

VERTICAL HEIGHT CLIMBING AND DESCENDING ROBOT

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ABSTRACT

Technologies in the world are improving day by day. It improved so fast that technologies that we have today are considered as fantasy during the past century. Improvement of technologies such as the ability and mobility of machines or robots are now so advanced that it could perform things that are not capable to be performed by human.

As for this project, it is about designing a robot which is able to go up a stair case which is at least twice its height carrying a load. It will also be able to make a turn and descend from this height to the ground without dropping the load. This robot will be wirelessly controlled.

The design considerations will be the wireless remote control, motors and structure of the robot. The motors, control system and the structure of the robot will be the key of this project. The robot will require a high torque motor to carry heavy load and go up vertical surface. Wireless remote control will be the part to trigger command to the robot.

Additional features like the sensors have been added to this project to increase the functionality of the robot. In default, the wireless remote control will be the one controlling the robot, but if there is an emergency such as malfunction of the remote control, the sensors will stop the robot from colliding with the wall.

Overall, the project went on as planned. The main aim of the project was successfully achieved. The robot is able to go up vertical surface and descend from it without dropping the load. With the additional features, the project is going on fine as planned.