

JCTIMES × JCCD

COATING DIES



精诚时代集团
浙江台州
黄岩新前建业路88号



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Public Account



JC-times.
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JCTIMES GROUP

NO.88, Jianye Road, Intelligent Mold Town,
Huangyan, Taizhou, Zhejiang, China

400-889-9977

突破界限的创新
—— 涂布模头精密解决方案
BREAKING BOUNDARIES WITH INNOVATION

From
Dreams
to
Reality

知您所需
创您所想

核心产品

涂布模头

挤出平模头

吹膜圆模头

精密挤出配件

产品广泛应用于电子、汽车、建筑材料、航天航空、新能源(太阳能、动力汽车、锂电池)、医疗卫生、食品包装等领域,为客户提供全方位的解决方案。

Coating Dies
Extrusion Flat Dies
Blown Film Dies
Precision Extrusion Equipment

Our products are widely used in electronics, automotive, building materials, aerospace, new energy (solar, EVs, lithium batteries), medical/healthcare, and food packaging industries, offering comprehensive solutions for customers.

公司简介



精诚时代集团引进全球尖端的精密加工设备,建有占地逾6万平方米的智能制造基地,是全球领先的精密模头制造中心。作为行业内首家采用地源热泵新风系统的企业,集团配备恒温恒湿车间,有效保障加工精度与产品稳定性。

集团以自主创新为核心,专注系列模头及核心装备的精密制造与高质量发展,服务于新能源、光伏、航天、智能交通、节能建筑、健康医疗等高端应用领域,提供定制化系统解决方案与优质品牌服务。

旗下涂布事业部聚焦涂布模头的研发、设计与制造,结合自主研发的流体仿真系统,优化流道结构,推动技术突破。产品广泛应用于锂电池、钙钛矿太阳能、氢能、热熔胶、MLCC陶瓷电容、半导体、光学显示、医疗等精密涂布领域,持续提供高性能涂层解决方案。

JCTIMES has introduced world-class precision processing equipment and established an intelligent manufacturing base covering over 60,000 square meters, making it one of the leading precision die manufacturing centers globally. As the first in the industry to adopt a geothermal heat pump fresh air system, JCTIMES is equipped with constant temperature and humidity workshops, ensuring high processing precision and product stability.

Driven by independent innovation, JCTIMES focuses on the precision manufacturing and high-quality development of a series of dies and core equipment. It provides customized system solutions and premium brand services for high-end application fields such as new energy, photovoltaics, aerospace, intelligent transportation, green buildings, and healthcare.

Our Coating Division specializes in the R&D, design, and precision manufacturing of coating dies. By integrating a self-developed fluid simulation system, the division optimizes flow channel structures and drives technological breakthroughs. Our products are widely used in precision coating fields including lithium batteries, perovskite solar energy, hydrogen energy, hot melt adhesives, MLCC ceramic capacitors, semiconductors, optical displays, and medical devices—continuously delivering high-performance coating solutions.

O5 Team Advantage

团队优势

精诚涂布事业部依托集团强大的研发、生产制造及匠心服务能力,与日本顶尖研究机构及国外技术团队合作,拥有一批经验丰富的技术、工艺及流体力学核心团队,以全流程数字化管理,实现定制化、高精密的国产替代,为用户提供超越期待的涂布模头精密解决方案。

Relying on the Group's strong R&D, manufacturing and all-around service capabilities, the Coating Division cooperates with Japan's top research institutes and international technical teams. It has a group of experienced core teams in technology, process and fluid mechanics, and uses full-process digital management to achieve customized, high-precision domestic product substitution, providing users with precision solutions for coating dies that exceed expectations.

120⁺
设计研发人员

50⁺
营销工程师

500⁺
专业匠人

40⁺
质检人员

50⁺
售后人员

20年以上的资深行业经验,从售前到售后,提供技术咨询、定制化设计、操作培训、现场试机等,全方位的360°系统解决方案。

With over 20 years of senior industry experience, we provide comprehensive 360° system solutions from pre-sales to after-sales, including technical consultation, customized design, operation training, on-site testing, and more.



流体 仿真分析

精诚独有2.5D解析算法

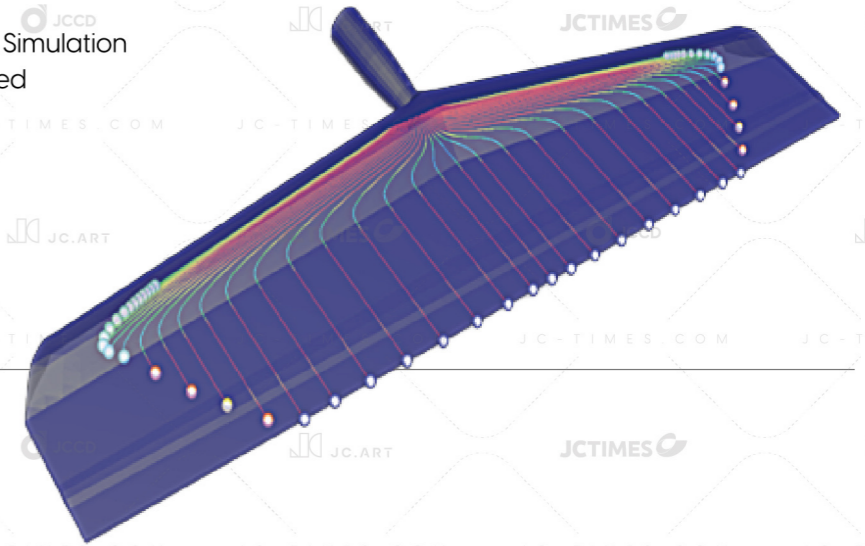
与日本顶尖研究机构以及国内著名院校合作,自主研发专用流体仿真系统,分析计算出最合理的流道并优化设计,实现对涂布速度、腔体内部压力分布、滞留时间等精确控制。

