mySCADA



Injection molding

REFERENCE



INTRODUCTION

PLASTON's history started in the 1950s producing plastic parts. In less than 10 years, PLASTON was one of the biggest companies capable of producing large plastic products. 5 years after the Velvet Revolution, they came to the Czech Republic and they built a plant here.



Nowadays, the company has more than 400 employees all around the world and about 150 in the Czech subsidiary. This Czech plant is famous for producing plastic cases for leading construction companies having around 25 machines in 3 halls.



Picture 1 - Plaston's factory

ABOUT THE PROJECT

The Czech PLASTON plant produces and assembles many types of cases especially for tools. The manufacturing machine produces the case from plastic granulate, the assembler put the case's parts together. Before the cooperation between mySCADA and PLASTON, they need to have 1-2 checkers who checked the final product.

mySCADA and PLASTON cooperation started in 2019. mySCADA offers a software solution (myPRO) which is completely web-based, having the option to not only check the final product automatically but to log the data about the products and their "producers" - the assembly workers.

During the cooperation, many functions have been added to ensure as many advantages as possible. These are just the most used:

- visualization (including pictures of the final cases using to compare)
- recipe management (showing the different configurations of each case)
- data-logging (produced pieces, NOK x OK pieces, data exporting)
- user management (different user accesses)
- camera synchronization (checks the cases instead of humans)
- alarming system (notifications of errors)

The pilot project was used on the machine which produces cases for their exclusive partner. The plan in the future is to extend to all machinery.



Picture 2 - Production line



PROJECT CUSTOMIZATION

There have been many specifications which have to be implemented to ensure that the system works exactly as is required. The system checks the produced pieces of the case with the help of 4 cameras and those must work in precise cooperation. The camera synchronization was the main issue they needed to deal with, but thanks to mySCADA versatility it went without troubles. Setting up of cameras depending on, for example, lighting in the production hall (when the sun shines, the cameras react differently etc.).

THE PROJECT - VISUALIZATION

The whole system has to be fully mobile - all in one cabinet. It contains:

- 1 panel with the visualization
- 1 myPRO (in the panel) SCADA software
- 4 cameras

all that in one place (see picture 3)



Picture 3 - Control station in the mobile cabinet

It is possible to monitor, check and manage the production remotely with a tablet or smartphone. Thanks to its mobility, the cabinet is placed next to the production line which is currently producing the components to assemble.

The system is very intuitive so anyone is able to work with it. Each worker has their own access to just those functions he/she needs for their work. Today, PLASTON AG uses 4 access/user levels:

- MACHINE OPERATOR
- FOREMAN
- TECHNOLOGIST
- ADMINISTRATOR

Based on those levels, the workers are grouped and they are given the proper degree of responsibility. All their actions are then logged - they use RFID chips which are the same as they use for work attendance.



Picture 4 - Login screen



Picture 5 - Control screen (if everything is correct, the pointer turns green)



Picture 6 - Control screen (if some part is missing, the pointer turns red and shows what to repair)

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Picture 7 - Camera system overview

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Picture 8 - Camera system overview



ADDED VALUE

Optimizing production and cost savings are the two main reasons why companies apply new technologies. mySCADA, used in the case of PLASTON, is a great example of both, but especially the latter. The optimization comes from **the decrease of scraps**. The savings are visible as well - **time savings as well as costs savings** because there is no need to have checkers (1-2 checkers per shift, 3 shifts per day) at the end of the production chain and they are either used elsewhere (where mySCADA cabinet is not yet installed) or the position is cancelled.



CONCLUSION

mySCADA solution is now going through the first few months of full operation with excellent results (zero scraps). Also, the management of the company was amazed by its efficiency. The PLASTON main constructer believes that the company will soon decide to extend this solution for all 20 - 25 machines in all halls.

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