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VITA for industrial and medical applications

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Vacuum insulated tandem accelerator (VITA) – original electrostatic accelerator – was proposed, created and is used for investigations in boron neutron capture therapy (BNCT) and in many other applications. VITA is the part of accelerator based (AB) neutron source in which protons/deutrons with an energy in range from 0.3 to 2.3 MeV and current in range from 1 nA to 10 mA are transported to a lithium or another target. It results in generating neutrons with a wide range of energies – cold, thermal, epithermal, fast.
Industrial applications of the VITA are: quafilication and testing perspective materials for thermonuclear fusion, investigations of metal blistering and measuring of cross-sections of nuclear reactions.
Medical applications of the VITA are: investigations in BNCT, conducting BNCT on domestic animals. VITA became a prototype for the AB neutron source in Xiamen (China), which is now in clinical trials, and for the AB neutron source for N.N. Blokhin Oncology Center (Moscow, Russia).
In talk there will be given details about VITA and industrial and medical applications of the VITA.
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