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Development and testing of high-voltage cells for 2 kA, 20 MeV Linear Induction Accelerator

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Two types of the high-voltage cells are developed for a 20 MeV, 2 kA linear induction accelerator and a 2 MeV injector. Each accelerator's cell incorporates 16 inductors, it is supplied in an inductive voltage adder manner with a pulse voltage up to 336 kV and different flattop duration of 60-380 ns. At the first stage the cells were tested in a 60 ns pulse mode, the test results with an overvoltage up to 400 kV are presented. Few imperfections have been discovered during experiments and fixed. The inductors are made of an iron-based alloy, test results of magnet cores batch are presented.

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