变革。因为在当前商业环境下，成功的关键已不再局限于技术规格与参数，而在于能否为企业的实际运营挑战提供有效解决方案，并切实推动可衡量的成果达成。

里程碑事件：CastExpo 2025

在佐治亚州亚特兰大举办的 2025 美国铸造展上，洛拉门迪公司与克洛阀门公司的合作成果成为焦点，明确了以目标为导向的创新。此次展会还代表了一个里程碑发展：洛拉门迪公司为北美客户提供服务已超过 30 年。这是与业内专业人士建立联系、展示实际解决方案以及巩固洛拉门迪作为全球砂芯制造技术领导者地位的绝佳机会。 ■



Turkish
Foundry
Association



World
Foundry
Organization



WFC 2026

76th Centenary World Foundry Congress

October 18-24, 2026 | Istanbul, Türkiye

The 76th World Foundry Congress (WFC 2026), organized by the Turkish Foundry Association (TÜDÖKSAD) under the umbrella of the World Foundry Organization (WFO), will be held from October 18–24, 2026, at the prestigious Hilton Istanbul Bomonti Hotel & Conference Center, Türkiye. This globally recognized congress brings together foundry professionals, researchers, engineers, and academics to explore cutting-edge developments in casting technologies and their applications across industries.

We cordially invite submissions of high-quality papers that present original research, innovative practices, and transformative insights aligned with the evolving needs of the global metal casting industry.

Key Congress Topics include

- ▶ Advancements in Cast Iron and Cast Steel Technologies
- ▶ Advancements in Non-Ferrous Casting: Materials and Processes
- ▶ Die Casting: Technologies, Challenges, and Future Directions
- ▶ Precision Casting: Achievements and Emerging Technologies
- ▶ Molding Materials, Ceramics, and Refractories: Science and Applications
- ▶ Lean and Agile Manufacturing in Foundries: Optimizing Processes for Efficiency and Cost Reduction
- ▶ AI and Machine Learning in Foundry Process Optimization
- ▶ Intelligent Digital Casting and Materials Genome Engineering
- ▶ Surface Engineering and Heat Treatment of Castings
- ▶ Additive Manufacturing in Foundries: Materials and Process Innovations
- ▶ Fabrication and Machining of Cast Materials: Challenges and Advances
- ▶ Cast Metal Matrix Composites: Design, Processing, and Applications
- ▶ Smart Foundries: Advancing Efficiency, Productivity, and Innovation
- ▶ The ESG Imperative: CBAM, Circular Economy, and the Regulatory Future of Foundries



Join us in Istanbul to shape the future of the global foundry industry!

Key Highlights:

- 3rd WFO Young Researchers Conference
- Poster Presentations & Industrial Visits
- Visit to ANKIROS 2026 Fair
- WFO Centenary & TÜDÖKSAD 50th Year Celebration Banquet



17th International Iron-Steel, Foundry, Non-Ferrous Metallurgy Technologies, Machinery and Products Trade Fair

Powered by "The Bright World of Metals"

22-24 October 2026 — Istanbul Expo Center

For inquiries:

secretary@76wfc.com

Abstract Submission and Registrations:
via www.76wfc.com
(Launching October 2025)





中国铸造协会成立40周年庆祝活动

The 40th Anniversary Celebration of China Foundry Association

邀请函

INVITATION

2026年5月6-9日 中国·上海

May 6th-9th, 2026 Shanghai, China



The 40th Anniversary Celebration of China Foundry Association Invitation

中国铸造协会成立 40 周年庆祝活动邀请函

In 2026, China Foundry Association will reach a significant milestone of its 40th anniversary. It is our great honor to invite you to attend the series of celebration activities for the 40th anniversary of China Foundry Association, to jointly witness four decades of excellence of China's foundry industry and draw the future blueprint for the sustainable development of the global foundry industry!

Since its establishment in 1986, China Foundry Association has been committed to promoting technological progress, industrial upgrading and global collaboration in the industry, striving to establish a first-class, world-renowned industry organization in China that is reliable for the government, trustworthy for the industry, indispensable for enterprises, and with influence on the international stage. Over the past four decades, we have worked hand in hand with industry colleagues to achieve development, promoting the sustainable development of the foundry industry. Chinese foundry has also injected strong impetus into the cooperation and development of the global foundry industry.

To review the glorious journey, exchange development experiences, and look forward to a bright future. We sincerely invite you to join us in the celebration activities in Shanghai from May 6th-9th, 2026, deepening friendship and enhancing cooperation, and jointly write a new chapter of high-quality development for the global foundry industry!

Industry events include: The 22nd Annual Congress of China Foundry Association

May 6th-8th, 2026 Shanghai, China

The annual congress and a series of industry forums will create a high-end platform for intellectual exchange, featuring dozens of cutting-edge reports that consolidate the top research achievements and practical experiences of leading enterprises

2026 年，中国铸造协会即将迎来成立 40 周年的重要里程碑；在这一重要时刻，我们诚挚邀请您莅临中国铸造协会成立 40 周年系列庆祝活动，共同见证中国铸造业四十年砥砺奋进的辉煌成就，共绘全球铸造产业创新发展的未来蓝图！

自 1986 年成立以来，中国铸造协会始终致力于推动行业技术进步、产业升级与国际合作，努力打造成“政府靠得住、行业信得过、企业离不开、国际有影响”，中国一流、世界知名的社团组织。四十年间，我们携手全球行业同仁同心聚力，共同推动铸造行业的可持续发展，中国铸造也为全球铸造行业的合作与发展注入了强劲动力。

为回顾辉煌历程、交流发展经验、展望美好未来，中国铸造协会定于 2026 年 5 月 6-9 日于上海举办“中国铸造协会成立 40 周年”系列庆祝活动，诚邀您相聚上海、共襄盛举！让我们携手深化友谊、促进合作，共同谱写全球铸造业高质量发展的崭新篇章！

庆祝活动包括：

1、第二十二届中国铸造协会年会

2026 年 5 月 6-8 日 中国·上海

年会及系列行业论坛将构筑高端思想交流阵地，凝结行业顶尖研究成果与领军企业实践经验的数十篇前沿报告，围绕当前国际经济形势、行业政策、热点问题展开交流，聚焦政策解读与技术创新，驱动行业新质生产力发展。

in the industry. Discussions will revolve around the current international economic situation, industry policies, and hot issues, focusing on policy interpretation and technological innovation to drive the development of new quality productivity in the industry.

