6.08. GENERATOR OF DISCHARGE PULSES “ISKRA IV” (ICKPA IV)

It is intended for the formation of current pulses in two channels with the amplitude and phase control to operate as a part of the complex of electric pulse machining of welds, which was created in the E.O.Paton Institute for Electric Welding of the NAS of Ukraine.

The proposed scheme has the following advantages:

- pulse-width method of charging and milking of capacitive storage;
- bipolar operating mode;
- minimized value of filter capacity;
- high efficiency due to the absence of resistance charge and discharge links.

Main technical specifications:

Supply	Three-phase 380 V network with zero output
Galvanic isolation input - output	3,5 kV, transformer
Number of channels	2
Amplitude of pulse in each channel	0 ÷ 5 kA
Voltage in the channel	10 ÷ 750 V
Current pulse duration of the clamping channel	680 ms
Current pulse duration of the discharge channel	550 ms
Time delay between current pulses in channels	10 ÷ 100 ms
Maximum measured current of the discharge circuits	5000 A
Cooling	Air forced