



WELDING EQUIPMENTS
ATOM

AWE-19US

Ultrasonic Cold Welding Machine



- **More than 20000/second vibration output**
- **7-inch touch screen, no physical button**
- **Welding electrode can be bent to weld any location**
- **Full digital smart control system**

The best tool for casting defect hole welding

Cold welding process is to use the high-energy power stored and release instantly between electrode and matrix with high frequency release, through air ionization channels formed between the electrode and matrix to generate an instant high temperature, high pressure micro-region. While in state of the electrode materials in micro-melt into the matrix, forming metallurgical combination. Not only due to quenching of metal surface to form martensite, and also deposition process of the narrow transition region to form ultra-fine austenitic organization.

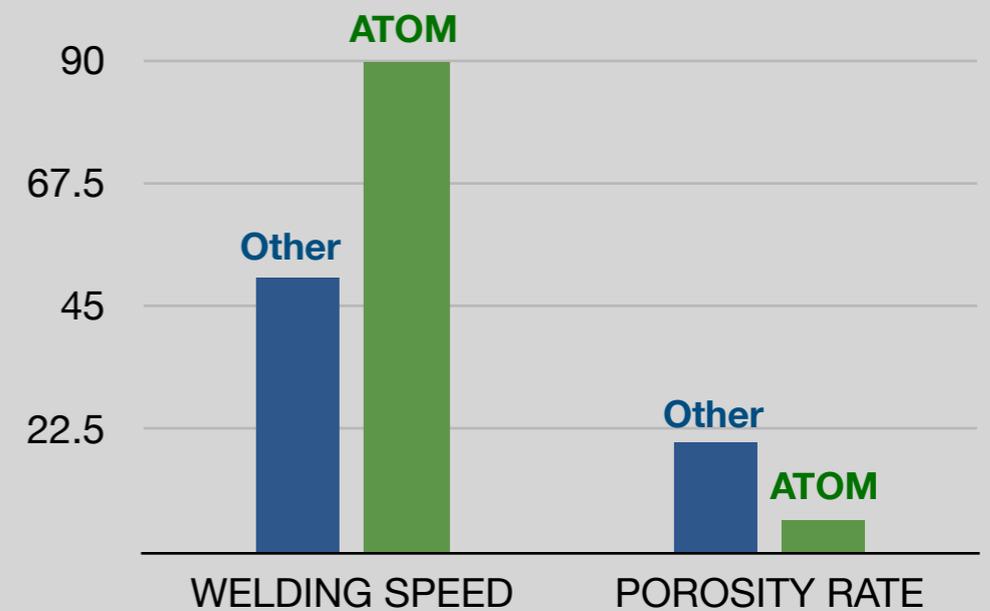


Most foundries will have rejection rate from 10% to 25%. Some of the castings may only have few small defect holes like these pictures, but they have to reject them due to their customers will not accept. AWE-19US cold welding machine will be the right tool to repair these castings and save cost.

Ultrasonic vibration cold welding system

High efficient, fast welding speed

Use the new generation of ultrasonic vibration system, more than 20000/second vibration output, high frequency discharge of electrode material and transfer to the workpiece.



