

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics



2022年7月28-29日
28-29 July 2022



江苏常州中吴宾馆
Zhongwu Hotel, Changzhou, Jiangsu, China

会议日程

CONFERENCE AGENDA

| 2022年7月28日 | | 28 July 2022 |
|-------------|--|--|
| 08:00-09:30 | 签到 | Registration |
| 09:30-09:40 | 欢迎辞 ORTHOMATERIALS 中国区负责人 翁益良 | Welcome Speech ORTHOMATERIALS China Regional Executive YiLiang WENG |
| 09:40-10:20 | 医用钛合金的纳米晶强化 中国科学院金属研究所 前沿材料研究部负责人 杨柯 | Nano-Grains Strengthening of Medical Titanium Alloy Institute of Metal Research, Chinese Academy of Sciences Head of Specialized Materials and Devices Division Ke YANG |
| 10:20-11:00 | 骨科医疗器械临床前的安全有效性评估 西南交通大学 利兹学院院长&机械学院教授 靳忠民 | Pre-clinical Evaluation of Safety and Effectiveness for Orthopaedic Medical Devices Southwest Jiaotong University Dean of the Leeds Joint School & Professor of Mechanical Engineering ZhongMin JIN |
| 11:00-11:30 | 茶歇 | Tea Break |
| 11:30-12:10 | 国人膝关节解剖特征与假体设计 上海交大学生物医学工程学院 长聘教轨副教授 蔡宗远 | Anatomical Characteristics and Prosthesis Design of Chinese Knee Joint School of Biomedical Engineering, Shanghai JiaoTong University Tenure Track Associate Professor TsungYuan TSAI |
| 12:10-13:30 | 午餐 | Lunch |

| | 材料和法规分会场 | Conference on Materials and Regulations |
|-------------|---|---|
| 13:30-14:10 | 聚醚醚酮植入物的新兴加工方式 赢创(中国) 特种化学应用技术经理 杨锐宾 | Emerging Processing Methods for PEEK Implants EVONIK (China) Specialty Chemical Applied Technology Manager Robin YANG |
| 14:10-14:50 | 硬质塑料包装方案在骨科行业的开发和应用 玫瑰塑胶(中国) 应用开发经理 朱琤艺 | Development and Application of Hard Plastic Packaging Solutions for Orthopedic Devices ROSE PLASTICS (China) Application Development Manager Shirley ZHU |
| 14:50-15:30 | 灭菌过程中涉及的相关微生物测试 诺洁医疗技术 资深技术经理 徐占利 | Microbiological Test Involved during Sterilization Process PROSTERI Senior Technical Manager ZhanLi XU |
| 15:30-16:00 | 茶歇 | Tea Break |
| 16:00-16:40 | 无源外科植入物疲劳可靠性测试方案分享 凯尔测控 技术工程师 王强 | Fatigue Reliability Test Scheme for Non-active Surgical Implants CARE Technical Engineer Qiang WANG |
| 16:40-17:20 | 新法规下同品种临床评价关键点 - 以常见骨科植入物为例 金石医疗 高级法规事务经理 马敬宇 | Key Points for Clinical Evaluation of Equivalent Devices under New Regulations - Cases of Common Orthopedic Implants KINGROCK Senior Regulatory Affairs Manager JingYu MA |
| 17:20-18:00 | 互动 | Networking |
| 18:00-20:00 | 晚宴 | Dinner |

| | 加工和测量分会场 | Conference on Processes and Measurements |
|-------------|--|--|
| 13:30-14:10 | 掌握机器、刀具、工艺要素 - 就可以在医疗器械中取得最佳加工的效果 米克朗刀具 中国总监 骆竞毅 | Machine, Tools, Process - Those who Master all Factors Achieve the Best Results in the Machining of Medical Instruments MIKRON TOOL China Director Loke Chin Yee Alex |
| 14:10-14:50 | 191neo助力医疗产品智能制造 斯达拉格(中国) 宝美销售总监 王相华 | 191neo Helps Intelligent Manufacturing of Medical Products STARRAG (China) Bumotec Sales Director XiangHua WANG |
| 14:50-15:30 | 咬合夹持+柔性制造骨科植入物和器械加工的自 动化实践先行者 朗牌 中国区负责人 李元琚 | Stamping + Flexible Clamping - the Pioneer of Module Factory Automation fall in Orthopaedics Materials and Medical Engineering LANG TECHNIK China Regional Leader YuanJun LI |
| 15:30-16:00 | 茶歇 | Tea Break |
| 16:00-16:40 | 干冰去毛刺的优势和局限性 酷捷(中国) 亚太销售总监 孙刚 | Advantages and Limitations of Dry Ice Deburring COLD JET (China) Senior VP, Sales Asia Gang SUN |
| 16:40-17:20 | 多孔钽涂层在骨科应用中的机械性能分析 锐百顺(中国) 营销总监 刘卓苓 | Mechanical Analysis of Porous Tantalum Coating in Orthopaedics Application APS (China) Sales Director Louis LIU |
| 17:20-18:00 | 互动 | Networking |
| 18:00-20:00 | 晚宴 | Dinner |