2.5D Analysis Algorithm

In cooperation with Japan's top research institutes and domestic famous colleges and universities, we have independently developed a special fluid simulation system, which analyzes and calculates the most reasonable flow channel and optimizes the design to achieve precise control of coating speed, pressure distribution inside the cavity, retention time and so on.

Flat Simulator Multi (Ver.2.0.0)

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取得中国、日本、美国 发明专利



创想 实验室



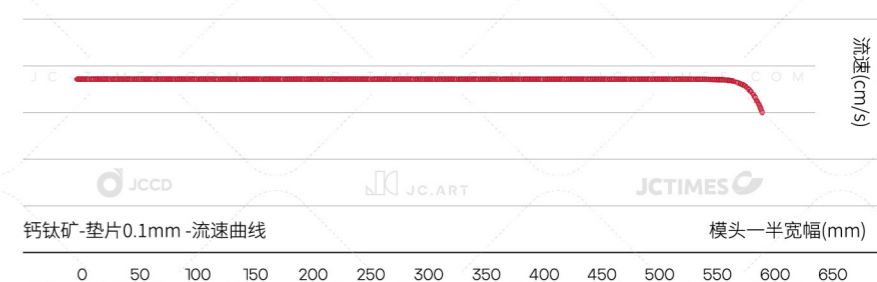
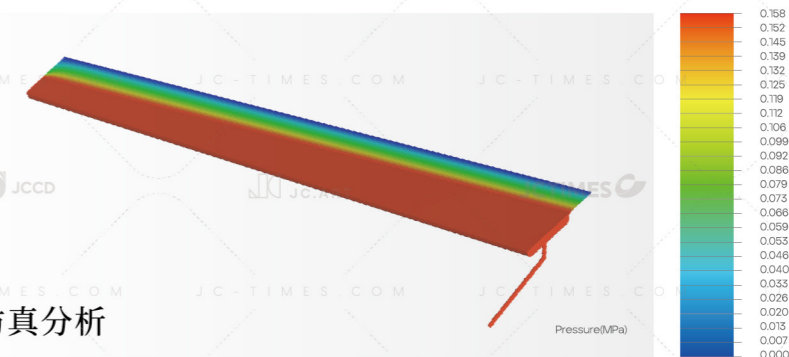
仿真分析案例 (钙钛矿涂布模头)

边界条件设定

涂布宽度	1200mm	流量	12mL/min	粘度(牛顿流体)	3.5-10cps
垫片厚度	0.1mm	密度	1300kg/m ³	涂布速度	50m/min

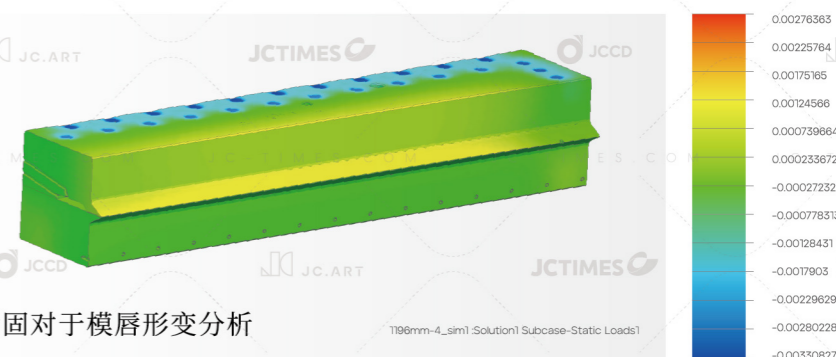
模腔压力分布

流体仿真分析



结构有限元分析

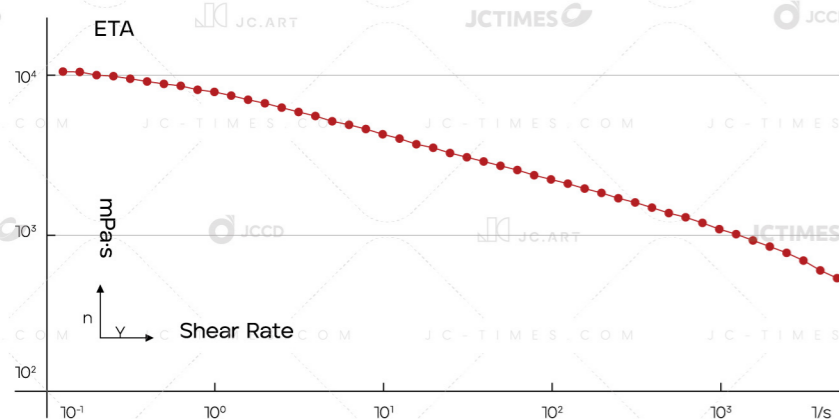
螺栓紧固对于模唇形变分析



仿真分析案例 (锂电电极片涂布模头)

