

SUBORDINATE CONTROL SYSTEM WITH SELECTIVE SPEED CONTROL

A necessary condition for the operation of electric mechanisms that ensure accurate testing of specified trajectories, is a high speed and accuracy of controlled coordinates maintaining in dynamic and steady state. In addition to these requirements, the control system should provide a wide range of speed control, limit the output coordinates by accepted values and ensure the margin stability in the range of possible changes of the electric and machinery parameters. To provide these requirements modern systems are mainly subordinated to the principle of regulation circuits connection.

Performance compensated inertia motors provided input forcing circuits links to regulators regulatory choice fast converter to power the engine that defines uncompensated time constant of the system and the number of circuits, of regulation.

The stiffness of the mechanical characteristics of the segment of speed stabilization selection provided by integrated speed controller with parameters calculated by "symmetrical optimum". Application of the regulator causes significant overshoot signal when mining tasks and the load . An implementation of variable structure speed regulator , which will use a variety of structural solution, with positive qualities of different regulators is offered.

Studies have shown that the system with selective choice of speed control ensures performance of electric drive which is higher than that corresponding to the default settings, with allowable overcontrol of controlled origin, speed in stability of the load . The system is easy to establish and requires no special calculation methods except traditional systems of subordinate control.