

ABSTRACT

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GLAMOUROBO

GLASS CLIMBING ROBOT

(xvii + 88 pages: 49 figures; 1 table; 6 appendices)

Nowadays, robotics technology is growing rapidly. Robot is a machine that can think, plan and act. Robot can be re-programmed to run a particular task. Robot is usually used to do something hard, dangerous, repetitive and dirty.

Glamourobo is a glass climbing robot, it can climb vertical glass such as window. And it has a feature to clean up the glass. Glamourobo consists of three main components, i.e. microcontroller, motor, and pneumatic system. The microcontroller is the brain of the robot. It should be well programmed in order to control the robot perfectly. The motor must operate well in the specified position and condition. Motor's specification should be calculated precisely. The most important component is the pneumatic system. It determines whether Glamourobo can be impacted to the vertical glass. It is considered as the best mechanism for Glamourobo.

As a conclusion, Glamourobo is able to climb the vertical glass. Its pneumatic system is located on the ground. Glamourobo must be placed manually for the initial position. Glamourobo climbs according to the programmed algorithm on the microcontroller. This algorithm does not include how to avoid obstacles. Further studies may include building a precise physical Glamourobo and finding a new method so that the pneumatic system can be located on the Glamourobo.

Reference: 8 books + 6 website (1994 - 2008).