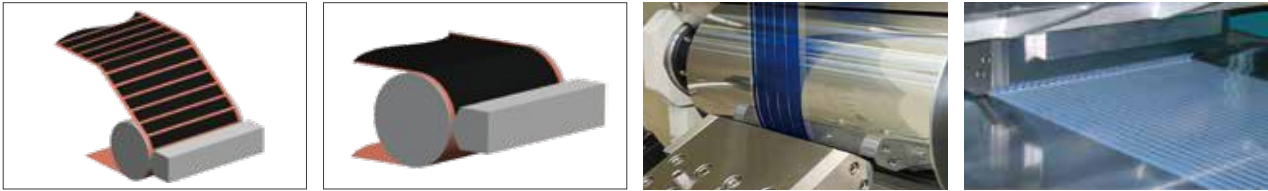




Coating Die Application

涂布模头应用领域

狭缝涂布模头应用领域包含：UV固化压克力胶，光学透明胶，电池，光伏太阳能系统，过滤膜，卷标，软性印刷电路板，医疗产品，压敏胶，涂料，遮阳膜，光敏产品，油墨，热熔胶等。
Applications include: UV curing acrylic adhesive, optical transparent adhesive, battery, photovoltaic solar system, filter film, label, soft printed circuit board, medical products, pressure-sensitive adhesive, paint, sunshade film, photosensitive products, ink, Hot-melt adhesive, etc.



Die Head Repair And Maintenance

模头修复和保养

- ◎杰威尔公司承接各类品牌涂布模头的维修和保养业务。
- ◎针对狭缝涂布模头出现流道面损伤、划痕、模唇缺口、变形、磨损等常见问题进行修复处理。
- ◎可针对客户生产过程中出现的问题，提供优质的解决方案，确保模头精度和使用效果。
- ◎Jwell Company undertakes the repair and maintenance of various brand coating die heads;
- ◎Repair and handle common problems such as channel surface damage, scratches, mold lip notches, deformation, and wear in the narrow seam coating die head;
- ◎We can provide high-quality solutions that arise during customer production, ensuring the accuracy and effectiveness of the die head.



“PRECISION
SLOT COATING
DIE”

精密狭缝
涂布模头



苏州杰威尔精密机械有限公司
SUZHOU JWELL PRECISION MACHINERY CO., LTD.

Jwell Machinery Suzhou Factory

金纬机械苏州厂区



Precision Slot Coating Die

精密狭缝涂布模头

狭缝涂布工艺是在一定压力下，将稳定的、定量的涂布液由料流输送系统经过模头入料口输送至模头型腔内，再通过模头内部岐管或型腔均匀分配到模头的整个宽度范围，沿模具开口缝隙挤出并转移到基材表面上。模头是狭缝涂布的关键部件，超高的模头精度，是确保涂布均匀性的关键因素。

The slot coating process is to transport a stable and quantitative coating liquid under a certain pressure from the material flow system to the die head cavity through the die head inlet, and then evenly distribute it to the entire width range of the die head through the internal manifold or cavity of the die head. It is extruded along the die opening gap and transferred to the surface of the substrate. The die head is a key component of slit coating, and the ultra-high precision of the die head is a key factor in ensuring coating uniformity.

Characteristics Of Slot Coating Process

狭缝涂布工艺的特点

- ◎涂膜速度高、膜厚一致性好
- ◎涂布液粘度适用范围广
- ◎涂布缺陷少，涂布液利用率高
- ◎可同时进行两层或三层涂布
- ◎High coating speed and good consistency of film thickness
- ◎The viscosity of the coating fluid has a wide range of applications
- ◎Less coating defects and high utilization rate of coating fluid
- ◎Two or three layers of coating can be applied simultaneously

Fixed Lip Coating Die Head

固定模唇涂布模头



- ◎结构简单，成本较低，通用性强
- ◎定制化的型腔结构，可适配不同特性的涂布液
- ◎模唇开口通过更换不同厚度的垫片进行调节，搭配高精度的模唇，涂布均匀性好
- ◎快速开合模体结构，方便清洗和保养
- ◎Simple structure, low cost, and more universality;
- ◎Customized cavity structure, suitable for different coating fluids with different characteristics;
- ◎The opening of the die lip is adjusted by replacing gaskets with different thicknesses, combined with high-precision die lips, resulting in good uniformity of coating;
- ◎Quick opening and closing of the die structure, convenient for cleaning and maintenance.

Differential Bolt Adjustment Coating Die Head

差动螺栓调节涂布模头



- ◎上模通过差动螺栓调节方式，调节精度高，涂布均匀性好
- ◎定制化的型腔结构，可适配不同特性的涂布液
- ◎The upper die is adjusted through differential bolts, with high adjustment accuracy and good coating uniformity;
- ◎Customized cavity structure that can adapt to different coating fluids with different characteristics.

Push And Pull Rod Adjustment Coating Die Head

推拉杆调节涂布模头

- ◎通过推拉杆调节对模唇开口进行微调，控制浆料挤出的均匀性
- ◎衣架式的型腔结构，适用于加工粘度较高的涂布液

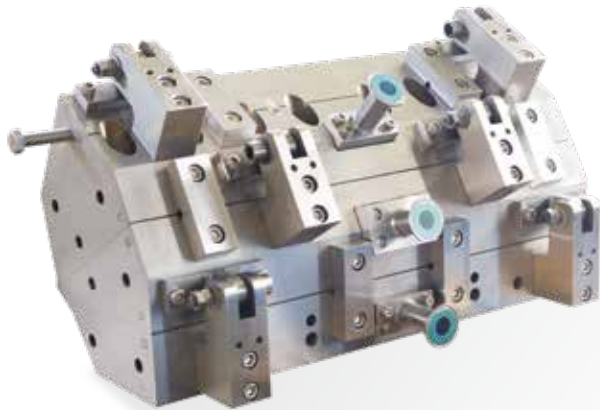
- ◎Adjust the die lip opening by pushing and pulling rods to control the uniformity of slurry extrusion;
- ◎The hanger style cavity structure is suitable for processing coating liquids with high viscosity.





