

第三届骨科应用材料及工艺技术研讨会

The 3rd Seminar on Materials and Processes for the Orthopaedics

2020年9月17日至18日 | 江苏常州富力喜来登酒店
17-18 September 2020 | Sheraton Changzhou Xinbei Hotel, Jiangsu, China

17/09/2020	议题 Agenda	发言者 Speaker
08:00 – 09:00	签到 Registration	
09:00 – 09:10	欢迎辞 Welcome	ORTHOMATERIALS 翁益良 ORTHOMATERIALS YiLiang WENG
09:10 – 09:50	欧盟和FDA生物安全性评价：ISO 10993-1和化学表征的重要性 Evaluation of Biological Safety for EU and FDA: ISO 10993-1 and the Importance of Chemical Characterization	能盛（中国） 高级项目经理 刘婷 NANSA (China) Senior Project Manager Ting LIU
09:50 – 10:30	骨科植入物的清洗验证 Cleaning Validation of Orthopaedic Implants	通标（中国） 生命科学部技术经理 童玉玺 SGS (China) Life Science Services Technical Manager YuXi TONG
10:30 – 11:00	茶歇 Tea Break	
11:00 – 11:40	医疗器械核磁共振成像扫描安全性考量 MRI Safety Considerations in Medical Device Development	毅博科技（中国） 科学家 鄢琰 & 经理 杨丽洁 EXPONENT (China) Senior Scientist Yan YAN & Manager Lijie YANG
11:40 – 12:20	医疗行业智慧质量及智能制造方案 Intelligent Quality and Intelligent Manufacturing Solutions in Medical Industry	海克斯康（中国） 华东事业部运营总监 谷进 HEXAGON (China) East China Managing Director Jin GU
12:20 – 13:30	午餐 Lunch	
13:30 – 14:00	精锻技术在医疗行业的应用与风险管控 Application of Precision Forging Technology in Medical Industry and the Risk Control Management	航亚科技 医疗事业部副总经理 李湘军 HYATECH Medical BU Vice General Manager Kent LI
14:00 – 14:40	PEEK材料脊柱融合器热等离子喷涂技术 Thermal Plasma Spray Coating Technology on PEEK Cages	麟科泰（中国） 技术经理 薛昊 LINCOTEK (China) Engineering Manager James XUE
14:40 – 15:10	茶歇 Tea Break	
15:10 – 15:50	激光焊接在医疗植入物以及器材生产的应用 Laser Welding for Medical Implant and Instrument Production	相干（中国） 销售经理 温达鑫 COHERENT (China) Sales Manager Jimmy WEN
15:50 – 16:30	拖拽/冲浪式抛光及3D后处理技术 Drag / Surf Finishing and 3D Post Process Treatment	罗斯勒（中国） 总经理 孙一岭 ROSLER (China) General Manager YiLing SUN
16:30 – 17:10	实现医疗行业的极限刀具夹持挑战 Meeting Toolholding Challenges in Medical Industry	瑞格费克斯（中国） 业务拓展经理 邢栋 REGO-FIX (China) Business Development Manager Dong XING
17:10 – 18:00	互动 Networking	
18:00 – 20:00	晚宴 Dinner	

18/09/2020	议题 Agenda	发言者 Speaker
09:00 – 09:40	智能化冷却液管理系统在医疗产品精密加工中的应用 Intelligent Coolant Management System Applicant in Precision Medical Parts Production	透波过滤 副总裁兼中国区总经理 陈侠 TURBO-SEPARATOR Vice President & General Manager of Great China Xia CHEN
09:40 – 10:20	医疗行业中的干冰魔法 The Magic of Dry Ice in Medical	酷捷（中国） 区域销售经理 刘含宾 COLD JET (China) Regional Sales Manager Eric LIU
10:20 – 10:50	茶歇 Tea Break	
10:50 – 11:30	CF/PEEK热塑性复合材料在骨科应用及通配加工解决方案 CF/PEEK Thermoplastic Composite Materials in Orthopaedics and its Processing Solutions	东华大学 朱姝教授 & 君华 医疗负责人 从飞 Donghua University Prof. Shu ZHU & JUNHUA Medical Operation Director Fei CONG
11:30 – 12:10	TC4合金脊柱侧弯连杆的四点弯曲疲劳性能研究 Bending Fatigue Behavior of Ti6Al4V (TC4) Connection Rod for Orthopaedic Spine Application	中国科学院金属研究所 研究员 柏春光 Institute of Metal Research Chinese Academy of Sciences Dr. Chunguang BAI
12:10 – 12:20	结束语 Closing	福雷孔（中国） 总经理 郑铁君 FORECREU (China) General Manager Tiejun ZHENG
12:20 – 14:00	午餐 Lunch	