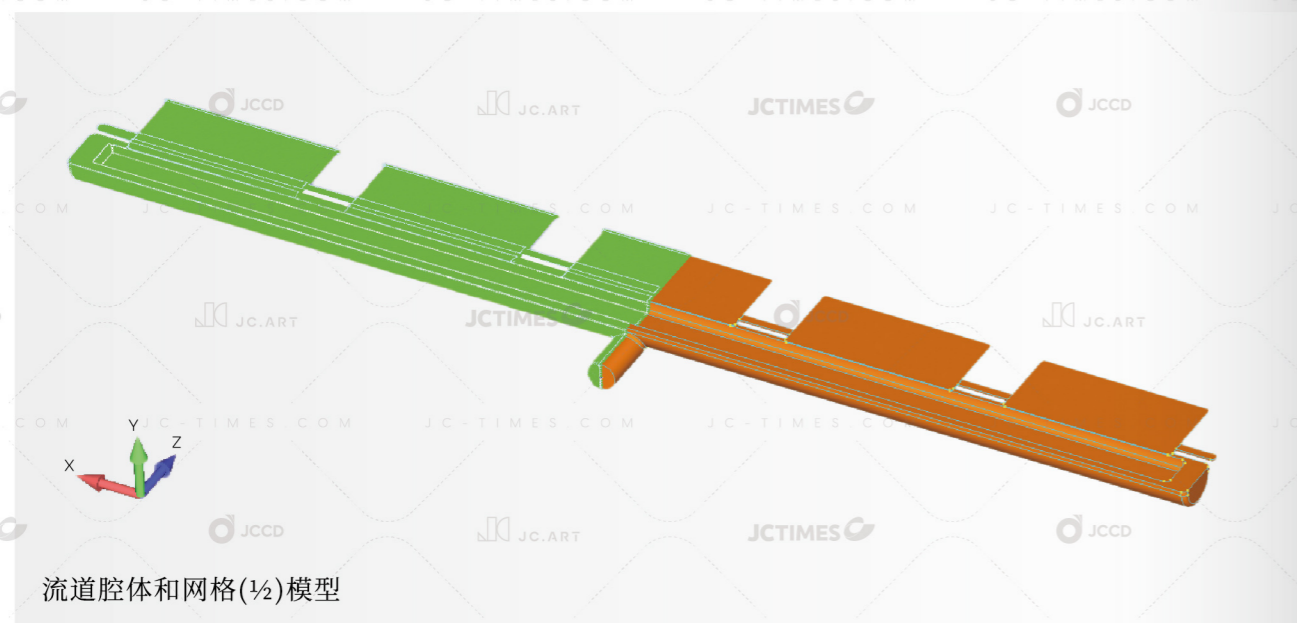
边界条件设定

涂布宽度	1200mm	垫片厚度	1mm	固含量	58%
刀距	200um	正极浆料流量	10.8L/min		
涂布速度	70m/min	正极浆料密度	1700kg/m ³		



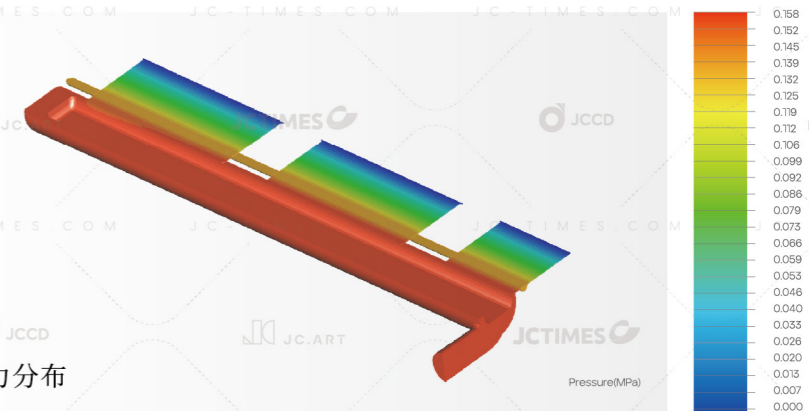
Anton Paar
LFP-zzp1
PP50-SN30991; [d=0.5 mm]
n^{CP} Viscosity