May 6th-9th, 2026 Shanghai, China

Metal China 2026/Diecasting China 2026/Nonferrous China 2026

China Foundry · Connecting the World

Gathering nearly 1,200 well-known domestic and overseas exhibitors on the 120,000sqm exhibition area, and attracting over 150,000 professional visitors from more than 60 countries and regions, the exhibitions will once again become the annual grand event in the foundry industry in 2026. It will form a comprehensive display matrix covering the entire foundry, die casting, and nonferrous casting industries, and build an international exchange and trade platform integrating all materials, all processes, and full industrial chain.

Over a hundred series of industry events: Global Gathering, Shaping the Future Together

Including the 40th Anniversary Celebration Kick-off Ceremony, Banquet, International Friends Award Ceremony, International Friendship Association Award Ceremony, International Foundry Forum, Exhibition Visits, New Product Releases, Seminars, Foundry Culture Experiences, Talent Recruitment, Factory Tours, etc.

We sincerely invite global foundry colleagues, international partners, and media representatives to actively participate in the event. We look forward to welcoming you to Shanghai in May 2026.

For more information, please visit the website: <https://www.expochina.cn/en/index> or contact: limengmeng@foundry.com.cn ■

2、第二十四届中国国际铸造博览会、第十九届中国国际压铸工业展览会、第十九届国际有色及特种铸造展览会

中国铸造 · 链接全球

届时，铸博会、压铸展、有色展将联袂打造行业盛会，12 万平米的展示面积将汇聚近 1200 家海内外知名展商，吸引来自 60 多个国家和地区的 15 万人次专业观众共赴盛会，形成覆盖铸造、压铸、有色金属铸造全行业的展示矩阵，构建起集全材质呈现、全工艺演示、全产业链对接于一体的国际交流展示平台。

2026 年 5 月 6-9 日 中国 · 上海

3、百余项系列行业活动：全球欢聚、共铸未来

包括 40 周年庆祝启动仪式、庆祝晚宴、国际友人颁奖仪式、国际友好协会颁奖仪式、国际铸造业论坛、参观展会、新品发布会、研讨会、铸造文化体验活动、人才招聘、工厂参观等。

诚挚邀请并期待全球铸造同仁、国际友人、媒体等的积极参与，让我们 2026 年 5 月上海见。

了解更多信息，请访问网站: www.expochina.cn 或联系 limengmeng@foundry.com.cn ■





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Product News

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All-Electric Mould Handling for Disa Match—Higher Speeds, Easier Maintenance and Lower Costs

Disa Match 造型机全电动传输系统——更高效率、更易维护、成本更低



DISA, a Norican technology, has launched a new all-electric Automatic Mould Handling (AMH) system for its DISA MATCH moulding lines.

The new AMH replaces hydraulic power with state-of-the-art electric servo drives. These give very precise and smooth control of mould transportation, acceleration, deceleration, and velocity. Using electric drives cuts overall operating costs and boosts sustainability due to simpler maintenance, lower power consumption and no hydraulic oil.

“We’re introducing the latest technology to our new all-electric AMH for DISA MATCH,” says Kasper Paw Madsen, Vice President Portfolio Development at DISA. “Our new AMH features the latest electric servo drives that transport moulds gently yet very efficiently, and advance MATCH’s performance in multiple areas, from higher production rates and uptime to reduced maintenance and running costs.”

近日，诺瑞肯集团旗下的迪砂公司推出了一款全新的全电动造型机 AMH 系统，专为 DISA MATCH 的砂型线设计。

新型 AMH 采用先进的电动伺服驱动器替代传统液压系统。这些驱动器能够对砂型的运输、加速、减速及速率实现精准而平稳的控制。电动驱动技术的应用有效降低了整体运营成本并提升了系统的可持续性，主要体现在维护更为简便、能耗更低，且无需使用液压油。

“我们为 DISA MATCH 推出的全新全电动 AMH 融合了最新技术成果，”迪砂产品组合开发副总裁 Kasper Paw Madsen 表示，“该款新型 AMH 配备了最先进的电动伺服驱动器，能够以更加柔和且高效的方式完成砂型传输，并在多个维度上提升 MATCH 的整体性能，包括更高的生产效率、更长的设备运行时间、更低的维护频率

Electric servo motors bring multiple benefits

The new AMH together with the DISA MATCH is the perfect solution for foundries that want to upgrade their existing moulding line and increase capacity. The new servo drives transport moulds more gently to assure mould integrity and increase transport speed. Current and future DISA MATCH customers will enjoy the new AMH as it is a perfect fit for the MATCH's recently introduced Speed-Up Kits which raise its maximum moulding speed to 210 uncured moulds per hour.

"The new AMH cuts operating costs because it uses less energy and requires less frequent maintenance," explains Lars Hjelm, Global Product Manager for Moulding at DISA. "With lower energy consumption, it's more sustainable, plus there's no oil to change and dispose of. You get a cleaner and quieter working environment too."

Capture valuable AMH data in Monitizer

The new AMH is simpler to install while its more compact motors fit neatly under the ends of the conveyers. With a smaller overall footprint, it can fit in a smaller area or cool moulds for longer within the same floor space. That makes it ideal for space-constrained foundries.

Real-time data from the electric drives can be fed to IIoT systems like Monitizer for monitoring, analysis, predictive maintenance, and other applications. For example, variations in motor metrics like drive load can give early warning of emerging problems.

"DISA has already sold more than 10 new AMHs in North America alone, including an all-electrical AMH on Gamma Foundries' DISA MATCH 20/24 in Richmond, Canada," says Bo Wolff Haugbølle, Vice President OEM Sales at DISA. "The first will be installed later in 2025. We and our customers are very excited about the benefits of taking mould handling in this direction, and we look forward to seeing the new AMH in action very soon."