Welding speed increase 80%

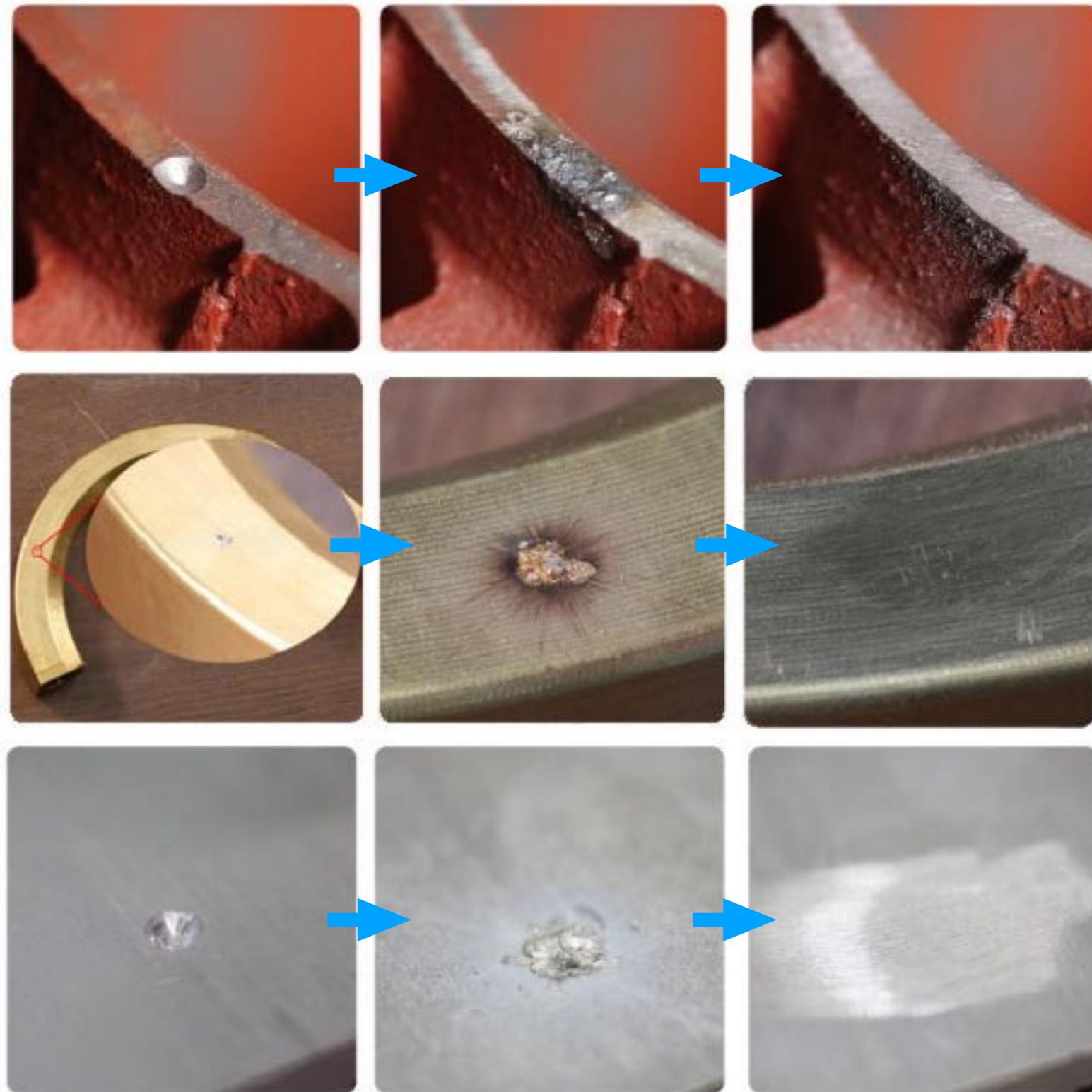
Porosity rate decrease 70%

Suitable for welding all kinds of casting defect holes

After welding very high deposition density and low porosity rate, most of the defect holes can be perfectly welded at one time.

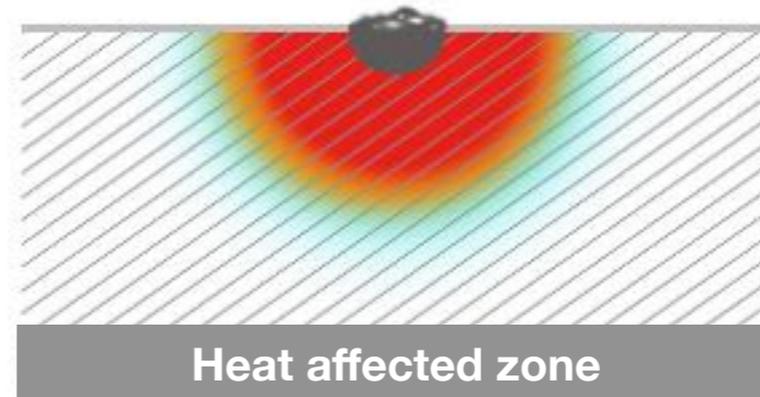
AWE-19US supporting many different types of welding electrode, choose the suitable electrode can adjust the hardness of the welding surface to match different requirements.

