ROYAL TECHNOLOGY

RTSP1200-PCB

Magnetron Sputtering Deposition Equipment
磁控溅射沉积技术镀膜设备

6
历时 6 个月

20
20多次实验

2020
第一台量产型设备成功交付

Technology Background

The RTSP1200-PCB machine is a tailor-designed and fabricated equipment for PCBs plating by magnetron sputtering deposition technology.

Everyone who is involved with the PCB industry knows that PCBs which have copper finishes on the surface requires a protective layer to protect it against from oxidize and deteriorate, meanwhile the film must with high hardness and abrasion resistance to guarantee the lifetime.

Royal Technology spent 6 months in R&D, over 20 times experiment to finalized the proper coating processes. More exciting new is in March 2020, we delivered the massive production machine to our customer's site with a high accomplishment result.

技术背景

RTSP1200-PCB 是一款采用磁控溅射沉积技术在PCB表面镀膜的设备。

从事PCB行业的每个人都知道，表面镀铜的PCB需要在其表面镀一层保护层来保护它免受氧化和腐蚀，同时膜层必须具有一定的硬度和耐磨性来保证其使用寿命。

永容科技历时 6 个月的研发，20多次实验，最终确定了适当的涂层工艺。 我们在 2020 年 3 月将第一台量产型设备成功交付，并得到了客户的认可和高度评价。

Benefits 优点

Environmental protection, green process 环保，绿色制程
Low production cost compared to traditional metal plating processes 与传统金属电镀工艺相比生产成本低
Excellent corrosion and wear resistance 优异的耐腐蚀和耐磨性
High density and high uniformity 高密度和高均匀性
The film thickness is controllable 膜厚可控

Main Features 主要特征

Multiple deposition cathodes for fast deposition rate
Strong vacuum pumping system for a short cycle
Anode linear ion source to improve adhesion and high density of deposited films
6 units standard planar cathodes mounting flanges
Flexible coating processes applied
Modular structure design for fast exchange of cathodes and targets

多靶位，可实现快速沉积
配有强大的真空抽气系统，生产周期短
配有线性阳极层离子源可提高膜层附着力和膜层密度
设计有 6 个标准平面阴极安装法兰
涂层工艺可灵活调整
模块化结构设计，可快速更换阴极和靶材，便于维护保养

Your Success is Our Success.
您的成功就是我们的成功

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Technical Specifications
技术参数

Coating Samples
镀膜样品

Description	RTSP1200-PCB
Deposited Films	Au gold, Ag silver, Cu copper conductive families films; Corrosion resistance metal families: Tantalum(Ta), Nickle (Ni), Chrome (Cr), Zirconium(Zr) etc. Compounded films: carbon-based metal films, Nitride metal films.
Deposition Chamber	Cylinder chamber with vertical orientation, one door structure with front opening method Chammber inner size: ϕ1200 * H1500mm
Loading Volume (Max.)	Central driving rack system, with Max. ϕ1000mm *H1100
Deposition Sources	4 Planar sputtering cathodes + 1 mounting flange for upgrading
Sputtering Deposition Power	Max. 30KW
Pulsed Bias Power	Max. 30KW
Footprint (L*W*H)	5000*5000*4500mm
Power Consumption	Max. 105KW Average:50KW
Operation & Control System	CE standard Mitsubishi PLC+ Touch Screen Operation Program with backup

These configurations are the standard. For a specific developing market and new special coatings, customized configurations and modifications are available on request.

描述	RTSP1200-PCB
可沉积膜层	Au金、Ag银、Cu铜等导电金属膜； 耐腐蚀性金属膜层系列：钽（Ta）、镍（Ni）、铬（Cr）、锆（Zr）等。 复合薄膜：碳基金属薄膜、氮化金属薄膜等
镀膜腔体（mm）	圆腔式，立式，单门，前开结构 腔体内部尺寸：ϕ1200 * H1500mm
最大有效装载空间	转架为公转方式，最大 ϕ1000mm *H1100mm
膜沉积源	4支平面溅射阴极+1支矩形阴极安装靶位（升级备用）
溅射电源	最大 30KW
偏压电源	最大 30KW
占地面积 (L*W*H)	5000*5000*4500mm
电量消耗 (KW)	最大105KW 平均50KW
操控系统	CE标准 三菱 PLC+ 触摸屏 操作程序备份件

以上列表为设备标准配置，针对特殊的应用领域需要开发新的涂层，可根据所需工艺要求提供定制设备。

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