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics



2022年7月28-29日
28-29 July 2022



江苏常州中吴宾馆
Zhongwu Hotel, Changzhou, Jiangsu, China

会议日程

CONFERENCE AGENDA

2022年7月29日

29 July 2022

材料和法规分会场

Conference on Materials and Regulations

09:00-09:40 骨科产品注册申报中关于临床前测试的难点和痛点
药明康德医疗器械测试中心 | 化学测试实验室负责人 孙冬迪 & 主任级高级研究员 陈霏生 & 微生物实验室技术负责人 秦杰

Difficulties and Pain Points of Preclinical Testing in Orthopaedic Product Registration Application
WUXI APTEC Medical Devices Testing Center | Head of Chemical Testing Laboratory DongDi SUN & Director-level Senior Researcher Peter CHEN & Technical Director of Microbiology Laboratory Jie QIN

09:40-10:20 全膝关节置换的取出分析
毅博科技 (中国) | 高级经理 杨丽洁

Retrieval Analysis of Total Hip Replacement
EXPONENT (China) | Senior Manager Lijie YANG

10:20-10:40 茶歇

Tea Break

10:40-11:20 骨科器械欧盟CE MDR的临床评价及如何建立等同
海河生物 | 高级技术副总裁 傅立 & 法规咨询业务总监 金香丹

Clinical Evaluation and Establish Equivalency of EU CE MDR for Orthopedic Devices
MID-LINK | Senior VP of Technology Lee Fu & Director of Regulatory Consulting XiangDan JIN

11:20-12:00 ISO 14644洁净室和相关受控环境要求解读
通标 (中国) | ISO 14644产品业务拓展经理 何泽彪

Interpretation of ISO 14644 Cleanrooms and Associated Controlled Environments Requirements
SGS (China) | ISO 14644 Product Business Development Manager Royce HE

加工和测量分会场

Conference on Processes and Measurements

09:00-09:40 骨科智造-数字化骨科解决方案
海克斯康 (中国) | 医疗行业研究院技术总监 刘彬

Orthopaedics Intelligent Manufacturing-Digital Orthopedic Solutions
HEXAGON (China) | Technical Director of Medical Industry Research Institute Bin LIU

09:40-10:20 先进的刀具夹持技术-致力于为医疗行业降本增效
瑞格费克斯 (中国) | 业务拓展经理 徐晶晶

Cutting-Edge Toolholding Technology Can Reduce Costs and Increase Efficiency among Medical Industry
REGO-FIX (China) | Business Development Manager JingJing XU

10:20-10:40 茶歇

Tea Break

10:40-11:20 Ti6Al4V的3D打印工艺与减材后处理自动化
GF加工方案 (中国) | 增材制造产品经理 李智

3D Printing and Milling Post-Processing Automation of Ti6Al4V
GF Machining (China) | Product Manager of Additive Manufacturing Leonard LI

11:20-12:00 数“智”未来-DX为测量助力前行
三丰 (中国) | 营业技术部次长 李斌








The Future of Intelligent Data-DX Facilitates Advance of Measurement
MITUTOYO (China) | Sales Engineering Department Vice Director Bin LI

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics

金属材料

METALLIC MATERIALS

| | | |
|---|--|--|
|  | <p>提供符合医疗器械行业质量标准的精密薄壁不锈钢管的市场领导者。</p> | <p>Market leader in supplying precision stainless steel thin wall tubing that meets medical device industry quality standards.</p> |
|  | <p>提供 TC4/TC4ELI/TC20/TA1G/TA2G/TA3G 板、棒、丝材的专业医用钛合金材料制造商。</p> | <p>Professional medical titanium alloy material manufacturer offering sheets, bars and wires in TC4 / TC4ELI / TC20 / TA1G / TA2G / TA3G.</p> |
|  | <p>高精度医用不锈钢和钛合金丝材、棒材、板材及型材制造。</p> | <p>Manufacture of wires, bars, sheets, and sections in medical stainless steel and titanium with high precision.</p> |
|  | <p>金属中空材的全球领导者，提供用于创伤、脊柱和运动医学等骨科植入物及手术器械应用的钛合金和不锈钢中空材，以及聚合物系列植入物的注塑成型代工服务。</p> | <p>World's leading producer of cannulated bars in titanium and stainless steel for the production of orthopaedic implants and surgical instruments in trauma, spine and sports medicine applications, as well as injection molding service of polymers for implants.</p> |
|  | <p>镍钛合金丝材、管材、定型件生产和销售；医疗零部件委托加工和组装一站式服务。</p> | <p>One-stop solution for all things Nitinol: material, design, engineering, testing, production and contract manufacturing for medical devices.</p> |
|  | <p>90 年欧洲医疗产业原材料供应商，提供骨科植入物和手术医疗器械的钛合金、钴铬钼及不锈钢原材料。</p> | <p>90 years of European medical raw material supplier, providing implantable and instrumental material ranges from titanium alloys, CCM and stainless for medical market.</p> |
|  | <p>提供医疗应用的全系列钛材牌号的钛棒及钛板制造厂家。</p> | <p>World's leading producer providing full range of titanium grade in bars and plates for medical application.</p> |

