

超硬材料树脂结合剂机器人工作站

Robot Workstations for Resin Bonded Super-hard Abrasive Tools

1.1 产品概述

超硬材料树脂结合剂机器人工作站是我所针对超硬材料行业开发的一种全自动生产线，本产品用于外圆/端面砂轮的生产。本产品由轻载、重载两种线体构成。轻载线包括预压机、机械手桁架、200T 主压机、轻载机器人、卸模压机、拆螺丝机、清洗线组成。重载线包括预压机、315T 主压机、重载机器人、卸模压机、拆螺丝机、清洗线组成。可以实现各种型号的砂轮自动预压、自动搬运、自动压制、自动卸模、自动拆螺丝、自动清洗等功能的同时，也大大降低了人工劳动强度，保证了生产质量，提高了劳动效率。

1.1 Introduction

These robot workstations are automatic production lines developed by ZZSM for the production of cylindrical grinding wheels and / or end surface grinding wheels made from superhard abrasive materials. They come in with two types lines, i. e., light load lines and heavy load lines. The light load line consists of a prepressing machine, a manipulator truss, a set of 200T press main(s), a light load robot, a mold unloading machine, a screw removal machine and a cleaning machine. The heavy load line consists of a prepress, a set of 315T press main(s), a heavy load robot, a mold unloading press, a screw removal machine and a cleaning line. These robot workstations realize, at the same time, various types of automatic operations of prepressing, handling, pressing, mold unloading, screw removal, cleaning and so on for the productions of grinding wheels. It greatly reduces the labor intensity, ensures the production quality, improves labor efficiency.

1.2 主要技术参数

1.2.1 轻载线技术参数

- 1、热压机公称压力：200 吨
- 2、配套热压机数量：根据客户要求设计

- 3、 砂轮外径：100~200mm
- 4、 砂轮高度：8~125mm
- 5、 砂轮规格：外圆磨砂轮、端面磨砂轮等

1.2.2 重载线技术参数

- 1、 热压机公称压力：315 吨
- 2、 配套热压机数量：根据客户要求设计
- 3、 砂轮外径 350~450m
- 4、 砂轮高度：20~60mm
- 5、 砂轮规格：外圆磨砂轮

1.2 Key Technical Data

1.2.1 Light Load Lines

- 1. Nominal pressure of hot press: 200 tons
- 2. Number of supporting hot presses: Designed according to customer requirements
- 3. Outside diameter of grinding wheel: 100~ 200mm
- 4. Grinding wheel height: 8~ 125mm
- 5. Grinding wheel specifications: external round grinding wheel, end grinding wheel, etc

1.2.2 Heavy Load Lines

- 1. Nominal pressure of the hot press: 315 tons
- 2. Number of supporting hot presses: Designed according to customer requirements
- 3. Outside diameter of grinding wheel: 350~ 450m
- 4. Grinding wheel height: 20~ 60mm
- 5. Grinding wheel specifications: external round grinding wheel