

Specifications of 11.8 kJ bank

- 2 ignitrons employed, type: GL 7171
- Four capacitors used, each 370 μF
- With added inductors, PFN can be formed,
- Charging voltage varies from 1.2 to 4 kV
- Maximum current is up to 70 kA
- Trigger generator to activate the ignitrons is included
- Additional 30 kV trigger pulse generator is incorporated
- Bank has safety interlocks
- Charge command and the dump safety command
- To activate the bank the external 15-70 V trigger pulse is required

Options

In the system 4 kV, 370 μF capacitors can be replaced by 20 kV, 90 μF capacitors. This enables the bank to store 72 kJ. The current concept was also upgraded to 100 kJ.

Applications

- Supply the prime magnetic field in MCG
- Produce magnetic field up to 4 T required for BWO
- Generate the electro-thermal chemical (ETC) ignition of gun propellants

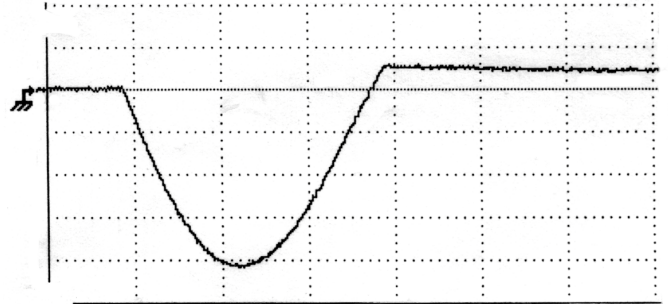


Figure 1. Current waveform (0.5 kA/div; 4 ms/div) in BWO. 4 T was produced inside 35 cm long tube of 6 cm in diameter



Figure 3. Photograph of 11.8 kJ bank, front of the cabinet.



Figure 4. Photograph of 11.8 kJ bank, back of the cabinet.

Shown in Figures 3 and 4 are the DC power supply, safety interlock, 30 kV trigger generator, Ignitrons' trigger generator, Ignitrons, safety switch with dump resistor and 370 μF capacitors.

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