浆料流变曲线图

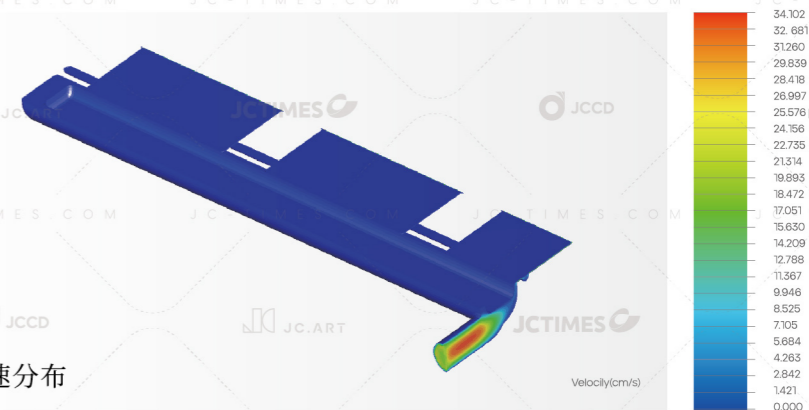


流道腔体和网格(1/2)模型

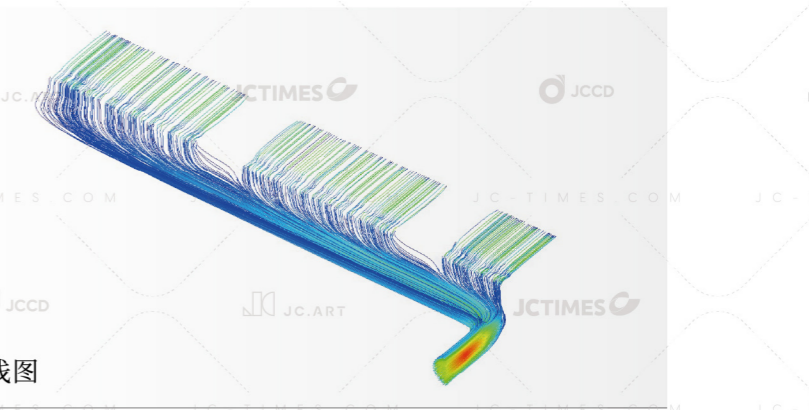
模腔压力分布



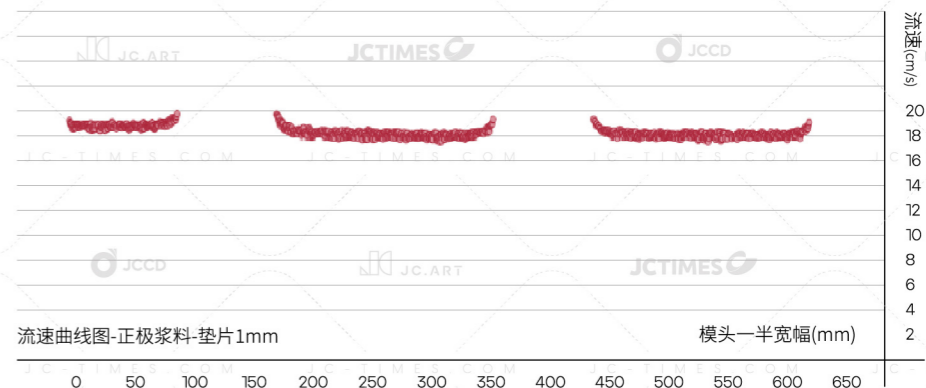
模腔流速分布



粒子流线图



流速曲线图-正极浆料-垫片1mm

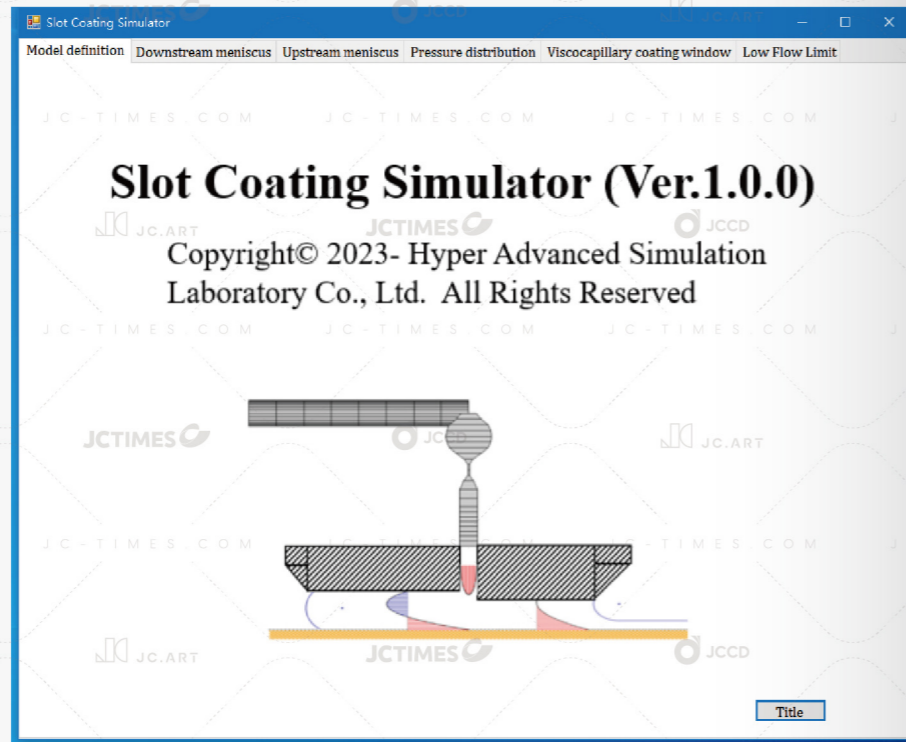


模头一半宽幅(mm)