材料 MATERIALS



高性能聚合物致力于医疗器械的材料解决方案，满足客户不同的应用需求。
High performance polymer, dedicated to material solutions for medical devices, to meet customers' different application needs.



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。
Professional medical titanium alloy material manufacturer offering sheets, bars and wires in TC4/TC4ELI/TC20/TA1G/TA2G/TA3G.



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。

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.



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。

Manufacture and sale of medical plastics sheets and rods which is complied with stringent requirements of the medical industry, and providing plastic material machining and injection moulding services.



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。

A global leading supplier of high performance polymers for medical application, including implantable PEEK (VESTAKEEP®), bioresorbable polymers (RESOMER®), and PA12 etc.



提供用于生产骨科植入物及手术器械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。

Supplier of cannulated bars in titanium and stainless steel for the production of orthopaedic implants and surgical instruments, as well as injection molding service of polymers for implants.



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。

Manufactures PEEK, PPSU, CF/PEEK composite and other medical grade polymers, and also provides OEM manufacturing service for related medical tools.



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。

Production & distribution of nitinol wires, tubes, cables and shape-set parts; contract manufacturing & assembly of medical device components & parts as a turn-key.



为医疗器械和制药制造商提供灭菌盖材、卷料、袋子、袋内支撑卡的全球领先的专业灭菌包装公司。

Leading supplier of innovative die-cut lid, roll stock, pouch products and mounting cards, providing outstanding quality and technical innovation to the global healthcare market.



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.



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。

90 years of European medical raw material supplier, providing implantable and instrumental material ranges from titanium alloys, CCM and stainless for medical market.



提供医疗应用的全系列钛材牌号的钛棒及钛板制造厂家。

World's leading producer providing full range of titanium grade in bars and plates for medical application.



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。

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.

工艺及服务 PROCESSES AND SERVICES



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。

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.



在医疗行业内提供 3D 打印关节类零件网格中残留粉末清洗方案·同时提供髓内钉、穿线器内孔去毛刺抛光工艺。

In the medical industry, we provide solutions for cleaning residual powder in the mesh of 3D-printed joint parts, as well as processes for deburring and polishing internal holes of intramedullary nails and threading machines.



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。

Focus on providing surface finishing services for medical devices, including titanium anodizing, stainless steel passivation and electrolytic polishing, HA^{nano} (Nano hydroxyapatite coating) for all implants.



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测试实验室·使用大量国际先进的检测设备·可以为客户提供各种产品注册测试服务和研发测试服务。

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.



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。

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.



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。

Providing 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.



关节、创伤、脊柱、手术器械等产品的力学性能测试·模拟计算以及失效分析；产品研发及注册检测服务。

Mechanical testing for joint, trauma, spine and surgical instruments, along with strength calculation and failure analysis. Testing service for product development and certification.



具有高硬度、良好的结合力、高断裂韧性、低摩擦特性的 Medthin™ 系列涂层·广泛应用于医学植入物及手术器械中。

The Medthin™ series of coatings features high hardness and excellent adhesion, fracture toughness, low friction properties, and are used on a wide variety of medical implants and instruments.



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、临床研究等服务。

A strategic project integration management platform providing medical device manufacturers with preclinical performance testing in vivo, biocompatibility testing, international registration consulting, clinical research, etc.



创伤、脊柱、关节、齿科种植体、工具器械类产品的超声波清洗及各项表面处理研发及代工服务。

Ultrasonic cleaning, R&D and service of surface treatment for trauma, spine, joint, dental implant and instrument products.