"The precise control provided by servo technology allows for smoother accelerations and decelerations, ultimately boosting our line speeds and overall efficiency," says Andrew Iannettoni, Foundry Technical Manager at Ford Meter Box. "Choosing an all-electric AMH could potentially reduce our insurance premiums since insurers prefer equipment without hydraulics and we expect to see a decrease in power consumption by eliminating the constant operation of hydraulic pumps." ■

以及更少的运营成本。”

电动伺服电机的应用具有多项优势

新的 AMH 与 DISA MATCH 相结合，为希望升级现有造型线并提升产能的铸造厂提供了一种理想解决方案。新型伺服驱动装置在运输砂型过程中更加温和，有效保障砂型完整性，同时提升了运输速度。由于新 AMH 系统与 DISA MATCH 最近推出的 Speed-Up 套件完美兼容，造型系统的最大速度可提升至每小时 210 个无芯砂型，因此当前及未来的 DISA MATCH 用户均可从中受益。迪砂全球产品经理 Lars Hjelm 表示：“因其能耗更低且维护频率更少，新的 AMH 能够降低运营成本，能耗的降低不仅提升了系统的可持续性，还减少了油液更换与处理的需求。此外，该系统还能提供更加清洁、安静的工作环境。”

在 Monitizer 中获取有价值的 AMH 数据

新型 AMH 的安装更加便捷，结构更为紧凑，可整齐嵌入输送机末端下方。由于整体占用空间更小，该设备不仅可在空间受限的环境中安装，还能在保持原有空间不变的前提下，为模具提供更持久的冷却效果，使其特别适用于场地受限的铸造厂。此外，电机驱动器可实时采集运行数据，并将其传输至 Monitizer 等工业物联网平台，用于设备监控、数据分析、预测性维护等多种工业应用。例如，电机负载等关键参数的变化可为潜在故障提供早期预警。

迪砂公司 OEM 销售副总裁 Bo Wolff Haugbølle 表示：“仅在北美地区，迪砂公司已售出超过 10 台新型 AMH 设备，其中包括安装于加拿大里士满市 Gamma 铸造厂的 DISA MATCH 20/24 的全电动 AMH 系统。首台设备预计将于 2025 年晚些时候完成安装。我们与客户均对新型 AMH 的各项优势感到满意，并期待其尽快投入实际运行。”

福特电表箱铸造厂技术经理 Andrew Iannettoni 表示：“伺服技术所提供的高精度控制，有助于实现更平稳的加速与减速过程，从而提升生产线的运行速度与整体效率。此外，选择全电动 AMH 还有望降低保险费用，因为保险公司更倾向于支持不配备液压系统的设备。同时，我们预计通过取消液压泵的持续运行，电力消耗也将有所减少。” ■

Building a Circular Foundry: How Reclamation is Reshaping Metalcasting

打造循环铸造：回收技术如何重塑金属铸造业

In An Industry Where Margins Are Tight And Regulations Are Tightening, Reclaiming What You Already Have Isn't Just Smart, It's Strategic. Foundries Around The World Are Rethinking How They Handle The Materials That Flow Through Their Processes. Reclamation, Once Seen As a Cost-Saving Add-On, Is Now a Cornerstone Of Operational Sustainability.

This Shift is Being Driven by Two Converging Forces: The Rising Cost and Inconsistency of Raw Materials, and Growing Pressure to Reduce Environmental Impact. Foundry Sand and Scrap Metallics Each Present an Opportunity Not Just for Recovery, But for Process Improvement.

Sand isn't Just Sand Anymore

Fresh Foundry Sand Is Expensive To Procure, Energy-Intensive To Process, And Increasingly Subject To Environmental Regulation. Used Sand, If Properly Treated, Can Be Returned To The Process,

在利润空间有限且监管日趋严格的行业背景下，对现有资源进行回收利用不仅具有战略价值，也体现了前瞻性思维。全球范围内的铸造企业正在重新审视其生产过程中物料的流动方式。回收利用这一举措，已从过去单纯的成本节约手段，演变为实现运营可持续性的关键环节。

这一转变主要受到两方面因素的共同驱动：一是原材料价格的持续攀升与供应的不确定性，二是对环保的要求日益提高。铸造用砂和金属废料的回收，不仅为资源再利用提供了可能，也为工艺优化提供了新的契机。

砂子已不是传统意义上的砂子

新砂采购成本高昂、加工能耗大，且受到环保要求的限制。如果处理得当，旧砂可以反复用于生产，而不会影响铸型的完整性。关键在于去除粘结剂、打碎砂块，并确



Again And Again, Without Compromising Mold Integrity. The Key Is Removing Binders, Breaking Down Lumps, And Ensuring Grain Structure And Size Consistency.

This is Where Vibratory Technology Offers Real Value. General Kinematics Vibra-Mill® Family Of Equipment Uses Tumbling, Abrading, And Conditioning Sand In a Controlled Environment That Reduces Binder Load And Minimizes Thermal Damage. In a Well-Designed System, Reclaimed Sand Can Approach The Quality Of New Sand At a Fraction Of The Cost.

Castings Don't Always Make it to the Finish Line. And When They Don't, The Metal They Contain is Too Valuable to Discard or Process Inefficiently. Reclaiming Sprues, Gates, Risers, and Scrap Castings is No Longer Just About Melting it All Down. It's About Preparing that Metal to Re-Enter the Furnace in a Form That Melts Faster, Slags Less, and Flows Better.

Rotary Drums, Like Gk's Ducta-Sprue® Rotary Sprue Cleaner / Consolidator, Cleans And Conditions Metallic Returns, Removing Sand, Breaking Off Cores, And Consolidating Geometry. They Aren't Just Waste Processors, They Are Pre-Melting Equipment. They Improve Charge Consistency, Reduce Inclusions, And Lower The Energy Required To Hit Tap Temperature. That Means Faster Turnaround, Better Cast Quality, And Lower Melt Costs.