非金属材料

NON-METALLIC MATERIALS

| | | |
|---|---|---|
|  | <p>可吸收骨科植入材料，具有的生物相容性和生物降解性优势，在运动医学、外伤、颅颌面等手术领域中，可作为治疗肌肉骨骼系统损伤。</p> | <p>Especially developed for resorbable orthopedic implant devices and serve as the matrix in a wide variety of applications to treat injuries such as sports medicine, trauma and spinal surgery.</p> |
|  | <p>生产和销售符合医疗行业严苛要求的医疗级塑料板棒，同时提供塑料材料机加工和注塑服务。</p> | <p>Manufacture and sale of medical plastic sheets and rods which are complied with stringent requirements of the medical industry, and providing plastic material machining and injection moulding services.</p> |
|  | <p>提供植入级聚醚醚酮 VESTAKEEP®，植入级可降解聚合物 RESOMER®，以及医疗级尼龙等高性能聚合物。</p> | <p>A global leading supplier of high performance polymers for medical application, including implantable PEEK (VESTAKEEP®), bioresorbable polymers (RESOMER®), and PA12 etc.</p> |
|  | <p>行业领先的生物医用材料供应商，为医疗行业提供专业的技术和服，包括：医用改性塑料、植入材料、药物 / 聚合物混合，以及贸易和分销业务。</p> | <p>An industry-leading biomedical materials provider, serving medical device and pharmaceutical manufacturers with professional technology and services. These include custom medical compounds, implantable materials, drug/polymer blends, and trading & distribution businesses.</p> |
|  | <p>为医疗器械制造商提供高性能可植入 PEEK 材料解决方案的全球领先企业，提供的产品和服务用于脊柱、创伤和骨科医疗领域的组件的制造，旨在研发使用寿命更长的植入式医疗器械。</p> | <p>A global leader in providing high-performance implantable PEEK solutions to medical device manufacturers. The company provides products and services for spine, trauma and orthopaedic and dental medical segments for the development of long-term implantable medical devices.</p> |
|  | <p>生产和销售 PEEK、PPSU、碳纤维复合材料等医用高分子材料，同时可提供相关材料的医疗器械产品代工。</p> | <p>Manufactures PEEK,PPSU,CF/PEEK composite and other medical grade polymers, and also provides OEM manufacturing service for related medical tools.</p> |
|  | <p>作为高性能热塑性塑料挤压和压缩成型技术的世界领先制造商，我们的先进技术使我们能够将全系列的热塑性树脂转化为棒材、片材和薄膜。</p> | <p>As a world leading manufacturer in extrusion and compression molding technologies of high performance thermoplastics, our advanced technologies allow us to convert the full range of thermoplastic resins into rods, sheets, and film.</p> |

包装材料

PACKAGING MATERIALS

| | | |
|---|---|---|
|  | <p>作为欧洲无菌包装解决方案领航者，我们可以帮助您提供从包装设计到生产阶段的高品质无菌包装，以及包括无菌吸塑盒、封口膜、泡沫垫和热封的整体解决方案。</p> | <p>As Europe's leading packaging solution provider, we can assist you from the concept to the production phase to manufacture top quality sterile packaging, providing total solution of blister packs, sterile lids, foam, and sealing.</p> |
|  | <p>专注于医用吸塑盒和 ProFlex Film™ (TPU 医用包装) 的研发与生产，在医疗领域里广泛应用于骨科植入器械及手术器械等。</p> | <p>Specializes in the research, development and production of Medical blister packaging and ProFlex Film™ (TPU medical packaging), which is widely used in orthopedic implants and surgical instruments in the medical field.</p> |
|  | <p>全球领先的为医疗器械和制药企业提供灭菌袋、盖材、卷料、袋内支撑卡的专业医用包装公司。</p> | <p>World's leading supplier of innovative pouch product, die-cut lid, roll stock and mounting cards, providing outstanding quality and technical innovation to the global healthcare market.</p> |
|  | <p>具有近 70 年的硬塑包装经验，为医疗器械、骨科、齿科和医疗保健等产品研发并生产初级和次初级包装解决方案。</p> | <p>Almost 70 years of intelligent hard-plastic packaging experience, we are specialized in the development and production of the primary and secondary packaging solutions for the areas of medical technology, orthopedic, dental, healthcare, laboratory and diagnostics.</p> |