骨科、创伤、脊柱和齿科市场的全球一站式合同制造商·也是生物医疗领域等离子喷涂和增材制造方面广受认可的专业供应商。

A global one-stop shop contract manufacturer for orthopedic, trauma, spine and dental markets and a recognized expert in plasma spray coatings and additive manufacturing technologies in the biomedical field.



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。

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.



国际公认的检验、鉴定、测试和认证机构·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。

World's leading inspection, verification, testing and certification company, with a state-of-the-art clinical pharmacology unit and the global network of GMP-compliance laboratories.



均隶属于世界领先的完全一体化全球健康卫士 Sotera Health 集团·Sterigenics 是全球领先的综合灭菌解决方案和专业咨询服务提供商；Nelson Labs® 是一家行业领先的实验室测试和专业咨询服务全球供应商。

As a part of Sotera Health Group which is the world's leading and fully integrated protector of global health, Sterigenics is the leading global provider of comprehensive sterilization solutions and expert consulting services. Nelson Labs® is an industry-leading, global provider of laboratory testing and expert advisory services.

设备及辅件 EQUIPMENTS AND ACCESSORIES



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



全球领先的激光器和激光技术的供应商之一，能为医疗行业提供各种高效、精准的激光切割、焊接、打标、钻孔等解决方案。
As one of the world's leading providers of lasers and laser-based technology, we offer highly efficient and accurate solutions for cutting, welding, marking and drilling for the medical industry.



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。
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.



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.



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。
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.



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.



用于医疗器械产品直接标识的激光打标机。
Laser marking system for direct marking of medical device.



全球精密制造技术的领导者及整体解决方案的提供商。
A leading provider of machine tools, technical solutions and services for the production of molds, dies and high value-added metal parts.



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。
5 axes grinding machines manufacturer and solution provider for orthopaedics, a global leading company in grinding application for medical industry.



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。
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.



为医疗产品加工带来高效率、高精度技术方案的自动走心车床、车铣中心、通用车床。
Providing high efficient and high precision technology solutions for medical products by sliding headstock automatic lathes, turn-mill centers and universal turning machine.



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。
Provides polishing machines, polishing media and polishing compounds, and also offers the total solution for the final polishing process of medical implant.



3/5 轴加工中心铣削加工、EDM 和线切割等全方位、定制化的医疗行业加工技术解决方案。
Full range of customized processing solution in medical industry including 3/5-axis milling, EDM and wire cutting.



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。
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.



作为 ER 夹持系统的发明人，我们的产品不但大量应用于传统的骨钉、骨板等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 traditional bone implants, bone plates and other 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.



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。
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.



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。
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.



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。
An innovative machining solutions provider of 5+ axes CNC machines in global medical industry.



Seeing beyond

全球顶级的工业仪器生产厂家，其中显微镜广泛应用于医院及骨科医疗器械企业。Smartproof 5 共聚焦显微镜可满足医疗产品所需的粗糙度测量，表面 3D 形貌特征，快速、准确、重复性好。
A leading TOP optical equipment manufacturer in the world, whose microscopy is widely applied in the hospital and related fields, such as medical apparatus and instruments of orthopedics. Smartproof 5 is an excellent confocal microscopy with high measuring efficiency, extremely accuracy, perfect repeatability to apply on roughness measurement for medical products.



作为德国领先紧固技术在中国的代言人，提供源自德国的螺纹紧固连接检测、校准、分析的仪器设备，以及紧固连接全寿命周期的解决方案。
As the spokesman of Germany's leading fastening technology in China, we provide the testing, calibration and analysis instruments and equipment of threaded fastening connection from Germany, as well as the solution for the whole life cycle of fastening connection.

合约制造 CONTRACT MANUFACTURE



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。

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.



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。

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.



上海利格泰生物科技有限公司
Shanghai Ligatech Bioscience Co., Ltd.

专业代工生产带袢钛板和超高分子量聚乙烯纱线材质的非吸收性外科缝线。

Contract manufacture of ligament fixation device and non absorbable suture made by UHMW-PE fiber.



我们为美国、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、心脏起搏器。

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 surgeries, sports medicine and components of pacemaker.

支持机构 SUPPORTS



生物医用材料产业技术创新战略联盟

Strategic Alliance of Biomedical Materials Technology Innovation

主办机构 Organizer

ORTHOmaterials™