Three Layer Composite Coating Die Head

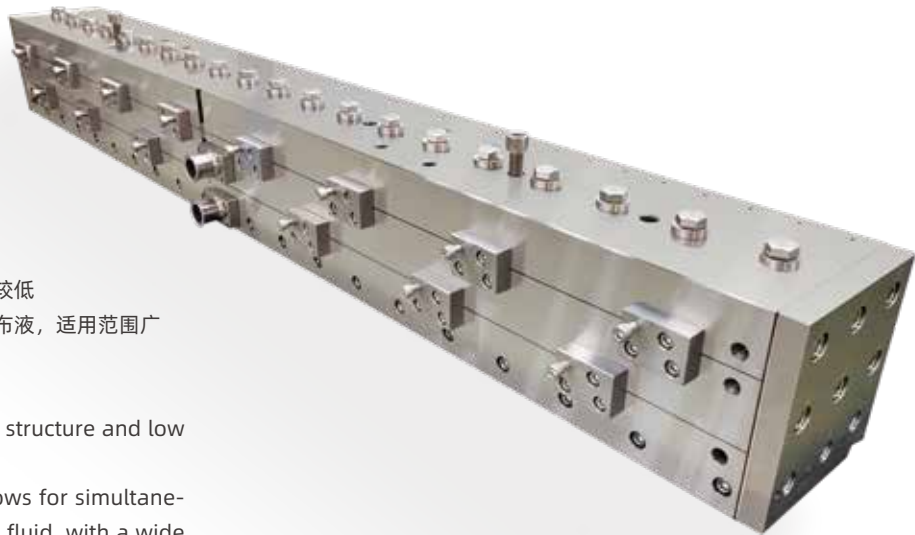
三层复合涂布模头



- ◎三个独立的型腔设计，可同时进行三层涂布
- ◎快速开合模体结构，每一层都能快速打开清理流道
- ◎模唇精度高，涂布均匀性好
- ◎Three independent cavity designs that can be coated in three layers simultaneously;
- ◎Quickly open and close the die structure, allowing each layer to quickly open and clean the flow channel;
- ◎High accuracy die lip and good coating uniformity.

Double Layer Sliding Curtain Coating Die Head

双层滑帘式涂布模头

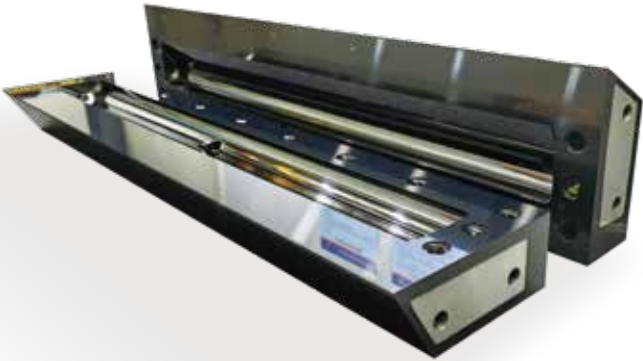


- ◎叠加式的模体设计，结构简单，加工难度较低
- ◎两层平行的流道设计，可同时涂布两层涂布液，适用范围广
- ◎模唇精度高，涂布均匀性好
- ◎Superimposed die design with simple structure and low processing difficulty;
- ◎Two parallel flow channel design allows for simultaneous application of two layers of coating fluid, with a wide range of applications;
- ◎High accuracy die lip and good coating uniformity.

Surface Treatment (Dlc Coating Treatment)

表面处理（DLC涂层处理）

- ◎超强的耐磨性能，维氏硬度可达HV2000-2300
- ◎极好的润滑性，摩擦系数0.06-0.1，防止粘着磨损
- ◎可根据模头大小调配成膜厚度，单边1-10um厚，厚度误差小
- ◎具备优秀的防腐蚀性能
- ◎Super wear resistance, Vickers hardness can reach HV2000-2300;
- ◎Excellent lubricity, friction coefficient of 0.06-0.1, preventing adhesive wear;
- ◎The film thickness can be adjusted according to the size of the die head, with a thickness of 1-10um on one side and low tolerance;
- ◎Excellent anti-corrosion performance.



Die Head Gasket

模头垫片

- ◎采用进口的垫片，垫片厚薄误差小，精度高
- ◎垫片材质可选择：SUS 304、316L
- ◎可根据涂布厚度选择不同厚度的垫片
- ◎改变U型垫片的开口大小可调整涂布宽度
- ◎Adopting imported gaskets, low tolerance and the high precision;
- ◎The gasket material can be selected: SUS304, 316L;
- ◎Different thicknesses of gaskets can be selected based on the coating thickness;
- ◎Changing the opening size of the U-shaped gasket can adjust the coating width.



Processing Capacity

加工制造能力

- ◎最大可加工尺寸：3000mm
- ◎模头材质可选择:17-4、316L、2507、C276、SUS630等
- ◎流道面粗糙度：≤Ra0.025
- ◎直线度和平面度要求可达：≤3μm/m
- ◎Maximum machinable size: 3000mm;
- ◎Die head materials can be selected: 17-4, 316L, 2507, C276, SUS630, etc;
- ◎Roughness of flow channel surface: ≤ Ra0.025;
- ◎The requirements for straightness and flatness can reach: ≤ 3 μ M/m.