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics

工艺服务

PROCESSING SERVICES

| | | |
|---|---|---|
|  | <p>提供骨科植入物与手术工具的涂层服务，拥有喷涂纯钛、钛合金、羟基磷灰石涂层领先技术与品质。</p> | <p>Coating service provider for orthopaedic implants and surgical tools, producing high quality commercially pure titanium (CPTi), titanium alloy (Ti6Al4V), and hydroxyapatite (HA) orthopaedic implant coatings.</p> |
|  | <p>生产钴铬钼材质股骨髁/胫骨托/双极头外杯植入物毛坯铸件和不锈钢材质股骨髁试模铸件。</p> | <p>Manufacture of CoCrMo femoral/ tibia/bi-polar implant casting parts, and Stainless steel femoral trial casting parts.</p> |
|  | <p>专为医疗器械提供表面处理代工服务，包括：钛金属阳极氧化、不锈钢的钝化和电解抛光、适用于所有植入物的HA^{nano}（纳米羟基磷灰石）涂层。</p> | <p>Focus on providing surface finishing services for medical devices, including titanium anodizing, stainless steel passivation and electrolytic polishing, HAnano (Nano hydroxyapatite coating) for all implants.</p> |
|  | <p>提供满足全球医疗骨科行业及航空工业发展需要的骨科植入物精密锻件、机加工成品件及航空发动机关键零部件产品。</p> | <p>Provides orthopaedic precision forging parts, finished machining products and key components of aero plane engine to meet the fast development and huge demands of global medical and aviation industry.</p> |
|  | <p>我们的Medthin™系列涂层具有高硬度、良好的结合力、高断裂韧性、低摩擦特性，这些涂层现在广泛应用于医学植入物及手术器械中。</p> | <p>Our Medthin™ series of coatings features high hardness, excellent adhesion, fracture toughness and low friction that are widely used in medical implants and surgical instruments.</p> |
|  | <p>为种植体生产企业提供种植体、基台及其他种植体附件数控加工及表面处理（喷砂酸蚀，阳极氧化）的代工服务；为骨科生产企业提供脊柱创伤类产品的数控加工及表面氧化的代工服务；椎体成形工具、骨科手术工具、模具加工、注塑件加工等加工业务。</p> | <p>CNC machining and surface treatment (sandblasting, acid etching, anodizing) of implants, abutment and other implant accessories for implant manufacturers; Provide CNC machining and surface oxidation OEM services for orthopedic manufacturers of spinal trauma products; Vertebra forming tools, orthopedic surgery tools, mold processing, injection parts processing and other processing business.</p> |
|  | <p>向创伤、脊柱、关节、齿科种植体、工具器械类产品的生产商提供全套超声波清洗及各项表面处理工艺研发、代工服务、设备及附属设施。</p> | <p>Total solution provider of ultrasonic cleaning, R&D of cleaning and surface treatment process and service of surface treatment for trauma, spine, joint, dental implant and instrument products.</p> |
|  | <p>为关节、脊柱、创伤和齿科市场提供一站式的合同制造服务；也是医疗领域铸造、机加工、等离子喷涂和增材制造方面的技术专家。</p> | <p>A fully-integrated, global contract manufacturer for orthopedic, trauma, spine and dental markets and a recognized expert in casting, machining, plasma spray coatings and additive manufacturing technologies in the medical field.</p> |
|  | <p>一站式灭菌解决方案提供商，业务包括灭菌技术服务和实验室检测服务，聚焦于医疗器械、医药包装、生物制品等行业。</p> | <p>One-stop sterilization solutions provider, business includes technical solutions and laboratory test, which is primarily specialized in medical device, pharmaceutical packaging, and biological products etc.</p> |

咨询及检测服务

CONSULTING AND TESTING SERVICES

| | | |
|---|---|--|
|  | <p>整合了德国实验室、德国设备制造商及国内优秀资源的第三方植入物检测实验室，使用各类国际先进的检测设备，可以为客户提供各种产品注册检测服务和研发检测服务。</p> | <p>A professional third-party implant testing laboratory by integrating German test service provider, German equipment manufacturer and domestic excellent resources, using a large number of international advanced testing equipments, which can provide customers with various product registration testing services and R & D testing services.</p> |
|  | <p>在医疗器械领域我们提供MRI安全性和兼容性测试、失效分析、实验设计和测试、有限元分析、工厂审核、美国和欧盟监管文件提交、植入物取出分析、产品召回相关的技术咨询等服务。</p> | <p>As an engineering and scientific consulting firm, we provide technical services including MRI safety and compatibility test, failure analysis, experimental design and testing, finite element analysis, quality assurance and factory audit, regulatory submissions in USA and Europe, explanted device analysis and product recalls in medical device industry.</p> |
|  | <p>作为一家服务于中高端、创新型医疗器械的第三方检测服务公司，为全球医疗器械研发生产企业提供专业的临床前大动物实验、生物相容性测试、国内外法规注册咨询、临床研究、体系与技术定制化培训等服务。</p> | <p>A strategic project integration management platform providing medical device manufacturers with professional preclinical performance testing in vivo, biocompatibility testing, international registration consulting, clinical research, customized quality and customized trainings, etc.</p> |
|  | <p>为医药企业提供全生命周期服务的专业公司并拥有17年的行业经验。我们的检测机构是首家获得国家级资质的非公有机构并拥有多样的检测能力。我们的咨询机构为客户定制策略，加速上市。</p> | <p>Professional services provider for medical enterprises with 17 years experience. Testing lab is the first non-public institution that obtains ChinaLaboratory Mandatory Approval with strong testing capacity. Consulting service assists client to establish global market strategy and speed the access to the market.</p> |
|  | <p>全球唯一的医疗器械研究组织及ISO-10993标准的奠基人，为全球医疗器械企业提供上市前和上市后的测试、法规咨询和临床服务。</p> | <p>The only medical device research organization (MRO), the founder of ISO-10993, providing pre- & post-market testing, consulting and clinical services to medical device companies worldwide.</p> |
|  | <p>外科植入物力学性能检测的第三方检测平台，拥有自主研发的检测设备，具有ISO17025等资质，报告可提交至NMPA、CE、FDA进行产品注册。</p> | <p>The third-party testing platform for Mechanical properties testing of surgical implants, has self-developed testing equipment and ISO 17025 certification. Reports can be submitted and used to NMPA, CE, and FDA for product registration.</p> |
|  | <p>国际公认的测试、检验和认证机构，致力于为医疗器械行业提供专业的检测服务，拥有全球领先的GMP合规服务实验室。</p> | <p>The worlds' leading testing, inspection and certification company, with a state-of-the-art clinical pharmacology unit and the global network of GMP-compliance laboratories.</p> |
|  | <p>专业第三方检验检测服务平台，为全球医疗器械生产研发公司提供生物相容性试验、微生物检测、医疗器械包装验证等测试服务。</p> | <p>As third-party professional testing service platform, we provide biocompatibility testing, microbiological testing, medical device packaging verification for medical device manufacturing and research worldwide.</p> |
|  | <p>拥有40年的医疗器械测试经验，提供从研发到市场化的一站式医疗器械测试服务商。所有服务流程均遵从且满足CMA、ISO/IEC 17025、US FDA GLP、欧盟成员国比利时OECD GLP、ISO13485、A2LA及相关ISO标准的要求。提供八大核心业务：大动物实验、化学测试、毒理学风险评估、生物相容性、生物学评价、微生物测试、病理学平台和注册及临床等。</p> | <p>With 40 years of medical device testing experience, we can provide a one-stop medical device testing service from R&D to marketization. All service processes comply with and meet the requirements of CMA, ISO/IEC 17025, US FDA GLP, EU Member State Belgium OECD GLP, ISO13485, A2LA and related ISO standards. Providing eight core businesses: large animal research, chemical testing, toxicological risk assessment, biocompatibility, biological evaluation, microbiological testing, pathology services and registration and clinical services, etc.</p> |

