

The Superconducting Vertical Accelerator for Applied Purposes SVAAP, A. VASILEV, O. VOINALOVICH, MRFAE; A. GLAZKOV, A. KOLJASKIN, A. PONOMARENKO, MEPHI; L. SEVRYUKOVA, I. ZVONAREV, IHEP - A project of a superconducting resonance electron linac under consideration is designed for technological goals at the energy of 5 MeV and the current 10 mA. A Tesla-shape accelerating section 684 mm long consisting of 14 cells is put into vertical cryostat. Vertical and horizontal dimensions of accelerator are 1.8 and 1 m respectively. In the horizontal part the 40 keV injector, electrostatic lens, prismatic chopper cavity collimator slot and turning magnet are housed. The other two collimator slots which form 20 grade bunches, another electrostatic lens to ensure the transverse co-ordination of a beam and an accelerator channel are housed in the vertical part. The chopper cavity dimensions optimized at the working density of 3 GHz are 75 x 75 x 20 mm with about 1 kW power supply. The details of the power supply systems of accelerating section and chopper have been described in the talk. It is given for a beam dynamics and parasite modes. Most attention has been given to manufacturing technology of SC accelerating structure 'Tesla-shape' HTSC/Cu consisting of 14 cells according to our technology.