

Paint shop for Hicom, Malaysia

CUSTOMER

DRB Hicom Automotive is a manufacturer of passenger cars and utility vehicles. This producer develops his own car brand Proton, but is also involved in a production of cars such as Isuzu, Mercedes and VW (cooperation for Malaysian market). This company is also involved in a national program for trucks and motorcycles development.

TASK

Programming and commissioning of conveyors in paint shop for VW Polo and Mercedes class C and E.

The transportation of a car body was done using a series of skids traveling on roller conveyors, chains with additional elements like cross conveyors, turn tables and lifters. Movable elements were positioned by a laser encoder, which allowed very precise and repeatable stop positions. The car body movement over the paint shop was controlled by Main Operating Panel (MOP). Modification of the production plan is always possible as long as a body is not in a paint booth, which gives operators of the plant great flexibility. Selected parts can be taken out of the production chain at any moment and placed back after offline inspection/repair.

For the pretreatment and electrocoating line autonomous shuttles running on the EMS rails were used (E-Shuttle from Eisenmann). Shuttle travels with a body using a preprogrammed dip curves (different for each model), which consists of drive and rotation axis. Dip curves are a part of a shuttle controller. PLC in that case is used only as a general coordinator between shuttles and protects the line from collisions.

SCOPE OF SUPPLY:

- Programming S7-300 PLC
- Preparation of visualization in WINCC
- Commissioning
- Warranty and post-warranty service
- Full integration with IT system of the customer

APPLIED TECHNOLOGY:

- 10 PLC's S7-319F
- Profinet
- Siemens panels KTP1200 Basic
- Main Operator Panel using WinCC
- Microsoft SQL server 2016
- RFID Siemens RF180C
- SEW Drive technology
- SICK Safety light barriers

