
DESIGN AND CONSTRUCTION OF AN EXPERIMENTAL INSTALLATION FOR INVESTIGATING DIRECT CURRENT MOTOR CHARACTERISTICS

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Abstract

We designed an inexpensive electromechanical test bench for investigating direct current (DC) motor characteristics. The bench makes it possible to test DC motors and refine a technique of using inertial loading to plot the torque/velocity curve. The primary goal of our work is to debug software and hardware solutions to be used in small-scale track-laying mobile robots and test benches.

Keywords

Vehicles, electrical drive, electro-magnetic gearbox, mobile robotic systems, test bench, experiment

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References

- [1] Zabavnikov N.A. Osnovy teorii transportnykh gusenichnykh mashin [Basics of track vehicle theory]. Moscow, Mashinostroenie publ., 1975, 448 p.
- [2] Borisov Yu.M., Lipatov D.N., Zorin Yu.N. Elektrotehnika [Electrical engineering]. Sankt-Peterburg, BVKh-Peterburg publ, 2012, 592 p.
- [3] Arduino. Available at: <https://www.arduino.cc/en/Main/Software> (accessed 15 June 2017).
- [4] DipTrace. Available at: <http://diptrace.com/rus> (accessed 14 June 2017).
- [5] MATLAB. Available at: <http://matlab.ru/products/matlab> (accessed 15 June 2017).

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