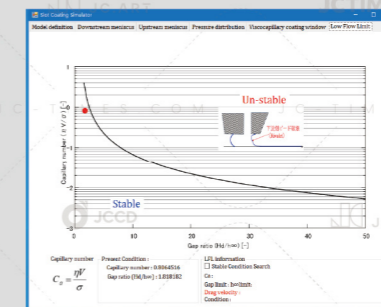
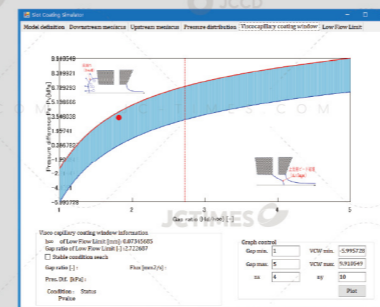
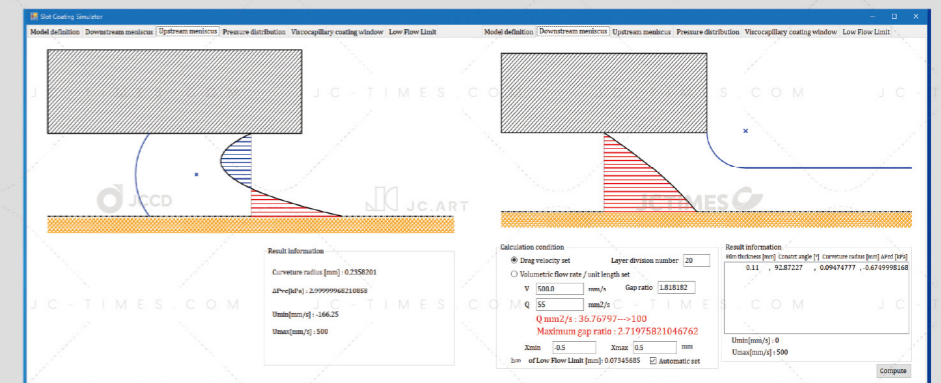
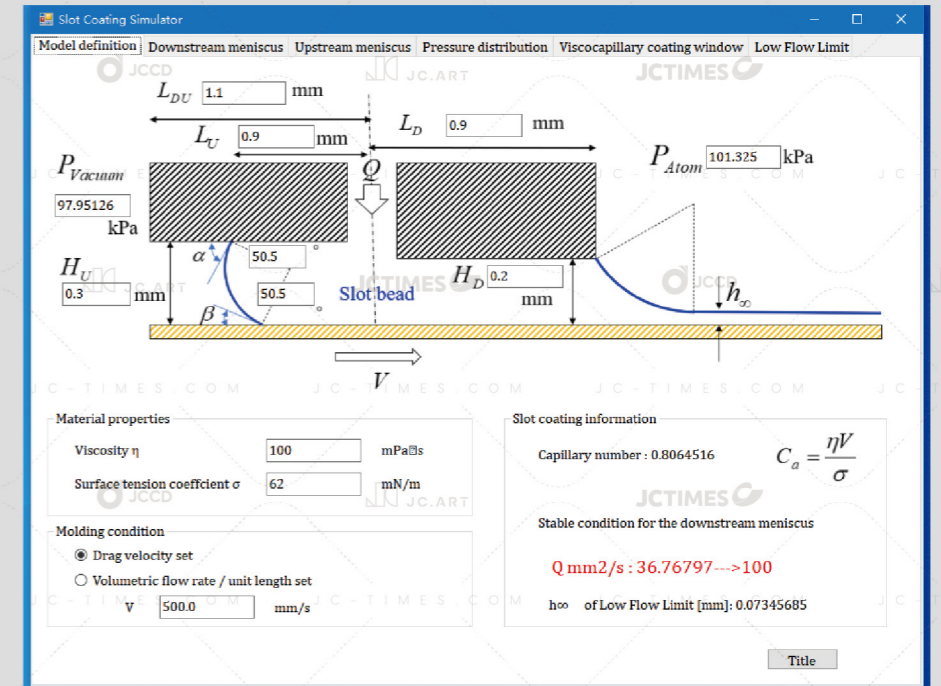
Liquid Beads Morphological Analysis

涂布液珠形态分析

与日本顶尖流体力学技术团队合作, 深入研究涂布模头流道设计和工艺, 开发了针对涂布液珠形态的分析软件, 提升涂布的均匀性和稳定性, 为客户提供合适的涂布工艺窗口。