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics









加工设备

MACHINING EQUIPMENTS

| | | |
|---|--|--|
|  | <p>高精度超高压五轴水刀，IGEMS-3D软件，快速、智能套料，切割精度达±0.02mm。国内首创，为钛合金骨科植入体等医疗器械提供高效自动化加工方案。</p> | <p>High accuracy and ultra-high pressure X5 waterjet cutting machine with IGEMS-3D software, to cut the material faster and intelligently, achieving cutting accuracy up to ±0.02mm. Providing efficient automatic processing solution for titanium alloy orthopedic implants and other medical devices.</p> |
|  | <p>提供包括车削、铣削以及先进加工技术，例如超声加工技术、激光加工技术和增材制造技术等全方位医疗产品加工行业方案。</p> | <p>Medical full-service provider for turning Technology, milling technology as well as new technologies (Ultrasonic, LaserTec, Additive Manufacturing).</p> |
|  | <p>全球精密制造技术的领导者及整体解决方案提供商。我们致力于协助医疗行业客户创造高附加值产品、降低制造风险并有效提高生产效率。</p> | <p>A leading global provider of complete solutions to the precision machining industry and manufacturers of precision components. We're committed to help medical customer to create high value products, reduce manufacturing risk and improve efficiency.</p> |
|  | <p>无论是植入物、假体，还是医疗器械，我们的五轴联动通用加工中心可满足医学工程行业的最高要求，确保精密工件的完美制造。</p> | <p>Whether implants, prostheses or medical devices, our 5-axis universal machining centers meet the highest demands of the medical engineering industry and ensure the perfect manufacture of precision parts.</p> |
|  | <p>提供骨科磨削方案的五轴数控磨床制造商，全球医疗领域磨削应用的领跑者。</p> | <p>5 axes grinding machines manufacturer and solution provider for orthopaedics, a global leading company in grinding application for medical industry.</p> |
|  | <p>为医疗产品加工提供高效高精解决方案的多轴自动机床、自动走心车床、车铣中心、和通用车床等。</p> | <p>Providing high efficient and high precision technology solutions for medical products by Multi-spindle automatics, sliding headstock automatic lathes, turn-mill centers and universal turning machine.</p> |
|  | <p>诞生于我们的数字化工厂的五轴加工中心、车铣复合加工机等，满足医疗行业客户加工的多样化需求。</p> | <p>5-axis machining center and multi-tasking machines manufactured in our iSMART Factory, fully meet the diversified needs of customers in the medical industry.</p> |
|  | <p>专业设计制造高精度数控机床，广泛应用于医疗、齿科和工业切削刀具的生产磨削。</p> | <p>Specializing in the design and manufacturing of high precision CNC machines for production grinding of cutting tools and cylindrical grinding for medical, dental and industrial cutting tools.</p> |
|  | <p>通过超高性能运动学和5轴联动加工，为医疗产品带来了高效可靠的整体高精加工解决方案。</p> | <p>Providing an efficient and reliable complete high-precision machining solutions for medical products through the ultra-high performance kinematics with five simultaneous axes machining.</p> |
|  | <p>在人工髋关节和椎间盘产品加工领域中，为不同类型的金属和陶瓷材料的球及球窝提供优化粗糙度和圆度解决方案的超高精度磨床。</p> | <p>Microfinish and Superfinish machines for improving roughness and roundness of different types of metal and ceramic balls and cups for Hip and Spinal Implants.</p> |
|  | <p>移动式主轴箱技术及瑞士型自动车床的发明者及行业领导者。我们凭借在整个医疗技术生产链中的丰富经验、全面的解决方法、完整的生产计划和全球性业务，成为医疗器械和仪器制造商及其供应商的完美合作伙伴。</p> | <p>The inventor and a pioneer of sliding headstock technology and the Swiss-type automatic lathes. Vast experience throughout the medtech production chain, a holistic approach, a complete production program and a global presence make us the perfect partner to medical device and instrument manufacturers and their suppliers.</p> |
|  | <p>有着60多年技术经验的工业液体过滤技术权威，一直致力为不同应用领域提供最先进的无耗材过滤系统。</p> | <p>With more than 60 years of technical experience in the industrial liquid filtration technology authority, committed to providing the most advanced non consumable filtration system for different applications.</p> |
|  | <p>为全球医疗领域提供创新加工方案的多轴数控机床制造商。</p> | <p>An innovative machining solutions provider of 5+ axes CNC machines in global medical industry.</p> |

