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Single –triple pulse Power supply for 2 kA, 20 MeV Linear Induction Accelerator

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A pulsed system for a 2 kA, 20 MeV linear induction accelerator power supply was developed. On a first stage of operation it is capable of producing a 336 kV, 2 kA, 60 ns single pulse at the accelerating inductive cells. Each cell is supplied by 8 pulse modulators based on an inductive voltage adder principle. Each modulator is designed to produce pulses up to 21 kV, 10 kA with a different flattop duration of 60 or 380 ns, also it can be used in a triple pulse mode operation with a time shift between pulses which can be set from 2 to 10 μ s. The modulator's single and triple pulse mode as well as the auxiliary charging and biasing systems test results are presented. Also the pseudospark switches batch testing is described.

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