通过调整模口参数、涂布间距、基材表面张力、涂布速度、浆料粘度和接触角大小等条件判断在相应工艺条件下, 涂布液珠上下半月牙形成是否合理, 上流侧是否需要增加负压装置以及适用的流量、拉伸比范围。



上流侧的负压大小、拉伸比例会影响液珠上下半月牙形态。

精密加工

公司引进国际领先的五轴加工中心和高精度磨床, 结合15年以上的匠心经验, 实现高精度复杂加工和稳定生产。拥有20000多平方米的精密加工和检测车间, 全年恒温恒湿, 确保加工精度。

The company introduces internationally leading 5-axis machining centers and high-precision grinding machines, combined with more than 15 years of craftsmanship experience, to achieve high-precision complex processing and stable production. We have more than 20,000 square meters of precision machining and testing workshops with constant temperature and humidity throughout the year to ensure machining precision.

唇口直线度

2um/m

模体流面的平面度

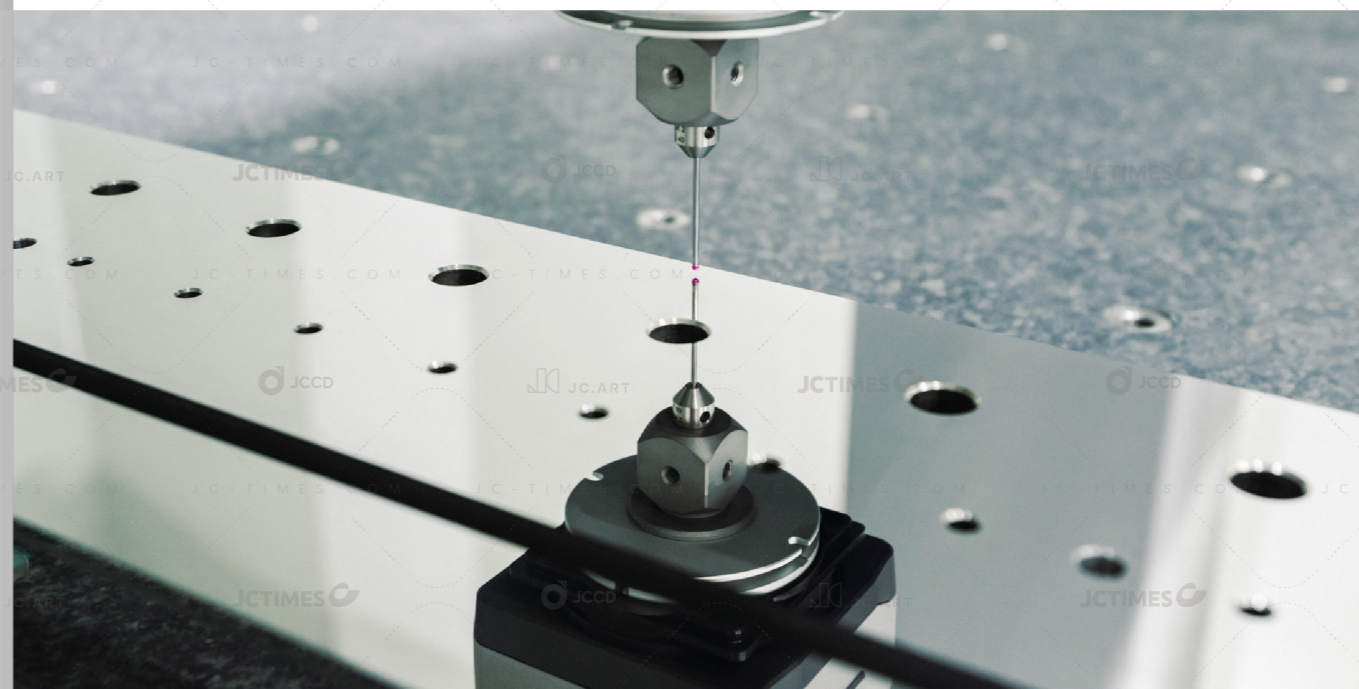
3um

模腔及流面的粗糙度

≤ Ra0.02um

最长可制作范围

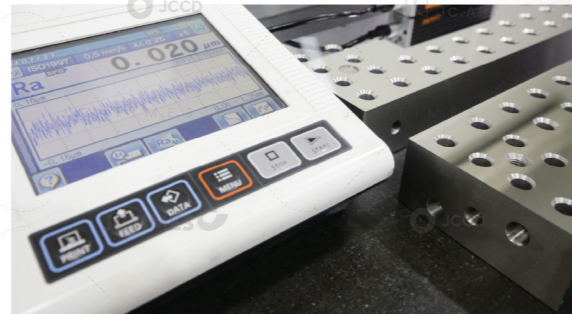
4000mm



高精 精密 检测

德国蔡司三坐标检测仪、光学检测仪、非接触激光及视觉检测仪、日本表面粗糙度检测仪等,以最严苛的品质管理,确保产品的最高品质。

Adopting German Zeiss coordinate detector, optical detector, non-contact laser and visual detector, Japanese surface roughness detector, etc., we ensure the highest quality of our products with the most stringent quality management.