后道处理设备

POST-PROCESSING EQUIPMENTS

| | | |
|---|---|--|
|  | <p>全球领先的超声波清洗设备制造商，为医疗器械和植入物等行业提供非标钝化和清洗设备。</p> | <p>The world's leading manufacturer of ultrasonic cleaning equipment, providing customized passivation and cleaning equipment for medical devices, implants and other industries.</p> |
|  | <p>干冰清洗机，使用干冰作为清洗介质，应用于工业设备、模具和产品的清洗，是一种绿色环保、无损、干燥、不会产生二次污染的清洗方式。</p> | <p>Dry ice cleaning machine, using dry ice as cleaning medium, applied to industrial equipment, molds and products cleaning, is a green, non-destructive, dry, no secondary waste cleaning way.</p> |
|  | <p>用于医疗器械产品直接标识的激光打标机。</p> | <p>Laser marking system for direct marking of medical device.</p> |
|  | <p>为骨科植入物、医疗器械及其它工程医疗用品提供各种表面光饰工艺、设备以及相配套的工艺水处理及光饰耗材。</p> | <p>Provides finishing processes and equipment as well as process water treatment and consumables for a variety of surface finishes on orthopaedic implants, medical devices and other engineered medical products.</p> |
|  | <p>专注于骨科医疗器械生产领域的技术公司，旨在为广大骨科医疗器械制造商提供金属或3D打印部件的表面处理技术、介质及相关设备。</p> | <p>As a professional tech support company and equipment supplier in orthopedics industry, we focus on metal or 3D parts finishing and deburring by providing advanced machines, specific media proprietary technology, and customized solutions to many orthopedic medical device manufacturers.</p> |
|  | <p>主要提供用于关节类产品、骨板、骨螺钉、心血管支架、手术器械等表面抛光处理设备及相关耗材，并全程提供技术支持服务。</p> | <p>Mainly provides surface polishing equipment and corresponding consumables for joint products, bone plates, bone screws, cardiovascular stents, surgical instruments, etc., and provides technical support services throughout the process.</p> |
|  | <p>为医疗行业提供抗腐蚀打标、激光切割、激光焊接以及3D打印等解决方案的高科技公司。</p> | <p>As a high-tech company we provide solutions for the medical industry such as anti-corrosion marking, laser cutting, laser welding and 3D printing.</p> |
|  | <p>主营研磨抛光设备、研磨耗材、研磨添加剂，以及医疗植入物后道研磨抛光的整体解决方案。</p> | <p>Provides polishing machines, polishing media and polishing compounds, and also offers the total solution for the final polishing process of medical implant.</p> |

设备附件及耗材

EQUIPMENT ACCESSORIES AND CONSUMABLES



工装夹具的变革：4 个拉钉构成的零点快换系统，具备高精度。我们的产品有快换底板及顶部夹具组成，广泛应用于精密加工骨科。新增气动底板及虎钳以适配更多客户需求。

Workholding Evolved . Simple 4 pull stud zero point system. Quick changeover with high accuracy. Our products including quick change bases & top toolings are widely used in precision machined orthopedic plates. New additional pneumatic bases & vises are for more and more customers' demand.



全球金属加工液领域活跃的制造商，致力于高质量的切削液和磨削油的研究及生产。

A globally active company in the metalworking fluid sector, developing and producing high-quality cutting and grinding fluids.



主要提供辐照、环氧乙烷、高压蒸汽、过氧化氢等灭菌方式的灭菌检测耗材，其中灭菌化学指示剂、生物指示剂销往全球 100 多个国家。

Mainly provides sterilization testing consumables for sterilization methods such as irradiation, ethylene oxide, high-pressure steam, and hydrogen peroxide. Among them, sterilization chemical indicators and biological indicators are sold to more than 100 countries around the world.



