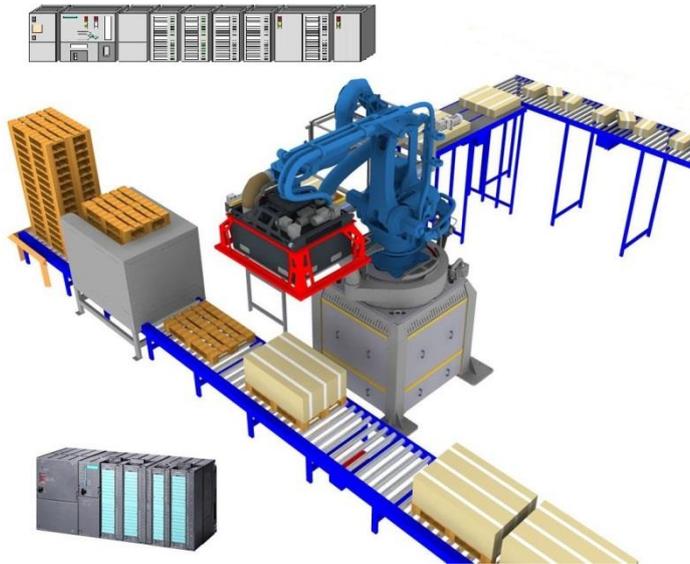


Topic Proposal for a Master thesis:

“Design and Analysis of an Optimized Fully Automatic and Robotic High Performance Palletizing Equipment”

The technologies for handling whole layers from article storage pallets to mixed customer pallets, or for the picking and handling of whole layers for further processing, are diversified. It does so under the various criteria, which may vary depending on the application. Often the solutions must be combined to exert a desired task in the desired form. The main aims remain the same however, it is redesign and development by increasing productivity, reducing cycle times and reducing costs with an increase in quality. These goals are often coupled together. Therefore, for layer picking and palletizing system a concept that does not conflict with the main objectives is required. The system should handle a greater range and variety of products both safely and accurately. Furthermore, layer picker and palletizer system is a key component of company's full order picking solution suite. Many distribution businesses are facing rapidly increasing demands for full layer picking, palletizing and packaging efficiency and safety within their supply chain and these challenges can be met with fully automatic logistic systems where the robotic palletizing equipment is included in the design.



Thesis Objectives

For these reasons, a new system has been developed, which meets all the requirements for a full automatic palletizing and packaging system for use with large numbers and small variation in the products types with a special focus on beverage industry.

For this, the following tasks are to be achieved in this work:

- System should be designed and visualized (Using 3D CAD software, Graphical specific modeling, visualization and animation).
- Individual components and operations of the system should be accurately described (description of the system).
- The initial control plan including sensors, actuators etc. must be developed.
- The system should be compared with a similar system.

Contact:

M.Sc. Mohammed Ruzayqat

SK 207

Telephone: +49-02033797058

Email: mohammed.ruzayqat@uni-due.de