Closing The Loop With Intelligent Reclamation Systems

What's Emerging Is a New Paradigm: One Where Sand And Metal Don't Just Exit The Shakeout, They Enter a Continuous Loop. This Isn't Theoretical. Modern Foundries Are Building Systems That Reclaim And Reuse More Than 90% Of Their Sand. They're Extracting Usable Castings From Sprue Returns. They're Feeding Furnaces With Cleaner, More Efficient Charge Material. Companies Like General Kinematics Are Enabling This Shift, Not By Selling Products, But By Engineering Systems That Close The Loop. Whether It's a Vibra-Mill® Reclaiming Used Sand, Or a Ducta-Sprue® Cleaning Castings And Return Metal, The Goal Is The Same: Reduce Waste, Capture Value, And Move Toward a Circular Model Of Metal Casting.

In The Past, Reclamation Was About Cutting Costs. Today, It's About Creating Resilience. Foundries That Reclaim Better Don't Just Spend Less. They Adapt Faster, Run Cleaner, And Deliver More Consistent Quality In a World Where Unpredictability Is The New Normal. ■

保砂粒结构和粒度的一致性。

这就是振动技术真正发挥作用的地方, General Kinematics 公司的 Vibra-Mill® 系列设备在受控环境中对砂进行翻滚、研磨和处理, 从而降低粘结剂用量并最大程度减少热损伤。在设计良好的系统中, 回收砂的质量可以接近新砂, 而成本只是新砂的一小部分。

废料和回炉料的潜在价值

铸件的生产过程并不总是顺利的, 一旦出现未能完成的铸件, 其中所含的金属因其价值较高, 不能随意丢弃或低效处理。对浇口、冒口、浇道及废铸件的回收已不再局限于简单地整体熔化, 而是通过预处理, 将其转化为更易熔炼、产生更少炉渣、流动性更好的形式, 以便重新回炉使用。

例如, GK 公司的 Ducta-Sprue® 旋转浇口清理与整合机这类旋转滚筒设备, 不仅能够清除金属回炉料中的砂粒、去除芯骨碎片, 还能优化其几何形状、提升装料效率。这类设备不仅作为废料处理装置, 更可视作熔炼前的预处理系统。它有助于提高炉料的一致性, 减少夹杂物, 降低达到铁水温度所需的能耗, 从而实现更快的周转、更高的铸件质量以及更低的熔炼成本。

利用智能回收系统实现闭环管理

一个全新的范式: 砂子和金属在使用后不再被舍弃, 而是进入了一个可持续的循环过程, 这并非空洞的理论构想。如今, 现代铸造厂正在建立系统, 以实现超过 90% 的砂子回收与再利用。企业从浇口返回物中提取可再利用的铸件, 并采用更清洁、更高效的炉料为熔炉供能。以 General Kinematics 为代表的公司正推动这一转型, 其方式并非单纯销售产品, 而是设计能够实现材料循环的系统。无论是用于回收废旧砂的 Vibra-Mill®, 还是用于清理铸件并回收金属的 Ducta-Sprue®, 其目标均一致: 减少浪费、收获价值, 并推动金属铸造行业的循环发展。

回收利用最初的主要目的是降低生产成本。然而在当今世界, 随着不确定性逐渐成为新常态, 回收利用的意义已扩展至韧性的构建。那些在回收利用方面表现更好的铸造厂, 不仅能够降低运营成本, 还能更迅速地适应环境变化, 实现更清洁的生产过程, 并提供更加稳定和可靠的产品质量。■

Robotic Deburring Cell for Die Casting—The Smart Solution for High Part Variety

用于压铸的机器人去毛刺单元——应对多零件种类的智能解决方案



In modern manufacturing, flexibility is a key success factor—especially in the die casting industry, where smaller batch sizes and high part variability are standard. Flexible automation solutions offer a clear competitive advantage. Mössner's robotic deburring cell is designed precisely with this in mind: it combines precision, adaptability, and efficiency in a compact unit.

Workpieces enter the cell via an infeed conveyor, where they are identified by a camera system and precisely picked up by a robot. Inside the cell, various processing tools are available: belt grinders, pivoting and rigid deburring spindles, and pneumatic files ensure

在现代制造业中，灵活性是成功的关键因素——尤其是在压铸行业，小批量生产和零件的高度多样性是常态。灵活的自动化解决方案具有明显的竞争优势。莫斯纳的机器人去毛刺单元正是为此而精心设计：它将精度、适应性和效率集于一体，结构紧凑。

工件经由进料输送带进入加工单元，通过摄像系统进行识别后，由机器人实现精准抓取。单元内配备多种加工工具，包括砂带机、可摆动与刚性去毛刺主轴以及气动锉刀，可针对不同类型的铸件去毛刺作业，确保工艺过程具备高度的灵活性与适应性。

maximum versatility in the deburring of a wide range of cast parts.

The processing tools are permanently installed within the cell, while the robot guides the workpieces to the relevant stations. This workpiece-guided processing allows for rapid switching between operations—without the need for mechanical retooling.

Once deburring is complete, the workpieces are transported out of the cell via an outfeed conveyor. An integrated extraction system ensures that grinding dust is safely and effectively removed.

Key Advantages at a Glance:

- Maximum flexibility through the use of multiple tools: belt grinders, deburring spindles, pneumatic files
- Compact cell design with minimal footprint
- Quick changeovers thanks to a unified control concept that enables intuitive integration of new workpiece types
- Digital twin: ABB RobotStudio allows for offline programming and reachability testing—minimizing commissioning times and enhancing planning reliability
- Large observation windows for full visibility and process transparency
- Integrated extraction system specifically designed for safe removal of grinding dust

Centralized Control via the Robot

All machining processes are centrally controlled via the robot, enabling streamlined coordination and real-time adaptability. New programs and processing routines can be created and modified independently, significantly increasing responsiveness to new production requirements.

August Mössner GmbH + Co. KG specializes in custom-built solutions across mechanical engineering, automation, and robotics. With approximately 140 employees, Mössner executes large-scale projects while maintaining the flexibility required for bespoke systems. At its Eschach site, the company develops, manufactures, assembles, and commissions machinery and systems worldwide.

