



1. Project definition

- **Description of the project / goal of the project**
Goal of the project is to reorganize a cell of an assembly plant of the company Afag which was taken out of operation, by mechanical and control technical changes for a self designed visiting card owner. In step 1 the bases of the visiting card owner should be brought to sort carrier and be converted in transportation units. Further the existing PLC (Programmable Logic Controller "S5") will be replaced by a new controller / control unit from Phoenix Contact.
- **Project extent**
The project covers the entire mechanical and control technical realization as well as the start-up of the plant. To the individual tasks belong project planning, mechanical construction, component manufacturing, electrical installation, programming, consideration of safety-relevant regulations and start-up of the plant.

2. Current situation

The discarded assembly plant was conceived for the assembly of switches for the automotive sector and was taken in enterprise in 1999. The format parts are designed for installing a brake switch only and will not be used for the project. The control is fully functional, but won't be used any longer. Other mechanical parts such as volumes, engines, pneumatics and the hanging installed XY axle portal are in good condition and will further be used.

3. Target concept

According to project inputs/guidelines and plans of the project team the concept and the objectives for the first stage of development in 2008/2009 were specified as follows.

- The base and the pin of the visiting card owner will be planned and manufactured.
- All format parts around the base will be designed and manufactured to supply, to isolate, to handle and to remove the bases. The pin and the clip are not yet considered in the machine concept, but will be integrated into the concept in the following steps when the project will be carried on.
- The existing Siemens control will be replaced by a Phoenix Contact control.
- For the data communication Profinet, a network bussystem will be used.
- New installation and wiring of the sensors and pneumatics.
- Partial renewal of the safety doors
- New wiring of the axis control
- Visualization by a monitor
- Development of suitable programs to operate the machine.
- Commissioning of the plant in consideration of safety-relevant criteria.