

ABSTRACT

This thesis is the continuation of a previous thesis and relates to design and construction of two robotic systems, called Gantry type and Delta robots.

To begin with, reference was made to the field of robotics and a brief description of the various machines which played an important role in the formation of the whole construction.

There is an analysis of the existing design of both robotic systems, with illustrations developed from previous dissertations.

Furthermore, is the presentation of the problematic points of design, and also any deficiencies observed and there is a reference to the ideas for solving them, taking into account all construction constraints. We record the actions that were taken to optimize the design, as well as the new designs that were made by analyzing each piece separately. The analysis requires the use of simulation methods, such as Solidworks Simulation, for more effective design and selection of the right materials. Then is followed by a detailed presentation of the process of manufacturing and assembling robotic systems.

Finally, all the problems that have appeared they are mentioned during the assembly of the whole construction and upon completion of this process the thesis is completed.

To sum up, with the completion of the dissertation all the stages for the construction of the two robotic systems are covered. Following the steps mentioned above, as a result there is the function of the two systems with chances for more improvement.