Whether individual components or turnkey casting and post-processing lines, Mössner's special-purpose machines stand for reliable, fully automated system technology. This includes all critical steps in cast part production—from core handling, die casting machine automation, and cooling, to industrial marking, decorating, sawing, milling, and deburring. ■

加工工具被永久固定安装于单元内部，机器人则负责将工件精准输送至各加工工位。采用工件导向式加工方式，可在不同工序间实现快速切换，无需进行机械换刀操作。去毛刺工序完成后，工件由出料输送机自动运离加工单元。集成式抽排系统可高效、安全地清除磨削过程中产生的粉尘，确保作业环境的清洁与安全。

主要优势一览

- 通过使用多种工具（砂带机、去毛刺主轴、气动锉刀）实现最大灵活性
- 紧凑的单元设计，占地面积小
- 由于采用了统一的控制理念，能够直观地集成新的工件类型，从而实现快速转换
- 数字孪生：ABB RobotStudio 支持离线编程和可达性测试，从而缩短调试时间并提高规划可靠性
- 大型观测窗，实现全方位可见性和工艺透明度
- 集成的抽排系统专门设计用于安全去除磨削粉尘

通过机器人实现集中控制

通过机器人技术实现加工过程的集中控制，确保各环节协调运行并具备实时适应能力。新的程序与加工流程可独立进行创建与调整，显著提升了对新型生产需求的响应效率。莫斯纳公司专注于为机械工程、自动化及机器人技术领域提供定制化解决方案。公司拥有约 140 名员工，在承接大型项目的同时，依然保持了定制化系统所必需的灵活性。位于埃施阿赫的生产基地负责机械与系统的全球研发、制造、组装及调试工作。

无论是单个组件还是整套铸造及后处理生产线，莫斯纳的专用设备都代表着可靠、全自动化的系统技术。这涵盖了铸件生产中的所有关键步骤——从芯盒处理、压铸机自动化、冷却，到工业标识、去芯、锯切、铣削和去毛刺。■



Thixomolding: Revolutionize the Production of Lightweight Structural Components

镁合金半固态注射成型技术：变革结构件的轻量化生产

BOLE Intelligent Machinery, one of the most innovative machine manufacturers from China with a focus on biopolymer, recycling, lightweight construction and the development of new materials in the field of plastics and metal, is investing in the scaling of machines based on Thixomolding Technology.

Thixomolding State of the art

Thixomolding Technology is not a new technology, it is based on the processing of magnesium in a semi-solid state and has been used for decades, especially in Asia, for the production of thin-walled components in the electronics industry, e.g. laptops and displays. It is therefore not surprising that most of the Thixomolding machines, around 2.000 machines, are installed in Asia.

The reason that this technology has so far only been used for thin-walled components is that until

伯乐智能机械作为中国最具创新力的机械制造企业之一，长期致力于生物聚合物、资源回收利用、轻量化结构设计以及塑料与金属领域新型材料的研发，目前正在积极推进基于触变注射成型技术的设备产能扩建项目。

镁合金半固态注射成型技术的最新进展

触变注射成型技术并非新兴工艺，该技术基于镁合金在半固态条件下的成形加工，已在工业领域应用数十年，尤其在亚洲地区广泛用于电子行业中薄壁部件的制造，如笔记本电脑外壳和显示设备组件。正因如此，全球约2000台触变注射成型设备中，大部分均用于亚洲市场。

该技术迄今为止主要应用于薄壁部件的生产，原因在于2019年之前，触变成形设备的锁模力上限仅为1000吨，

2019 this Thixomolding machine was only available with clamping forces of up to 1.000 tons and screw diameters of 84 mm and thus with shot weights of max. 1.500g and throughputs of approx. 80kg per hour.

Since 2019, ever larger machines with clamping forces of now up to 6.000 tons and screw diameters of currently up to 190 mm with maximum shot weights of up to 22kg and possible throughputs of 500kg per hour have been developed and launched on the market.

BOLE Intelligent Machinery is one of the pioneers in these further developments and currently has the largest Thixomolding machine in series production on the market, the MTX 4000 D-170 series machine

Magnesium the infinitely available material on our planet

Why does BOLE now rely on magnesium in combination with Thixomolding Technology? In contrast to many other materials such as plastic and aluminum, magnesium is an infinitely available material on our planet.

Magnesium is a lightweight construction material which, in contrast to aluminum and plastic composite materials, enables a weight reduction of between 10% and 20%.

Magnesium Co2 footprint lower after all?

If you look at the CO2 footprint of magnesium

螺杆最大直径为 84 毫米，导致最大注射量限制在 1500 克以内，每小时产量约为 80 千克。

自 2019 年起，更大规格的设备相继研发成功并投入市场，目前锁模力已提升至最高 6000 吨，螺杆最大直径达到 190 毫米，最大注射量可达 22 千克，每小时产量可实现 500 千克。

