



GUANGDONG HWASHI TECHNOLOGY INC.

DESIGN PROPOSAL

of

Glass Lid Steel Belt Capacitor Discharge Spot
Welding Machine

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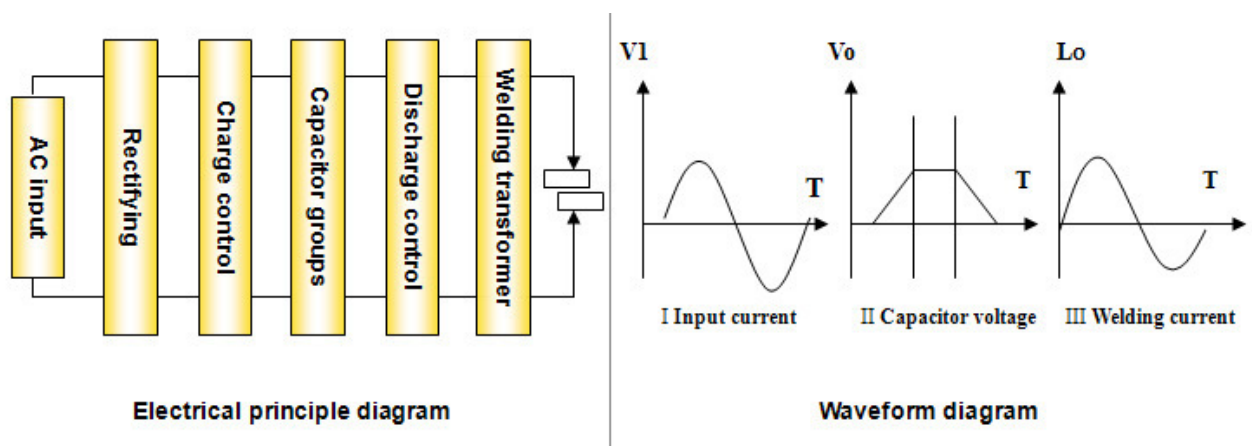
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1. Theme of the Proposal

Capacitor discharge spot welder uses capacitor to store energy and to release instantaneous current. In the meantime, it concentrates large current to pass through a small point and then achieves welding effect (welding process passes through thousands of ampere current within 1/1000 second of time). Therefore, it can minimize the situation that the work piece being oxidized or mechanically deformed due to overheat during the process of welding. The output of the capacitor discharge spot welder that we produce is from 100WS to 18000WS. It is especially suitable for welding metals like red copper, bronze, brass, aluminum, silver and stainless steel, etc. Thus, this type of machine is widely applied to various kinds of industrial production and manufacturing.



Our company produces the capacitor discharge spot welding machine which is suitable for steel belt welding within 50mm.

2. Design Concept

- High efficiency, high quality. Basically achieve automation. Completely meet the intelligent requirement of human-machine conversation.
- The welding spots are good in looking, firm, and stable. Well consistency of welding spots.
- Wide application. The machine, electricity and other mechanism could be reasonably assembled. It could be used to weld other similar products after relevant modification of microcomputer data program. One machine could serve several purposes.
- Design Working Life: 8-10 years

3. Machine Composition

- **Main Body:** Adopt the reinforced special designed steel structure as the body. Reasonable stress center of gravity to ensure the stable intensity of the main body when conducting fast speed welding. At the meantime, it could provide stress supporting point and working platform for other actions.
- **Power Source:** The design uses 15K (8000J) capacitor discharge method as welding power source. Adopt Japanese "NIPPON CHEMI

CON"(NCC225UF/475V)high quality brand urgent charge-discharge special capacitor; High-speed charging and discharging voltage circuit, and fast charge-discharge special capacitance. Every minute charge-discharge cycle count as to 124 times (set to 100V) with quick speed, high efficiency; Digital adjustment of electric voltage, adjustable voltage from 0 to 425V. Accuracy for fluctuation is 1v which can help to guarantee the welding accuracy.