Suitable for welding Ductile iron / Grey iron / Steel / Aluminum / Copper etc.





ATOM Cold welding



Traditional welding

Very small heat affected zone No change of micro structure

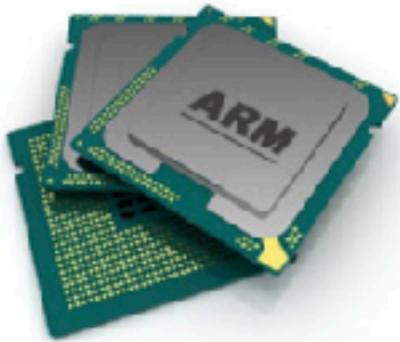
Use cold welding technology, you can touch the welded surface immediately after welding. The surface is just warm not hot. Very small heat transferred into the casting compare to traditional welding machine. It will not anneal the casting and keep the mechanical structure unchanged.



7-inch touch screen

No physical buttons, more durable

7-inch touch screen clear enough to operate, four welding mode selection, quickly change the parameters for welding different materials.



Full digital control

32 bit ARM cpu, smart control. High quality electric components to guarantee the machine stability and longer using life.





1, Casting defect welding



2, Steel mould repair

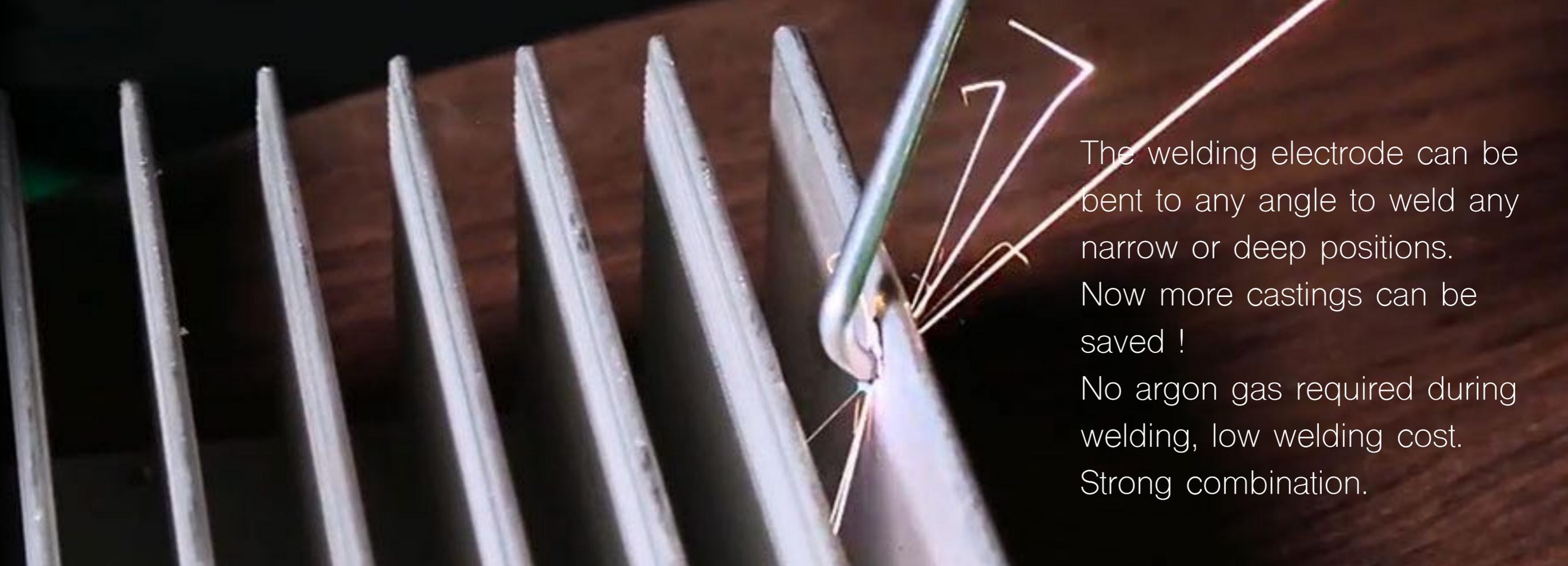
THE USAGE OF AWE-19US



3, Used equipment repair



4, Surface hardening



The welding electrode can be bent to any angle to weld any narrow or deep positions. Now more castings can be saved !
 No argon gas required during welding, low welding cost. Strong combination.



AWE-19US PARAMETERS

MODEL:	AWE-19US	INPUT VOLTAGE:	AC220V
POWER OUTPUT:	1500W	VOLTAGE OUTPUT:	1 ~ 9
FREQUENCY OUTPUT:	1 ~ 9	CURRENT OUTPUT:	1 ~ 9
WEIGHT:	15KGS	MACHINE SIZE:	405*220*290MM
WELDING ROD DIA.:	φ1.0 ~ φ3.0MM	PACKAGE:	BOX