伯乐智能机械是推动该技术进一步发展的领先企业之一，其 MTX 4000 D-170 系列机型为当前市场上可用于量产的最大吨位触变成形机。

镁——地球上取之不尽的材料

镁作为一种在地球上储量极为丰富的材料，为何伯乐公司当前选择将其与触变成形技术相结合？相较于塑料和铝等其他常用材料，镁具有更高的可持续利用潜力。

镁作为一种轻质结构材料，相较于铝合金及塑料复合材料，可实现 10% 至 20% 的减重效果。

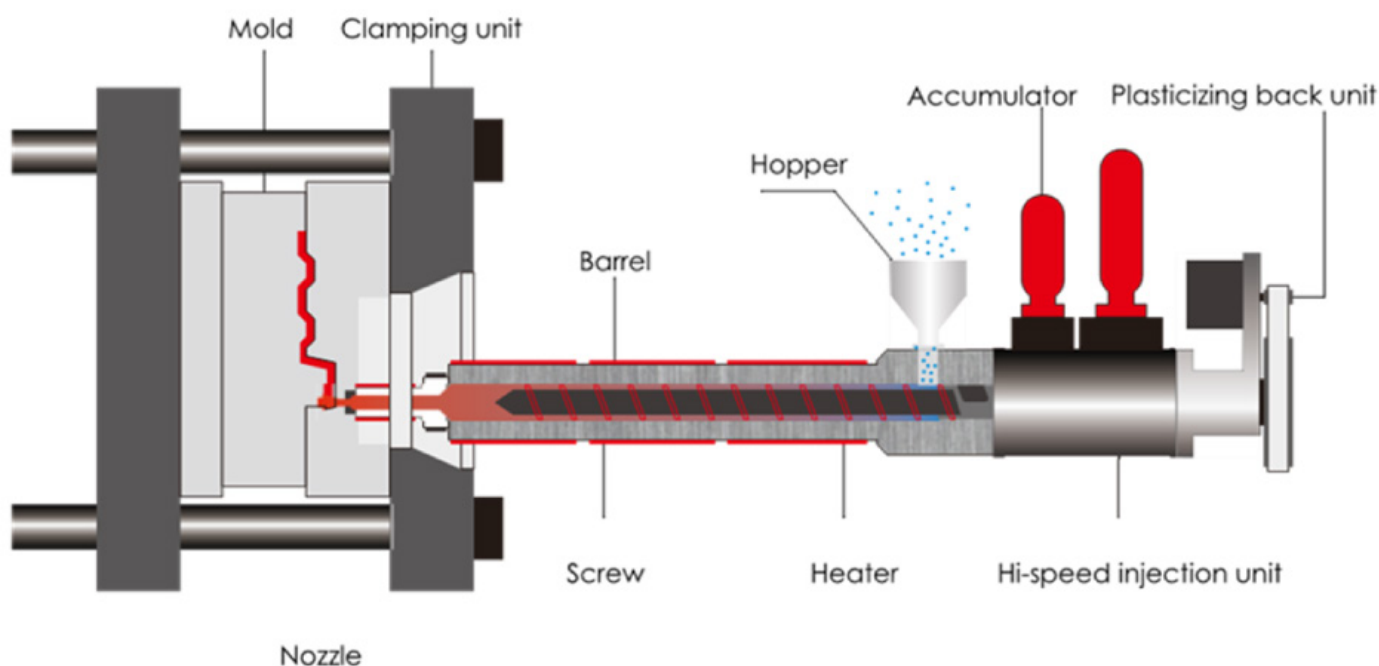
镁的二氧化碳排放量是否显著低于铝？

通过对比镁与铝的单位质量碳排放数据可知，二者存在明显差异。

欧洲地区铝生产的平均碳排放 = 6.7 千克二氧化碳 / 千克

全球铝生产的平均碳排放 = 15 至 16 千克二氧化碳 / 千克

皮江法生产镁的碳排放 = 22 千克二氧化碳 / 千克





compared to aluminum, there is a big difference per kg.

Aluminum in Europe = 6.7 Co2/kg

Aluminum global average = 15 - 16 Co2/kg

Magnesium Pidgeon process = 22 Co2/kg

But if you have a 1,000cm³ component in die casting with aluminum with 2.7kg at 40.5 Co2/kg and in magnesium with 1.7kg at 37.5Co2/kg. That is a Co2 reduction of -8%.

If you now take a close look at the CO2 footprint in production and then also consider the thixomolding technology, the following emerges. In the Thixomolding process, the sprue and overflow weight is between 25% and 40% of the weight of the molded part, which is at least 50% less than in die casting.

If you now look at the Co2 footprint on the shot weight of the 1.000cm³ component mentioned above, you come to the following comparison. The casting in aluminum with at least 5.4kg at 81.0 Co2/kg and in magnesium with 2.12kg at 46.6 Co2/kg. This is a Co2 reduction of -42% compared to the global Co2 average of aluminum.

With new pidgeon processes and electrolysis it will be possible to achieve 8kg Co2/kg for magnesium in the next few years, then the differences will be dramatic in the future.

Recycling magnesium

As already described, one of BOLE's core strategies is recycling. It is therefore not surprising that we have also tested the direct recycling of start-up parts, sprues and overflows. The results are that when this magnesium recyclate is fed back into the Thixomolding process, there is no change in the performance of the

然而，若以相同体积（1000 立方厘米）的压铸件进行比较，铝制部件重 2.7 千克，总碳排放为 40.5 千克二氧化碳；镁制部件重 1.7 千克，总碳排放为 37.5 千克二氧化碳，相对减排约 8%。

进一步分析生产过程中的碳排放，并结合半固态成型技术的应用，可发现更显著的环境优势。在该工艺中，浇口和溢流部分的重量仅占成形件重量的 25% 至 40%，较传统压铸工艺减少至少 50%。

以此计算上述 1000 立方厘米部件的实际射出重量，铝件毛重至少达 5.4 千克，对应碳排放为 81.0 千克二氧化碳；镁件毛重为 2.12 千克，对应碳排放为 46.6 千克二氧化碳。

相较于全球铝生产的平均碳排放水平，镁在此情境下的碳排放降低幅度可达 42%。随着新型皮江法工艺及电解技术的发展，预计在未来数年内，镁的单位碳排放有望降至每千克 8 千克二氧化碳左右，届时其在低碳制造领域的潜力将更加突出。

镁的回收

如前所述，回收利用是伯乐的核心战略之一。因此，我们对启动件、浇口及溢料的直接回收应用进行了系统测试，结果表明，将此类镁合金回收料重新应用于半固态模锻工艺后，成形部件的各项性能指标均未发生显著变化。基于这一成果，半固态模锻成为贵公司实现材料闭环循环的唯一可行工艺，不仅显著降低了原材料成本，同时有效

components. With this knowledge, Thixomolding is the only process that offers the possibility of a closed material cycle in your company, which again significantly reduces your costs and CO2 footprint.

With its Thixomolding Machine Technology, BOLE also offers its customers a recycling technology that produces the recyclate with minimal energy input and feeds it back into the machine. The customer can decide how much recyclate he wants or is allowed to use in his components.

But as I said, 100% recirculation of your start-up parts, sprues and overflows will have no effect on the performance of your magnesium components.

The general advantages of this Thixomolding Technology are brief.

1. Lower porosity on the components, as shrinkage is very low due to the lower input temperature of 580 to 630°C for magnesium

2. No air inclusions, as the components are coated with a honey-like melt with flow front velocity in the source flow.

3. Better corrosion resistance, due to the lower flow front speed, a closed surface is achieved during thixomolding under pressure in the casting process.

