

THE REMANUFACTURING OF AN ARTICULATED ARM ROBOT WITH 5 DEGREES OF FREEDOM STEP IN THE ACADEMIC PRACTICAL EXPERIENCE

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Rezumat. În cadrul acestui proiect s-a urmărit procesul de refabricare a unui robot didactic de tip braț articulat, cu 5 grade de libertate. Scopul final al proiectului este realizarea unui model didactic funcțional, programabil și simplu de utilizat și înțeles de către alți studenți. În urmărirea acestui scop, se prezintă aici primele întâlniri atât cu reprezentanții industriei de profil din România, cât și cu furnizorii pentru diferite componente. Prin finalitatea proiectului se afirmă necesitatea următoarelor: planificare riguroasă a riscurilor, planificare a etapei de dezasamblare a proiectului și recuperare de componente, experiența câștigată în afara programului de studiu.

Abstract. In this project we aimed at the remanufacturing process of a teaching robot with an articulated arm and five degrees of freedom. The ultimate goal of the project is to develop a functional didactic model, programmable and easy to use and understand by other students. In the pursuit of this goal, we will present to you here the first meetings with the industry representatives from Romania and suppliers for various components. The stated purposes of the project show the necessity of: planning a rigorous stage of disassembly and recovery of components, the experience gained outside the normal academic program, rigorous planning for risk, rigorous timetable planning.

Keywords: remanufacturing, project planning, articulated arm robot, electronics

1. Introduction

The necessity of a working teaching model in a learning institution cannot be stressed enough. As well, the importance of a simple and easy to understand model for young, inexperienced students, is almost vital for the learning process.

As such, the current project has the goal set at offering back a working, programmable device, that can be worked on by just about anyone who has an interest in it. Alongside the physical model, it will offer upon its completion a detailed report on both the construction of the robot, and the experience gained along the road. This experience, a valuable resource for any student, will include data about manufacturers of components, retailers, the importance of having a risk management plan and also the importance of having a recycling plan for the end of the device's lifecycle. Such aspects, as though during college years, have a great importance and relevance in the industry; but it is only through experience that these can be truly appreciated, and it is our interest to pass on this knowledge, in an accessible way.

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