深入学习和应用欧美精密小零件加工解决方案，提升中国医疗客户（创伤、脊柱、关节、种植牙等领域）生产效率，解决各种加工难题。

In-depth study and application of precision small parts processing solutions in Europe and the United States, improving the production efficiency of Chinese medical customers (trauma, spine, joints, dental implants and other fields), and solving a variety of processing problems.



致力于工装夹具系统、测量设施、机器人、工作管理软件的研发和生产。

A global operation organization for the development, production of tooling system, presetting & measuring device, robot loading system, and job management software.



全球金属切削技术领导者，以高性能切削刀具、创新研发及贴近客户需求的特质在全球市场获得成功。“PASSION FOR PRECISION - 精益求精”是我们的承诺与主旨。

As a leader of the global cutting technology, the high-performance cutting tools, inventiveness, and customer focus are the three factors that have made us a success on the world market for cutting tools. PASSION FOR PRECISION is our commitment and keynote.



对变形敏感的工件、以及对任何形状的零件进行同心补偿的夹持专家。

Specialist in clamping deformation-sensitive workpieces and in the compensating, concentric clamping of whatever-shaped components.



致力于专业开发、生产五轴机床配套的零点快换系统、工件夹持系统。提供植入物及器械零件加工自动化一体化方案。

Focus on the development and production of QuickPoint and Workholding system for 5-axis machine. We supply the complete module or special automation solution to the trauma, spine, joint parts and other field components.



以其最高质量和精度、以小尺寸和难加工材料为主的圆形硬质合金刀具，包括直径为 0.1mm 和最大深度为 50xd 的刀具。在加工骨科或医用螺钉时提供了表面质量最高、完整且无毛刺的工具解决方案。

Round carbide cutting tools in the highest quality and precision, with focus on small dimensions and the machining of difficult materials, includes tools with diameters from 0.1 mm and a maximum depth of 50 x d, providing complete and burr-free tooling solutions with the highest surface quality when machining a bone plate or medical screws.



以“切削液公司”著称，我们作为水溶性切削液的顶级专家，为全球客户提供个性化定制解决方案。

As “The Coolant Company”, we specialize in water-miscible coolants, and we provide individual, tailor-made solutions for your business all over the world.



作为 ER 夹持系统的发明人，我们的产品不但大量应用于各类外科植入物的生产过程中，而且针对 MQL 微量润滑及 CO2 干冰冷却等特殊冷却方案，配合我们的专利 powRgip® 冷压刀柄夹持方案更可获得无与伦比的加工效果。

As the inventor of the ER clamping system, our products are not only widely used in the production of surgical implants, for special cooling solutions such as MQL micro-lubrication and CO2 low temperature cooling system, in combination with our patented product powRgip® toolholding system, you can achieve excellent machining results.



我们对医疗植入物喷砂工艺有着深入的理解，始终如一地为客户提供可靠的高性能陶瓷喷砂介质，包括氧化锆珠、氧化铝砂和锆刚玉。

We have developed an in-depth understanding of media behavior on medical implant, and been consistently delivering reliable supply of high-quality ceramic blasting media including zirconia beads, alumina grits, alumina-Zirconia grits with maximized performance and efficiency.



专注于走芯机医疗小零件加工，提供包括软件、刀具、夹具、切削液、加工方案设计、试切等系统解决方案。

Focus on CNC machining of medical small parts, providing system solution of software, cutting tools, fixtures, cutting fluid, processing scheme design, product trial cutting etc.



自 1915 年创立以来，致力于开发、生产和服务微小机械零件的优质刀具。提供骨钉，关节，心血管及直线加速器的加工方案。

Since foundation in 1915, it has been our declared goal to forge ahead in the production of high-quality cutting tools for micromechanics that are valuable and beneficial for our customers. We supply the special precision tools solution for the bone screws, joint parts, cardiovascular components and linear accelerator parts.