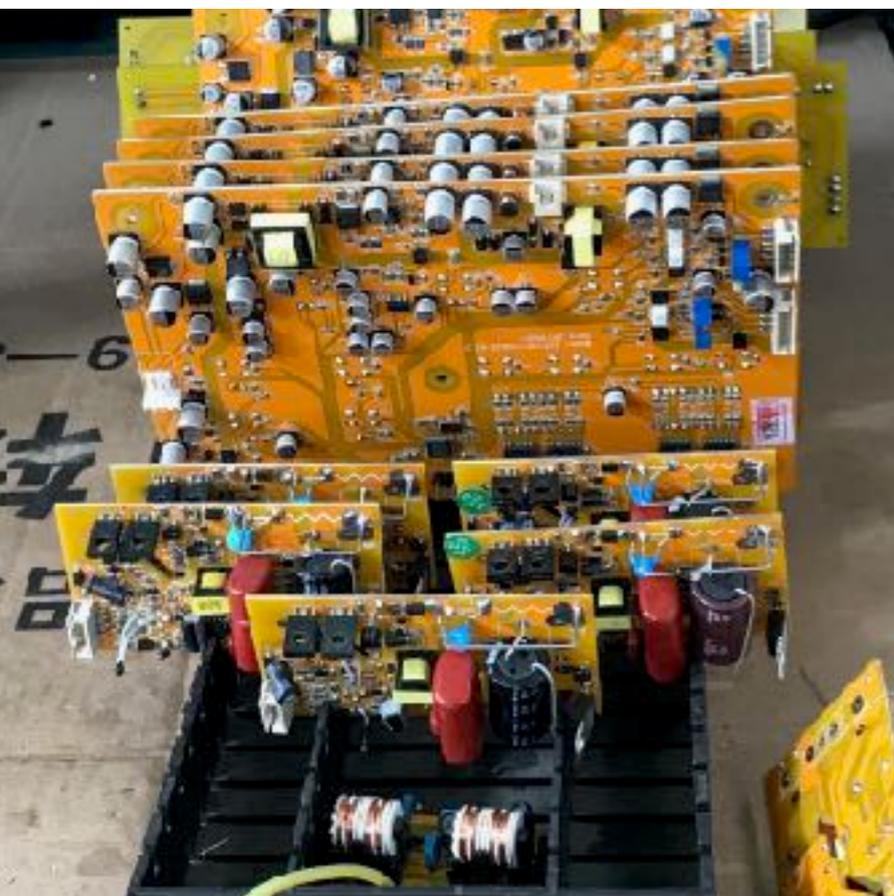
OUR MANUFACTURING EQUIPMENTS

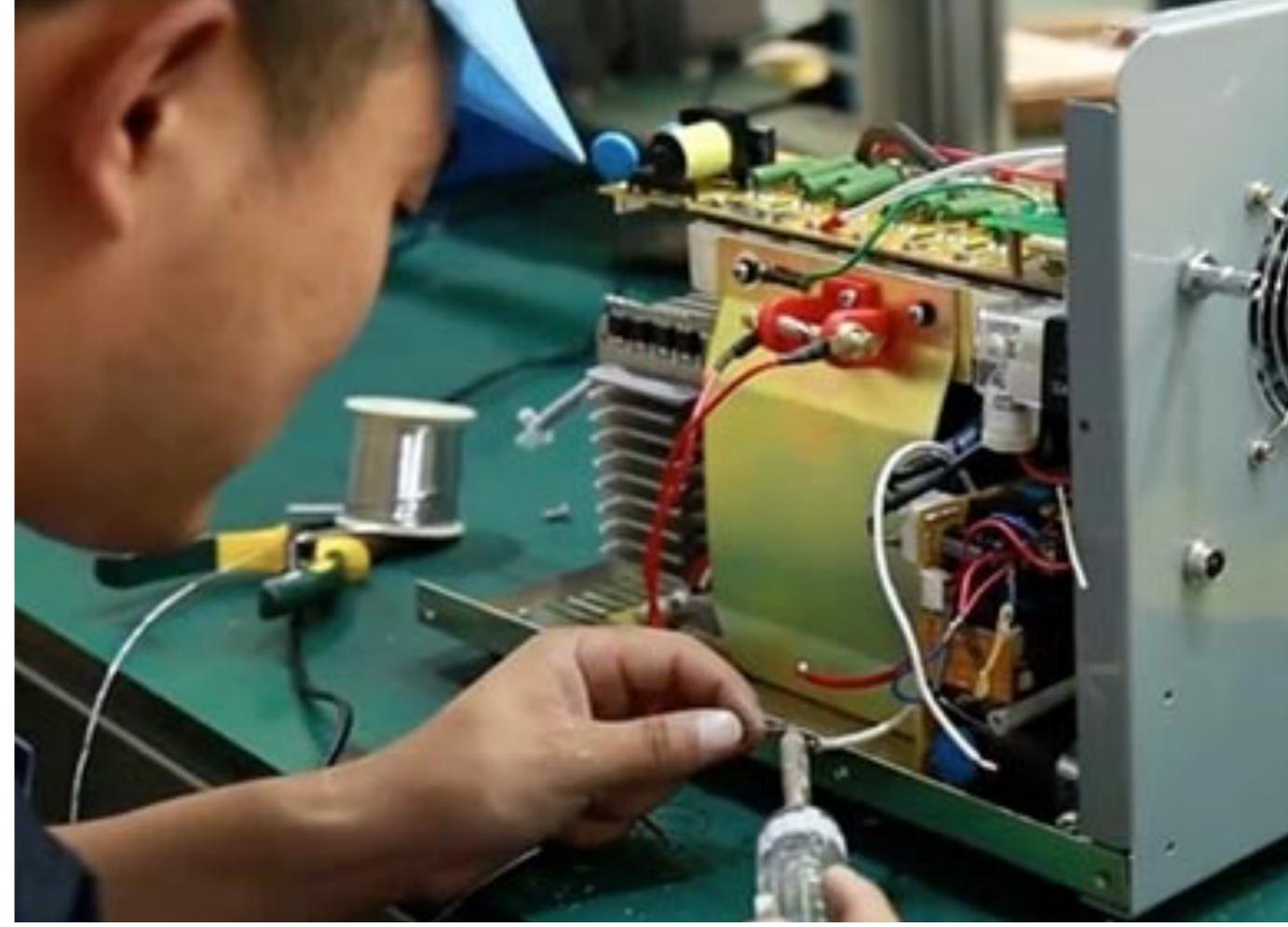


To guarantee our cold welding machine stability, we adopt Japan imported lead-free reflow soldering automatic printing high-speed PCB mounter for PCB SMT processing, and the equipment can even be used for processing mobile phones and other circuit PCB boards.



High quality electronic components







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