Cold Welder

1. Introduction

Electrical cable is used as the intermediate link to connect each functional parts of the whole electronic system. Any loose contact or low quality welding joint will threaten the operation security of entire system. Cold welder is mainly used in wire drawing process.

2. Applied Material

Generally, the cold welder is suitable for metal wires with low hardness and good ductility like aluminum wires and copper (alloy) wires.

3. Welding Classification

The welding process is simple and easy to operate, mainly including cold welding and hot welding. Cold welding is a method to achieve solid-state welding through applying pressure to make metal strong plastic deformation at room temperature. The applied pressure generally should be higher than the material yield strength to deform by 60%~90%.
And the hot welding is carried out higher than the room temperature between 100~300℃.
Under the cold welding, the oxide or other pollutant on the surface of aluminum and copper are broken and removed under the pressure.
The bonding surface of aluminum and copper neither produce welding defect assosiated with melting and solidification, nor melt occur.
When using hot welding, the joints are generally not required to be cleaned before welding, and the welding heating temperature is lower than the eutectic point of aluminum and copper, and the aluminum and copper base materials are not melted. In the formation of aluminum and copper mechanical mixing zone, increase the pressure to improve the microstructure, can refine the compound, and improve the strength of the joint.

4. Matched Dies and Maintenance

4.1 The dies for cold welder are made by high quality steel and treated by vaccum quenching. Its hardness is about HRC 56 ~ 60 with the characteristics of small deformation and wear resistance. When using, in addition to selecting a die that matches the wire specifications, in order to extend the service life of the die and achieve a better welding result, the maintenance is also very important.
4.2 It is necessary to take it apart and wipe it with a clean white cloth every day after using (We

suggest using compressed air to blow away the dirt inside the dies) to ensure no foreign bodies in the four small blocks and the column pin cannot be rusted. Especially in relatively humid coastal areas, the dies should be sprayed with lubricants when not used for a long time, and should not be wrapped with a damp cloth to prevent rust.
In the case of daily use, you only need to wipe it cleanbut bot with any lubricant. The wire groove in dies is very important, wipe it clean every day to prevent the wire groove from rusting. If there is oil or dirt on the wire head during wiring, clean it before wiring.
If it has not been connected more than 20 times, take out the die and clean inside of it, then continue.

5. Technical Parameters and Advantages

We provide hand-held welder(LT-10A), table type welder(LT-3B,LT-4A) and hydraulic type welder(LT-1510B, LT-2013B)
Welding range and application material are as the following table:

Model	LT-3B	LT-4A	LT-10A	LT-1510B	LT-2013B
Range of Wire (mm)	Cu: Φ0.80-Φ4.00				

Product link：https://www.linttop.com/cold-welder.html