第五届骨科应用材料及工艺技术研讨会

The 5th Seminar on Materials and Processes for the Orthopaedics





测量及检测设备

MEASURING AND TESTING MACHINES

| | | |
|--|---|--|
|  <p>ACQTEC 研索仪器 科研级非接触全场测量系统</p> | <p>领先的 BIOVIA Materials Studios 材料模拟计算、Psylotech 介观 / 宏观试验加载、美国 CSI 数字图像相关 (DIC) 变形与应变测量的解决方案服务商。</p> | <p>The leading solution provider for BIOVIA Materials Studios, Psylotech Meso/Macro scale test machine, VIC-3D Digital Image Correlated (DIC) deformation and strain measurement system.</p> |
|  <p>凯尔测控 CARE Measurement & Control</p> | <p>外科植入物动态力学解决方案服务商, 包括骨钉、接骨板、椎间融合器、髌关节等。</p> | <p>Dynamic mechanical solutions for surgical implants service provider. Consist of metallic medical bone screws, metallic bone plates, intervertebral body fusion device, hip joint prostheses, etc.</p> |
|  <p>道姆光学</p> | <p>德国 GOM GmbH 在中国的合作伙伴, 专业提供成套光学三维扫描和变形测量方案, 以及技术咨询和测试服务。</p> | <p>The partner of German GOM GmbH in China, specializing in providing complete sets of optical 3D scanning and deformation measurement solutions, as well as technical consulting and testing services.</p> |
|  <p>Duratt®</p> | <p>动态试验机集成专利高性能直线电机, 广泛适用于骨科植入物及材料的动态力学性能测试和多自由度多轴定制化动态测试。</p> | <p>Dynamic test platform integrates patented high-performance linear motor, which can be widely used in dynamic mechanical properties test of various materials and orthopedic implants, as well as customized multi-axis dynamic test.</p> |
|  <p>海克斯康 HEXAGON</p> | <p>拥有200多年的精密计量经验, 以及对智能制造领域先进技术的重组, 为医疗行业提供贯穿产品全生命周期的质量提升解决方案。</p> | <p>Provides quality improvement solutions throughout the product life cycle for the healthcare industry, with more than 200 years of experience in precision metering and reengineering advanced technologies in intelligent manufacturing.</p> |
|  <p>Mitutoyo</p> | <p>提供从千分尺等测量工具到三坐标测量机、影像测量机等全系列测量产品及测量解决方案的全球综合性测量仪器制造商。</p> | <p>A global comprehensive measuring instrument manufacturer providing plentiful product lines from measuring tool such as micrometer to instruments such as coordinate measurement machine, vision machine, as well as measurement solutions.</p> |
|  <p>瑞埃德检测 OPTICAL MEASUREMENT</p> | <p>意大利 Vici Vision 轴类光学测量仪和 Metrios 一键闪测设备销售, 以及作为法国 RX Solutions 中国区总代理提供工业 CT 设备的测试和销售服务。</p> | <p>Key distributor of Vici Vision Optical Measurement Machine and Metrios, also is the Master Distributor of RX Solutions Industrial CT, to provide service and sales in China.</p> |
|  <p>werth China</p> | <p>来自德国的精密测量设备制造商, 针对外科植入物的尺寸测量提供复合式三坐标或CT解决方案。</p> | <p>Precision measurement equipment manufacturer from Germany, providing multi-sensor coordinate measuring or CT measuring solutions for surgical implants.</p> |
|  <p>ZEISS Seeing beyond</p> | <p>我们的医疗行业质量解决方案覆盖金属加工、注塑及增材制造等多种工艺, 满足医疗产业对产品质量管控各环节所提出的更多样化需求, 赋能客户跨越医疗质量检测难关, 为生命健康护航。</p> | <p>Our medical industry quality solutions cover a wide variety of processes such as metal processing, injection molding and additive manufacturing, we will fulfill various demands from medical industry for quality control, and support our customers to overcome the challenges for medical quality control.</p> |
|  <p>Zwick / Roell</p> | <p>全球技术领先的材料试验机供应商, 为20多个工业领域的研发及质量保证提供全面的材料试验解决方案。</p> | <p>A worldwide leading supplier of materials testing machines, provides testing solutions for test methods in R&D, as well as for quality assurance in more than 20 industries.</p> |

合约制造

CONTRACT MANUFACTURE

| | | |
|--|---|---|
|  <p>AHNO 阿诺 Cutting Tool Technology</p> | <p>提供各式骨科钻头、骨锉、铰刀、丝锥及各类牙科钻头、丝锥等医疗工具代工及协同开发服务。</p> | <p>Specialized in providing professional orthopedic instrument OEM and R&D support service, supplying various kinds of orthopedic instrument such as drills, broaches, reamers, taps. Dental drills and taps are also our strength products.</p> |
|  <p>autocam medical</p> | <p>全球化的合约制造商, 精密制造加工骨科手术钻头、起子、螺钉、骨板、切割工具, 以及其他复杂、高度工程化的外科植入物、器械和手件等。</p> | <p>A global contract manufacturer of precision-machined surgical drill bits, drivers, screws, plates, cutting tools and other complex, highly engineered surgical implants, instruments, and handpieces, as well as other device components.</p> |
|  <p>BONE MAN</p> | <p>ODM服务商, 提供口腔种植、运动医学、骨科器械、器械盒设计开发、协同开发及受托生产服务。在刀具切削、产品耐腐蚀方面方案卓越。</p> | <p>ODM supplier providing design, collaborative development and contract manufacture of dental implants, sports medicine, orthopaedic instruments, cases and trays with excellent solutions in sharp tool cutting and product corrosion resistance.</p> |
|  <p>LX Precision</p> | <p>为美国、欧洲著名医疗客户提供优质的OEM服务, 产品包括螺钉、骨板、改锥及器械等, 广泛应用于医疗设备、医疗工具、以及脊柱、创伤、牙科、运动医学、颅颌面、眼科、心脏起搏器。</p> | <p>We provide OEM service for the most famous medical customers in USA and Europe. Our products, which include screws, plates, drivers and instruments, are widely used in trauma, spine, dental, sports medicine, cranial maxillofacial, ophthalmic surgery and components of pacemaker.</p> |

主办机构 Organizer

ORTHOMaterials™



ORTHOMATERIALS
微信公众号



主办方联系人