直线度 检测结果

ZEISS CALYPSO 7.6.1204	部件名称: 232902-下模 平放 图号: 232902 订单号: 公司: 部门: CMM号: 145223061975	部件标识符: 16 时间/日期: 2024-07-17 17:45 操作者: Master 文本:
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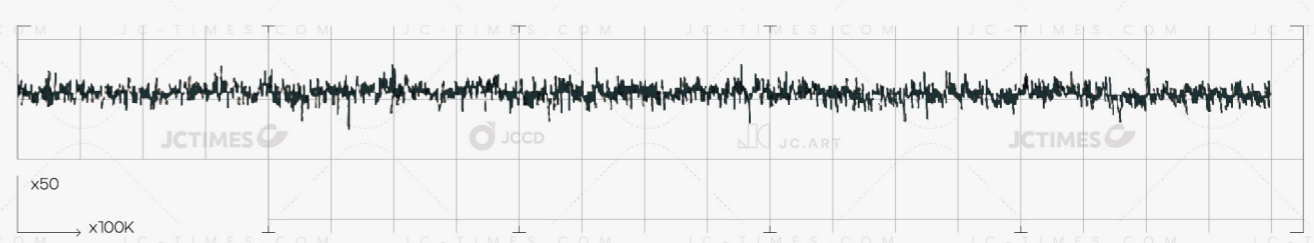


名称	测量值	上限	点	过滤类型	Lc	upr	探针半径	Vmess [mm/sec]	评定策略
直线度 定型段	0.0013	0.0020	687	无滤波	-	-	0.4985	5.000	最小区域法

粗糙度 检测结果

评价条件	标准 ISO1997	λc 0.8mm	前送/后送 ON	计算结果 Ra 0.020 um
	曲线 R	λs 2.5um	切缺 OFF	Rq 0.029 um
	滤波 GAUSS	取样数 5	公差判定 平均值	Rz 0.198 um

R曲线 纵向倍率 0.10 um/cm 横向倍率 200.00 um/cm



Areas Of Application

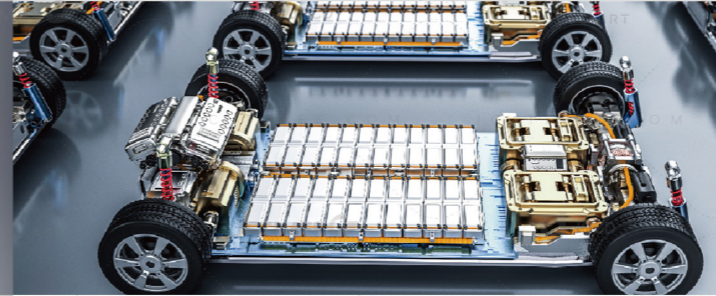
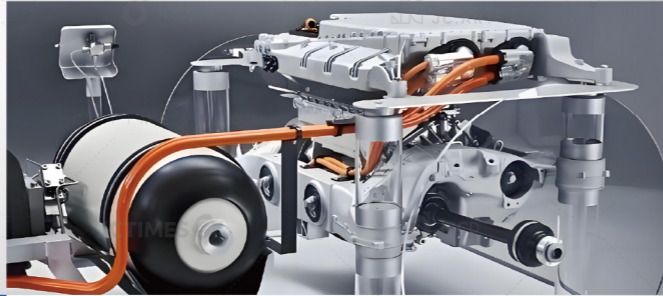
应用领域

氢能
Hydrogen Energy

新能源锂电
New Energy Lithium

光伏
Photovoltaic

MLCC 陶瓷电容
MLCC (Multilayer Ceramic Capacitor)



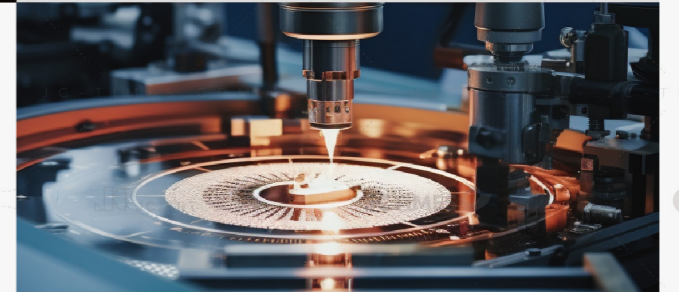
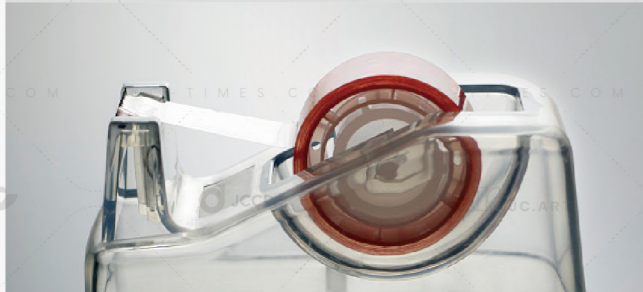
显示面板
Display Panel