减少了二氧化碳排放。

依托先进的半固态模锻设备技术，伯乐还为客户提供了一套低能耗的回收解决方案，可将回收料高效处理并重新投入生产流程。客户可根据实际需求自主决定产品中回收材料的使用比例。需要强调的是，即使在 100% 使用启动件、浇口和溢料等回收料的情况下，所制备的镁合金部件性能仍保持稳定，不受影响。

这种触变成型技术的主要优点简述如下：

1. 由于镁的输入温度较低，为 580 至 630 摄氏度，收缩率非常低，因此部件的孔隙率也较低。

2. 由于各部件均涂覆有类似蜂蜜的熔体，且在源流中熔体前沿流速较快，所以没有气泡。

3. 由于流速较低，在半固态铸造过程中，通过压力实现的触变成形可获得封闭的表面，从而具有更好的耐腐蚀性。

4. 机械性能值至少提高 20%，在某些情况下提高 40%，例如部件的伸长率和抗拉强度。

5. 与压铸工艺相比，能耗降低至少 55%。包括熔化



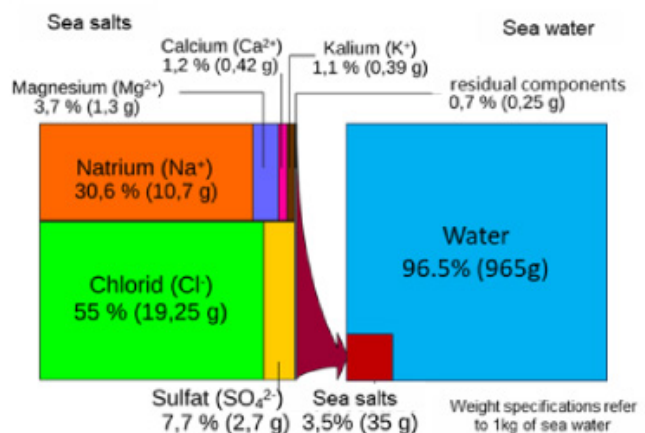
Mining in the salt lake

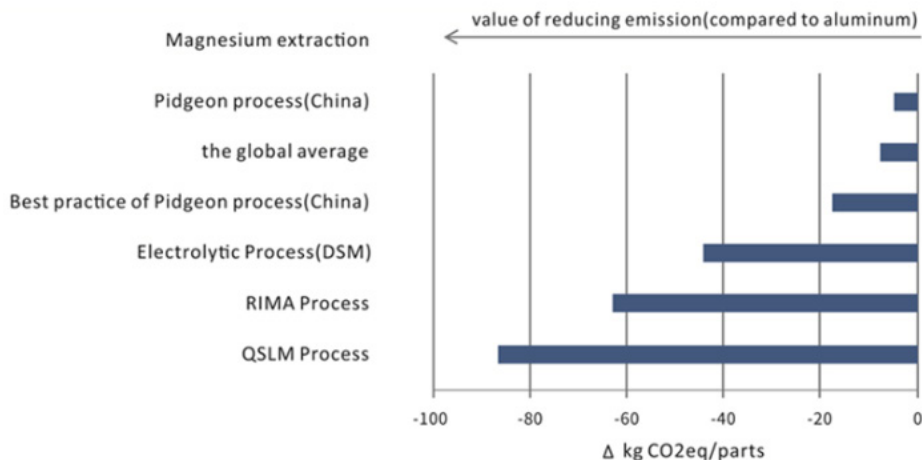


Mining of dolomite ore



Sea desalination





4. At least 20% and in some cases 40% better mechanical values, such as elongation and tensile strength on the component.

5. Energy cost reduction of at least 55% compared to die casting processes. The average energy consumption, including melting and complete peripherals, is less than 0.5 kW per kilogram of magnesium cast.

6. The service life of the tools is at least twice as long and in some cases up to a factor of 3 compared to production using the die casting process. This is a massive cost reduction, especially in the area of large components and therefore tools.

Component costs

If one now compares the article costs in the production of magnesium components in die casting exactly with the production of the same component in Thixomolding, the manufacturing costs in the Thixomolding process are generally 21% to 23% lower, depending on the component.

If you now compare the longer tool service life and the cleaning intervals, you arrive at 26% to 28% lower costs.

When using BOLE recycling technology in combination with a Thixomolding machine, we achieve almost 35% lower manufacturing costs for your components.

Conclusion

We at BOLE Intelligent Machinery are firmly convinced that we can make our planet a little better with Thixomolding Technology. ■

和全部周边设备在内的平均能耗低于每千克镁铸件 0.5 千瓦。

6. 与采用压铸工艺相比，这些工具的使用寿命至少延长了一倍，在某些情况下甚至延长了三倍。这是一项巨大的成本削减，尤其是在大型部件及其模具方面。

部件成本

若将镁合金部件在压铸工艺中的材料成本与采用触变成形工艺生产相同部件的成本进行精确对比，触变成形工艺的制造成本通常可降低 21% 至 23%，具体降幅取决于部件类型。进一步考虑模具寿命更长及清理周期更长等因素，成本降幅可达 26% 至 28%。当触变成形工艺与伯乐智能公司的回收技术结合使用时，部件的制造成本最高可降低约 35%。

结论

综上所述，伯乐智能机械公司坚信，通过应用触变注射成型技术，我们能够改善地球环境贡献一份力量。■

Fast Silo Replacement at the Heart of the Core Sand System

核心砂处理系统中快速更换砂仓装置



Precisely planned, efficiently executed: Modernization of a central core sand hub in a German high-volume iron foundry

In spring 2024, GUT Gießerei Umwelt Technik GmbH, based in Freudenberg, was entrusted with a demanding and time-critical task: replacing aging and heavily corroded silos at the heart of the core sand system in a German series production foundry.

What might sound like a routine maintenance job quickly revealed its complexity when considering the constraints: a complete system replacement had to be carried out during a very short summer shutdown period—with no room for delays or disruptions.

