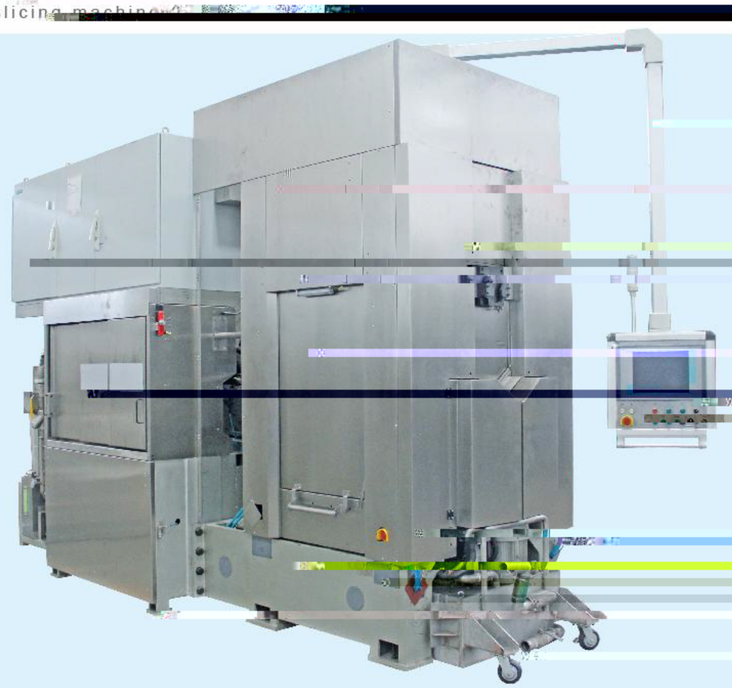
WSK063..

半导体晶圆切片机

WSK063 SiC slicing machine



设备用途和特性

- 本机是适用于光伏行业，用于半导体晶棒的切片，是半导体行业广泛应用的设备，用于将晶棒加工为330mm，切片厚度最小为0.2mm，必须调整制程，一次装夹最大可切片达1000-2300片，是半导体行业领先生产厂家的优选设备。
- 本机特点：
- 1、两个钢线导轮驱动，收（放）线驱动，张力控制，钢线驱动采用伺服电机；
- 2、钢线张紧力的控制通过伺服电机力矩（恒张力）控制；
- 3、工件进给由伺服电机通过滚珠丝杠副与钢线的切割速度匹配；
- 4、切削液的搅拌与输送。切削液管道可经过换热器与恒温及计量器计量，与切片速度匹配；
- 5、本机床为高新技术集中的产品。

Applications and Structural Features

- the machine is used for cutting semi-conductor bar, which is main processing equipment. The max dimension of cross section Φ330mm, the minimum thickness of section 0.2mm, adjust processing procedure. It may cut 1000-2300 pcs at one clamping, the optimized equipment for solar semiconductor manufacturers.
- features:
- two wire guide wheel drive, "up-down" drive, "cable drive", all of these three servo drive, and must be synchronized.
- detection control of wire tension should be controlled by servo motor by cable meter (constancy)
- workpiece feeding is driven by servo motor and ball screw, matching the cutting speed of wire.
- agitation and conveying of cutting fluid, cutting fluid pipe can reach up constant temperature through heat exchanger, matching the slicing rate.
- this machine is an integrated high-tech product.

技术规格参数 Specifications and Technical Parameters

工件 workpiece	
横断面 cross section	≤Φ330mm
长度 length	2×230mm；1×60mm
厚度 thickness	≥0.200mm（必须调整制程 must adjust manufacturing process）
切割速率 cutting rate	
线速度 linear velocity	最大 max 30m/s
快速移动 fast move	200mm/min
工作行程 working stroke	最大MAX 285mm
钢线 wire	
芯线径 diameter of core wire (external diameter)	0.05-0.55-0.400mm
钢线长度 length of wire	按线轮而定 according to wire wheel
钢线方向 direction of wire	前进或后退切割 forward or backward/double directional cutting
预张紧力 pre-tension	最大50N（端切钢线直径0.35mm） max 50N (according to diameter of wire)
导轮 guide wheel	
直径 diameter	Φ192mm
长度 length	662mm
个数 number	3
主电机功率 main motor power	最大 max 30KW
轴距（左右）wheelbase (left&right)	400mm
轴距（上下）wheelbase (up&down)	450mm
钢线偏移轮 offset wheel	
直径 diameter	Φ100mm
个数 number	2×3(6)
卷绕线盘 winding coil	
卷绕轴工作高度 working height of winding shaft	1355mm
卷绕线盘 winding coil	WSK027S3-27S3-21-301
切削液供给 cutting fluid supply	
切削液流量 flow capacity of cutting fluid	300L/min
冷却温度 temperature constant of cooling fluid	18℃ 可选择预设温度 optional preset term
泵压 pumping rate	最大 MAX 12000kPa 可调整，使用流量计测量显示 measure the flow meter and display
冷却水流入温度 inflow temperature of cooling water	
控制系统 controlling system	
类型 type	SPS控制器 PC/SPS controller S7 series with integrated PC
供货商 supplier	西门子（Siemens）
外观尺寸及总重量 outline dimension and total weight	
长度 length	4470mm
宽度 width	2170mm
高度 height	2563mm
总重量 total weight	约13000kg

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