光学薄膜
Optical Film



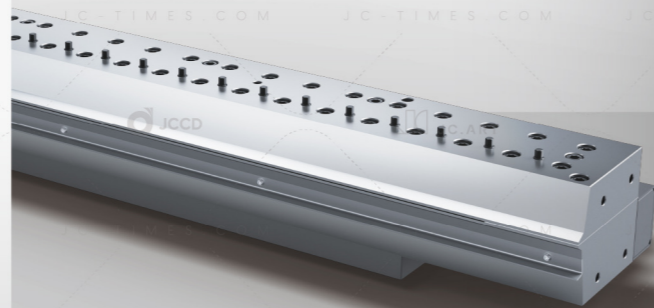
热熔胶、胶粘
Hot Melt Adhesive, Gluing

半导体
Semiconductor

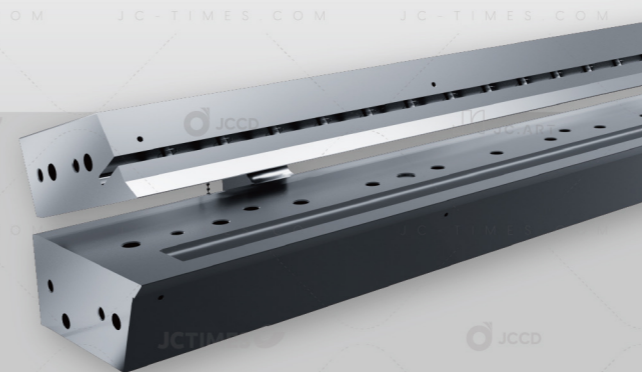


涂布系列模头

热熔胶涂布模头
Hot Melt Adhesive Coating Dies



氢燃料电池涂布模头
Hydrogen Fuel Cell Coating Dies



水处理膜涂布模头
Water Treatment Film Coating Dies



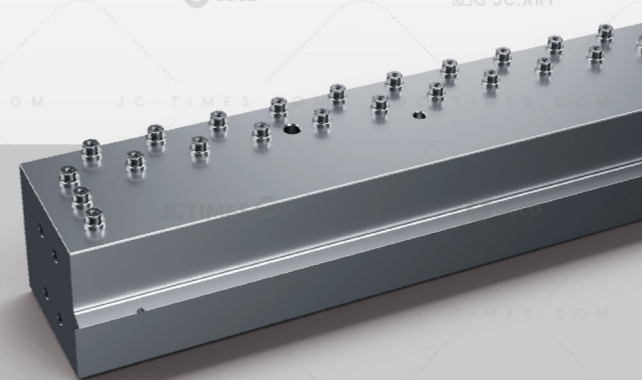
钙钛矿涂布模头
Perovskite Coating Dies



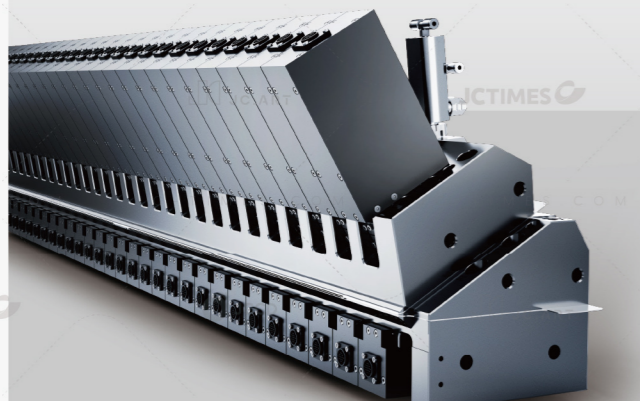
MLCC陶瓷电容涂布模头
MLCC Coating Dies



平板显示涂布模头
Panel Display Coating Dies

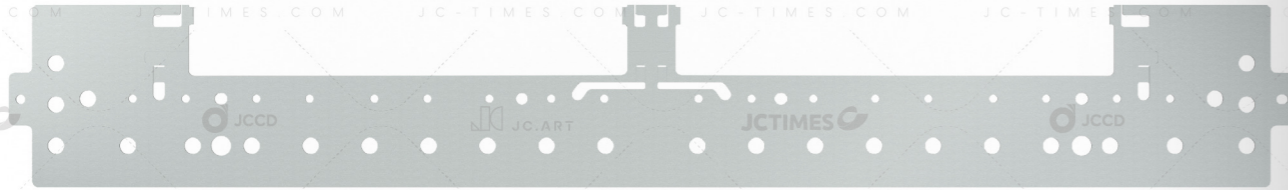


锂电池涂布模头
Lithium Battery Coating Dies



光学膜涂布模头
Optical Film Coating Dies





垫片

专业定制不同厚度的高精度垫片适用于不同粘度范围的流体以及不同线速度的涂布工艺。

- 灵活调节唇口厚度和涂布宽度, 满足产品多样化需求

- 垫片材质选项: 不锈钢/黄铜/树脂

- 加工精度高, 表面光洁度高