Initial Situation

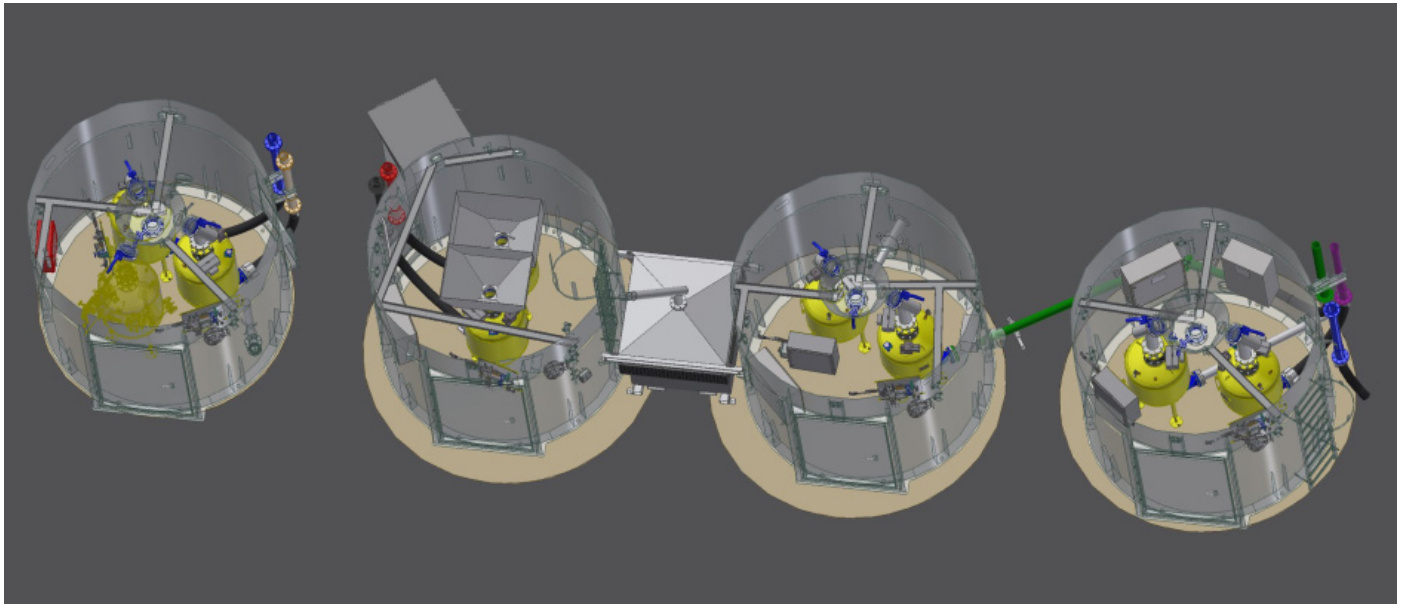
In the center of the foundry, used core sand of various grades is stored temporarily before being distributed to several regeneration units. The existing silos and pneumatic conveying systems had performed reliably for decades but had reached the end of their service life and required replacement — without

精密规划、高效实施：德国某大型铸铁企业中央 砂芯系统的现代化升级

2024 年春季，位于弗罗伊登贝格的 GUT 铸造环境技术有限公司承接了一项任务，即为德国一家铸造厂更换其砂处理系统中老化且严重腐蚀的筒仓。该任务不仅时间紧迫，而且实施条件极为严苛。这似乎仅是一项常规的维护作业，但考虑到必须在极为有限的夏季停工期内完成整个系统的更换，且期间不得出现任何延误或中断，项目的复杂性明显上升。

初始条件

在铸造厂的中心位置，不同等级的旧砂芯暂时存放于此，之后会被分配到多个再生单元。现有的筒仓和气动输送系统已可靠运行数十年，但已达到使用寿命的终点，需要更换——且不能影响下游的生产流程。



compromising downstream production processes.

Project Scope

The project called for the full dismantling of:

- four existing silos including feed lines, and
- eight outgoing pneumatic conveyor systems.

In the same location, GUT was tasked with installing:

- four new silos, including a preassembled pipe bridge,
- one silo equipped with a vibration screening station and magnetic separator, and
- eight new pneumatic conveyor systems.

The Timeline

From electrical disconnection and silo demolition to restarting production, only four weeks were available — a tight timeframe that demanded seamless coordination and precise execution:

- Installation of preassembled silos and pipe bridge: completed within just two days
- Mechanical assembly and connection of all conveying systems: finished in two weeks
- Electrical installation and commissioning in three existing control systems: carried out in just over one week

The Result

The customer was able to restart production right on schedule — with zero delays or disruptions. True to GUT's reputation, the entire project was delivered on time and on budget. The result stands as another

项目范围

该项目要求全面拆除:

- 四个现有的筒仓, 包括进料管线, 以及
- 八套出料气动输送系统。

在相同位置, GUT 负责安装:

- 四座新筒仓, 包括一座预组装的管道桥架
- 一座配备振动筛分站和磁选机的筒仓, 以及
- 八套新的气动输送系统。

时间线

从断电和拆除筒仓到恢复生产, 只有四周的时间——这是一个紧迫的时间表, 需要无缝协调和精准执行:

- 预组装筒仓和管道桥的安装: 仅用两天就完成了
- 所有输送系统的机械装配和连接: 两周内完成
- 三个现有控制系统中的电气安装和调试: 在一周多一点的时间内完成

结果

客户得以按计划准时重启生产——毫无延误或中断。正如 GUT 的声誉一样, 整个项目按时且在预算内交付。这一成果再次有力地证明了德国制造的可靠、高效且技术精湛的工厂工程。

strong example of reliable, efficient, and technically sophisticated plant engineering — made in Germany.

“We thank our customer for the trust placed in us and our suppliers for their excellent support throughout the project. This was a great example of teamwork and execution under pressure.” – Jens Müller-Späth, ■

“我们感谢客户对我们的信任以及供应商在整个项目期间给予的出色支持。这是在压力之下团队合作与执行力的绝佳范例。”——延斯·穆勒-施帕特，



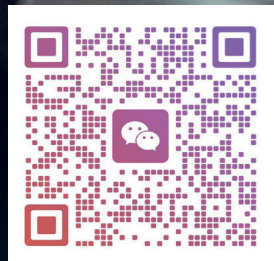
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