

CONTROL SYSTEM FOR THE EXPERIMENT PREPARATION OF THE THERMONUCLEAR FUSION DEVICE

V.V. Bulan, Troitsk Institute For Innovation And Fusion Research; V.M. Chikovsky, Troitsk Institute For Innovation And Fusion Research; V.I. Zaitsev, Troitsk Institute For Innovation And Fusion Research

The control architecture of thermonuclear fusion device named Angara-5 was described in [1]. In present paper the development of control system for shot preparation of Angara-5 is given. This stage of working cycle precede by the experiment and include a lot of control and monitoring operations. The control system hardware comprises the CAMAC blocks (ADC, multiplexers, I/O blocks, PC-connected controllers) and IBM PC. The design of control system permits to maintain the self-testing operations. The main part of the software is the polling program that gives possibility to fulfill the preparation of the gas pressure means and starting the procedure of capacitor bank charging. The program users are technical personnel and has reporting and archiving capabilities. Special tools for the supervision of preparation process in the real time are designed. There are some instruments for the system test and maintenance too. The hardware and software charts of control system are given.

[1] V.V.Bulan, E.I.Dudorova, V.I.Zaitsev et al., Proc. of ICALEPCS'91, KEK, Tsukuba, Japan, pp.235-238.