



RESEARCH ON THE OPTIMIZATION OF THE CAPABILITIES OF THE MILITARY LOGISTIC SYSTEM BY THE IMPLEMENTATION OF SOLUTION SPECIFIC TO ROBOTIZED TECHNOLOGIES

CODE PROJECT: TE_10
PROGRAM: HUMAN RESOURCE
ACRONYM: ROBMILCAP

TYPE OF PROJECT: *Funding Application for the Research Projects for the stimulation of the founding/ forming of young independent research teams*

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PROJECT OBJECTIVES

GENERAL OBJECTIVE: the contribution the optimization of the didactic and learning process for the improving the didactic logistics of the Land Forces Academy by modernizing a laboratory of Advanced Logistic Technology necessary both for the preparation of the students in the Logistics specialization as well as for the students enrolled in the Management of the Capabilities Programs and Management and Technology Programs.

FROM A SYSTEMIC POINT OF VIEW THE OBJECTIVES ARE:

- The optimum dimensioning of the capabilities of the logistic resources (Forces and Means)
- The robustness and accuracy of the algorithms in the conception, design, modelling and simulation of the logistic systems using the robotized technology

FROM A TECHNICAL POINT OF VIEW THE FOLLOWING THINGS ARE AIMED AT:

- The conception, calculus and modelling of various architectures of industrial robots for military logistic applications
- Determining the interconditionings between the use of the robotized technique in the logistic applications and the development of the military technology

AT AN OPERATIONAL LEVEL THE FOLLOWING THINGS ARE AIMED AT:

- The control of the quality indicators for a logistic system
- Estimating the standardization and interoperability requirements in the field of military logistics

Acomplishment

STAGE 1:

1. Identification of the elements specific to NATO interoperable logistic systems relevant for obtaining operational capability
2. Characterization of the revolution in military affairs
3. Evaluation of the logistic determinations of the revolution in military affairs

STAGE 2:

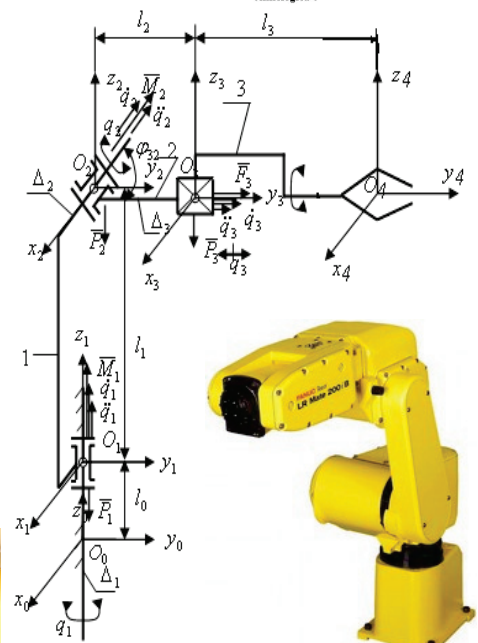
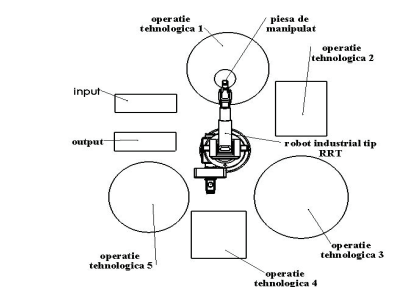
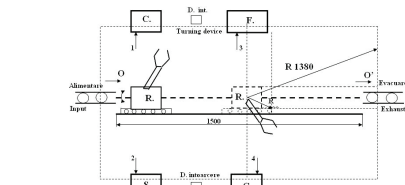
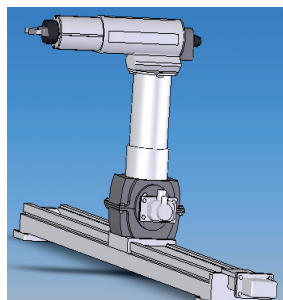
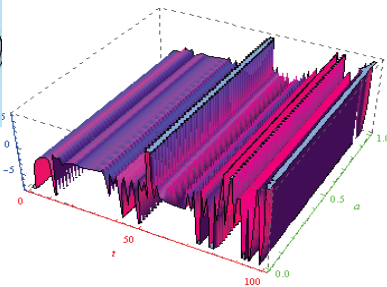
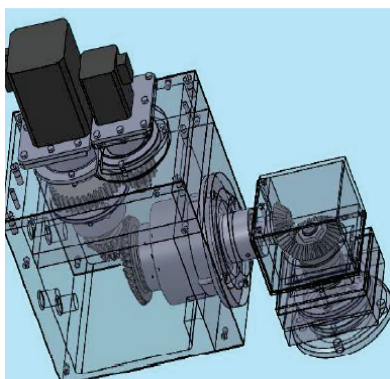
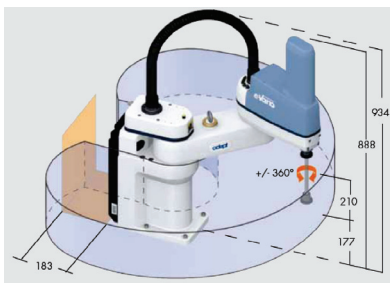
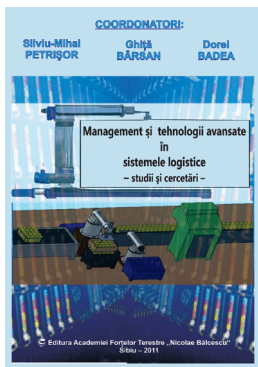
1. Identification of the elements specific the changes based of the capabilities in the logistic military domain
2. Characterization and evaluation of the capabilities of the robotized technological equipment
3. Organization and design of flexible manufacturing cells equipped with industrial robots intended to facilitate military logistic activities

STAGE 3:

1. Constructive optimization of certain architectural variants of industrial robots proposed for implementation in the selected activities
2. Functional optimization of certain architectural variants of industrial robots proposed for implementation in the selected activities
3. Testing and validation of the type of organization of the selected flexible cell and of the structure of industrial robot proposed for being implemented in the military logistic system

STAGE 4:

1. Formulation of proposals and recommendations regarding modernization of the military education in the logistic domain
2. Improvement of the didactic logistics within the Advanced Logistic Technologies Laboratory
3. Formulation of proposals and recommendations regarding the utilization of robotized technologies in the military logistic activities



Aplicability

- Identification of the elements specific to NATO interoperable logistic systems relevant for obtaining operational capability
- Characterization and evaluation of the logistic determinations of the revolution in military affairs
- Characterization and evaluation of the capabilities of the robotized technological equipment
- Organization and design of flexible manufacturing cells equipped with industrial robots intended to facilitate military logistic activities
- Constructive optimization of certain architectural variants of industrial robots proposed for implementation in the selected activities
- Testing and validation of the type of organization of the selected flexible cell and of the structure of industrial robot proposed for being implemented in the military logistic system
- Improvement of the didactic logistics within the Advanced Logistic Technologies Laboratory
- Formulation of proposals and recommendations regarding the utilization of robotized technologies in the military logistic activities