- **Welding control system:** It used advanced microcomputer rapid response touch controller, digital control, simple and clear operate interface; Quick thinking logic circuit, can guarantee the voltage for each discharge must reach the preset voltage then it can work, which can ensure the stability of the welding effect. It can effectively prevent the unhealthy phenomenon of loose weld and cold joint; Speed reaction, high accuracy control, provide guarantee for high quality welding spot.
- **Main Engine Control System:** Adopt the touch screen of Japan Panasonic as the human-machine interface, Chinese-English input. The PLC, as the control hub as the whole machine, is in charge of reading, transmitting and controlling all kinds of signal processing and coordinating with various external instructing transmission signal mechanism in order to ensure the validity of all orders of execution of the machine. The self-detection of all automatic testing stations

effectively eradicates the occurrence of malfunction and other accidents. When the pressure, current, air pressure, hydraulic pressure, temperature or other testing signals are in abnormal situation, the machine will give an alarm to prevent any insecure accidents.

4. Material Configuration

S. N.	Name	Specification	Brand	Origin
1	Charging silicon controlled	KP-150	MCC	U.S.A
2	Discharging silicon controlled	SKKT1000-12E	MCC	U.S.A
3	Rectifier diode	ZP-150A	MCC	U.S.A
4	Current-limiting resistance	100W/100Ω	NANFA	Hong Kong
5	Capacitance	225UF/475V	Nitponchemi.con	Japan
6	Discharging contactor	JMC-75	LG	South Korea
7	Charging contactor	JMC-18	LG	South Korea
8	Charging control panel	WD-20DC-1	HWASHI	Home-made
9	Discharging	WD-20DC-2	HWASHI	Home-made

	control panel			
10	Charging switch	15A	MITSUBISHI	Japan
11	Tail switch	DS-231	IDEC	Japan
12	The main magnetic valve	3000#	SANWO	Korea
13	Pressing magnetic valve	4#	SANWO	Korea
14	Air group	4000#	SANWO	Korea

5. Technical Parameters

Model	Input Voltage	Input Power	Output Heat	Capacitance	Electrode Force	Electrode Stroke	Steel Belt Width
WL-C-5K	380V	5KVA	3000J	28000uF	350kg	80mm	15mm
WL-C-7K	380V	7KVA	4500J	42000uF	800kg	100mm	16-25mm
WL-C-10K	380V	10KVA	6000J	60000uF	1000kg	100mm	26-30mm
WL-C-12K	380V	12KVA	7000J	70000uF	1000kg	100mm	30-35mm
WL-C-15K	380V	15KVA	8000J	80000uF	1000kg	100mm	36-50mm

Video Link: <http://www.hwashi.com/Product/609183469.html>

Pictures of Machine



Full Automatic Steel Belt Loading and Welding Machine



Machine with Automatic Fixture and Automatic Electrode Grinder

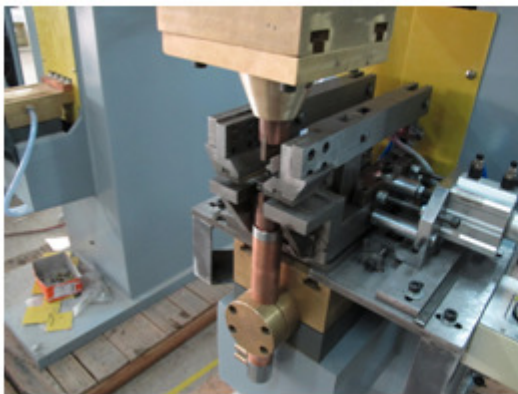
Capacitor Discharge Spot Welding Machine



Machine with Automatic Fixture



Machine with Manual Fixture



Notes: please respect our efforts and keep the relevant technological content of this proposal confidential. Before we sign a purchase contract, we would not provide any relevant drawings of this proposal. We sincerely apologize for any inconvenience that we bring to you. Thanks for your reading.