SUMMARY

The magister dissertation contains 113 pages, 38 figures, 34 table, 1 addition, 6 sheets of a graphic part.

In this magister dissertation the digital control system of the link of the welding manipulator with the laser sensor is developed. The dissertation makes an analytical review of welding manipulators and burner trajectories in the process of welding and identifies the basic requirements for the designed system. As the engine for the feed mechanism of the burner is selected DC motor 2 DPM-60-0,13-3,5-D00V with power. The structural scheme of the SAK of the ZM link was developed with a two-link welding manipulator. The first link of the welding manipulator must provide the specified transverse horizontal position of the burner relative to the center of the joint of the welded parts, and the second link – the distance vertically between the burner and the surface of these parts. A study was carried out, the task of which was to reproduce real physical exertion on the engine.

WELDING MANIPULATOR, AUTOMATIC CONTROL SYSTEM, LASER SENSOR, CONTROL UNIT, STEAM ENGINE, RESEARCH, REGULATOR, STATE OBSERVER.