nxtControl - Process automation

Der nxte Schritt in der Automation

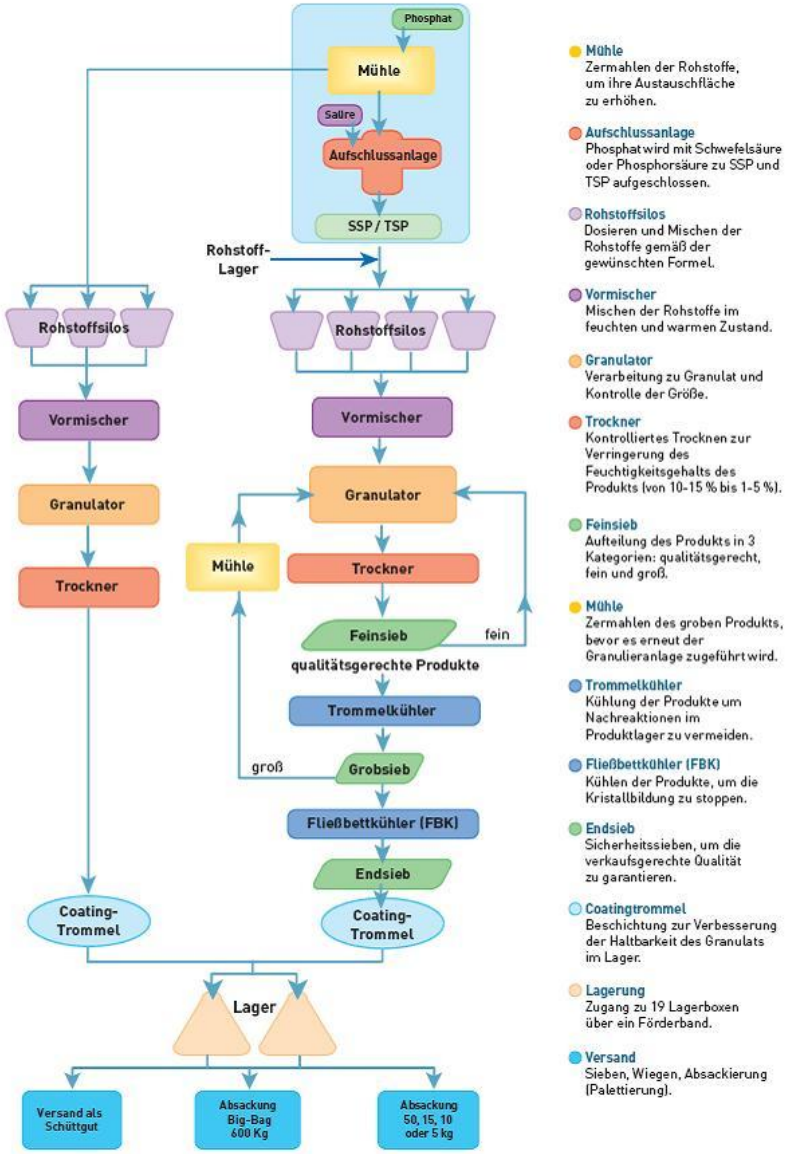
Content

- Timac Agro: Fertilezer production
- Mariel: Vineyard automation

Timac Agro – Fertilizer production

For 80 years Timac Agro is producing fertilizers from natural raw materials for agriculture and gardening.

Today the plant in Pischelsdorf (Austria) delivers a production output of 300.000 tons of phosphate -, potash- and compound fertilizers in any possible variation.



Timac Agro
Automation tasks

- **Refurbishment of existing facility**
- **Automated filling of several silos directly from trucks**
- **Automated pneumatic transport to different production units**
- **Measurement and control of production reactor** (sulfo-ureic-liquor)
- **Visualisation and operation concept for complete facility**
- **Implementation with respect for further extension of distributed system**

Timac Agro
Automation solution

- **Automation solution based on Siemens Hardware** (Microbox IPC + several ET200S)
- **Connection of field devices via Profibus DP**
- **Virtualisation of hardware components: controller, I/O terminals, motor starters, motor circuit breakers, weighing machine**
- **Calculation of transport routes and control of pneumatic gates**
- **Design and implementation of emergency concept for reactor**
- **Implementation of standard SCADA functionality**
- **Operation of production via sequence control**

Simplified topology

Siemens Microbox

Profibus DP

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens ET200S

Siemens Simocode

each ET200S with several:

- Analog I/Os
- Digital I/Os
- Motor starters
- Siwarex

Mariel – vineyard Automation

Mariel is a family driven vineyard. Since many generations they produce vine with outstanding passion and know-how.

The vineyard is situated next to lake Neusiedlersee. The 10 ha cultivated vineyard acreage deliver award-winning Cabernet Sauvignons and Gelber Muskateller.

Mariel

Automation tasks

- Automation of fermentation process in a wine yard
- Control of 20 tanks for white wine and 12 tanks for red wine
- Control of heating and cooling equipment for fermentation process and wine storage
- Visualisation and operation via HMI

Mariel
Automation solution

- Automation solution based on existing Beckhoff hardware
- Connection of remote I/Os via Profibus DP
- Control of fermentation temperature and storage temperature
- CO2 monitoring in fermentation cellar with ventilation control
- Virtualized hardware for easy maintenance and diagnostic
- Visualisation and operation for each fermentation tank (depending on type of wine)

Simplified topology

Beckhoff Panel PC
BC3640

Profibus DP

Beckhoff
BK3150

Heating

Beckhoff
BK3150

Cellar

Beckhoff
BK3150

E-distribution

each BK3150 with several
- Analog I/Os
- Digital I/Os