

灯泵浦YAG自动激光焊接机

YAG Laser welding system



原理 Principles

激光焊接机是应用高能脉冲激光对物件进行焊接。通过激光电源对氙灯脉冲放电，形成一定频率和脉宽的光波经聚光腔辐射到Nd³⁺:YAG晶体，晶体发光经谐振后发出1064nm的脉冲激光，再经扩束、反射、聚焦后进行焊接。设备配备PLC或工业PC机控制的数控工作台，焊接时通过对激光频率、脉宽、工作台速度、移动方向进行高精度焊接。Laser welding machine is use high energy impulse laser to weld the material. It through laser power discharge to Xe lamp impulse to form light wave. The light wave radiate to Nd³⁺:YAG crystal through gather ray cavity, crystal send 1064nm impulse laser through resonance, then it weld the materials through echo and focus.



产品特点 Product performance indices

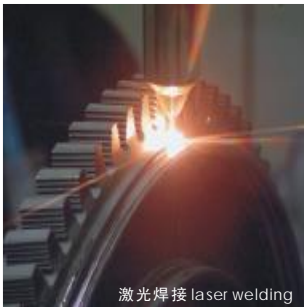
激光脉冲的高能量、高密度可使焊接平整、焊缝宽度小热影响区小，能完成传统工艺无法实现的精密焊接。奥华激光焊接机引进德国焊接机技术研制生产的激光焊接机。焊接效率高、效果好、操作简单方便，适用于各种材料的点焊、对接焊、叠焊、密封焊、平面直线、圆弧及任意轨迹的焊接。The high energy and high density of laser impulse has small heat affected zone and smooth jointing surface, it can realize exact jointing which can't do by traditional technics. Aohua laser welding machine fetch in German technology, so the efficiency is high and easy to handle.



产品应用 Product application

碳钢、普通合金钢、不锈钢、不同钢材之间的激光焊接、不锈钢-低碳钢，416不锈钢-316不锈钢，347不锈钢-HASTALLY镍合金，镍电极-冷锻钢，不同镍含量的双金属带、钛、镍、锡、铜、铝、铬、铌、金、银等多种金属及其合金，及钢、可伐合金等合金的同种材料间的焊接。铜-镍、镍-钛、铜-钛、钛-钼、黄铜-铜、低碳钢-铜等多种异种金属间的焊接。手机电池、首饰、电子元件、传感器、钟表、精密机械、通信、工艺品等行业。

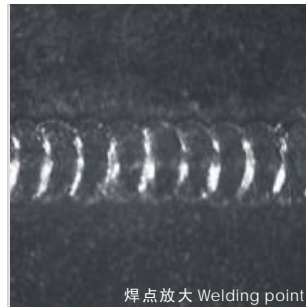
The laser welder can weld the same material like titanium, nickel, tin, copper, aluminum, chromium, niobium, gold, silver, steel and their alloys. it can weld two different materials, such as copper-nickel, nickel-titanium, titanium-molybdenum, brass-copper, low carbon steel-copper. It also can be applied widely to mobile phone batteries, sensors, clocks, watches, jewelry, electronic components, eye glasses, crafts, precision instruments and medical apparatus etc.



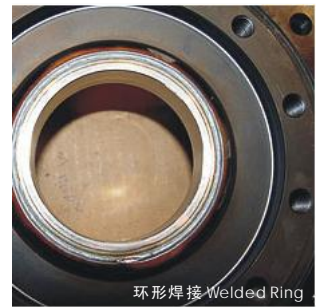
激光焊接 Laser welding



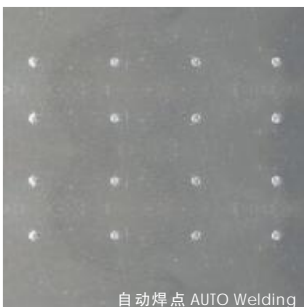
圆周焊接 Circular welded



焊点放大 Welding point



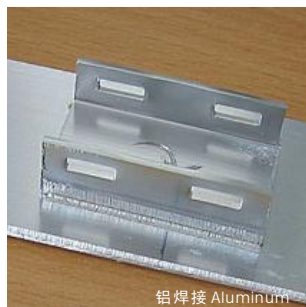
环形焊接 Welded Ring



自动焊点 AUTO Welding



传感器 Sensors



铝焊接 Aluminum



铜焊接 Copper

AHL-W200 AHL-W400

高品质
HIGH QUALITY

高效率
HIGH EFFICIENCY

低维护
LOW MAINTENANCE

产品优势

激光焊接机采用人工学设计，安装操作简单方便，采用内循环冷却系统，不需任何外部水塔供水冷却。激光焊接机焊接频率最大可选用50-100Hz，线速度可达18mm/s，大大提高了焊接效率和焊缝质量。

可配四维滚珠丝杠工作台，采用进口伺服控制系统，含有旋转工作台，可以焊圆柱形物体及其它各类形状的物体，适用范围广，精度高，速度快。电流波形任意调整，可适用于各种材料及合金。

奥华激光可定制各种自动焊接机，并可根据客户生产线定制在线自动焊接机。

AHL-W200S/400S双光点焊机将光分成两路，可同时焊接两个很近的焊点，可大大提高焊接效率，并能保证焊接的准确度。主要用于电阻等小物件。



AHL-W400自动激光焊接机

Product advantage

Laser welding machine uses kinesiology design so it's simple and convenient to install and operate. It has its own cooling system, no need any external standpipe to offer water.

The max. welding frequency of the welding machine can reach 100Hz and the linear speed can reach 13mm/s, so the welding efficiency and the quality of the seam are much higher. As it's equipped with rotative, four-dimensional ball bearing guide screw worktable and servocontrol system, it can weld cylinder and other shapes of substances. It's used widely and has a high precision and speed. The wave of the electric current can be adjusted at random so it's suitable for all kinds of materials.

技术参数 Technology parameters

		AHL-W200 / AHL-W200S	AHL-W400 / AHL-W400S
最大激光功率	Max. laser power	200W	400W
激光波长	Laser wave-length	1064nm	1064nm
单脉冲最大能量	Single pulse energy	90J	110J
激光焊接深度	Welding depth	0.1 - 3.3mm / 0.1 - 2.3mm	0.1 - 3.5mm / 0.1 - 3.3mm
脉冲宽度	Pulse width	0.3 - 20ms	0.3 - 20ms
连击时激光焊接频率	Welding frequency	1 - 50Hz 或 1 - 100Hz	1 - 50Hz 或 1 - 100Hz
光斑尺寸可调范围	Adjustable facula size	0.2-2mm	0.2-2mm
重复精度	Repetition accuracy	±0.01mm	±0.01mm
整机耗电功率	power consumed	≤9KW	≤11KW
电力需求	Electrical source	380V±10%/50Hz/40A	380V±10%/50Hz/40A
控制系统	Control System	PLC or PC (CNC2000数控)	
瞄准定位	Positioning	红光指示Red indicator (可选CCD监视系统、显微镜)	
工作台行程	Worktable itinerary	300mm X 300mm X 200mm (或定制/or Customization)	
备注：由光路、冷水箱、控制箱、显示器、外置空调等组成。可选配旋转工作台、监视系统及安装流水线。			