SUMMARY

Diploma contains: 68 pages, 47 illustrations, 2 tables, 2 appendixs, 20 sources.

Object of study – the dynamic processes in the direct current elecric drive system. The aim is to design and to comparatively analyse the astatic speed control. For the purpose of analysis was made for the typical system with P-regulator, composed I- and P-regulator and PI- regulator. Also were taken into consideration such systems: with reference model circuit, speed-compensated static torque, with feedback on current and dynamic system with observer status of the first order, restoring dynamic and static torques. Research is carried out by mathematical modeling.

Investigated system can be used in systems where static regulation and stabilization of the speed of the executive bodies is necessary. For example a variety of machines and mechanisms - rolling mills, hoisting mechanisms, mining and extractive machines.

ELECTRIC DRIVE, CONTROL SYSTEM, ASTATIC SPEED CONTROL, CASCADE CONTROL, TRANSIENTS, STATUS OBSERVER.