

AIRS AUTOMATION

SELECTED REFERENCE LIST 2011-2016



Operational costs reduction-steam (2011):

- Case study incl. calculation of investment return.
- Realization documentation (electric & MaR).
- Turn key delivery.
- Siemens S7-300 (SW).



Control system for Pharmapaktor (2012):

- Design & realization documentation (electric & MaR).
- Turn key delivery.
- Siemens S7-300 (HW+SW), touch panel Kinco, frequency invertors Vacon.



BSU1 unit reconstruction (2012):

- Reconstruction of Superclaus lab. unit using original components
- Design & realization documentation (electric & MaR).
- Control system ADAM Advantech & SCADA ControlWeb.



Electrical reconstr. of a building (2012):

- Design, realization documentation (electric & MaR).
- Manufacturing and installation of 23 electrical cabinets (~1000kW). Delivery incl. interior lighting.
- Siemens S7-300 for approx. 100 technologies (HW + SW).



More references (2011 a 2012):

- Control system for electric cabin furnaces ZEZ (Siemens S7-300, turn key delivery).
- Control system for V-homogenizer (Siemens S7-300, turn key delivery).

Backup of CaSO₄ conveyor (2013):

- Replacement of existing conveyor for calcium sulfate for three new conveyors (two as a backup).
- Design & realization documentation (electric & MaR).
- Electric & MaR delivery (frequency invertors Siemens).



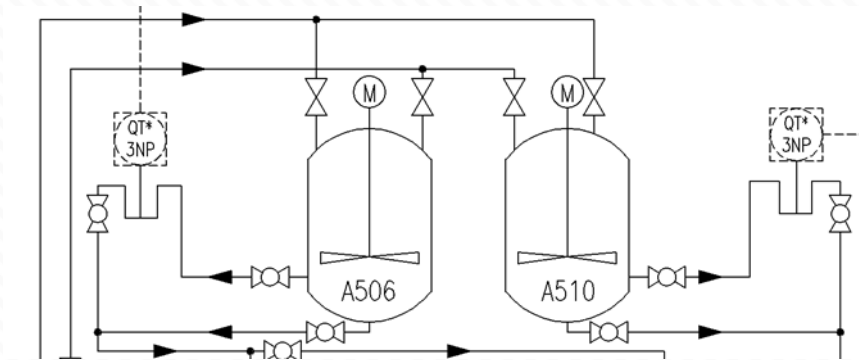
4RU Superclaus unit modification (2013):

- Modification (MaR, control system, piping) of Superclaus lab. unit with four reactors using original components.
- Design & realization documentation (MaR, piping).
- Control system ADAM Advantech & SCADA ControlWeb.



Production line R-CAT (2013):

- Modification of existing production line for a new type of production (modification of piping, tanks, control system, MaR).
- Siemens S7-300, TP Kinco.

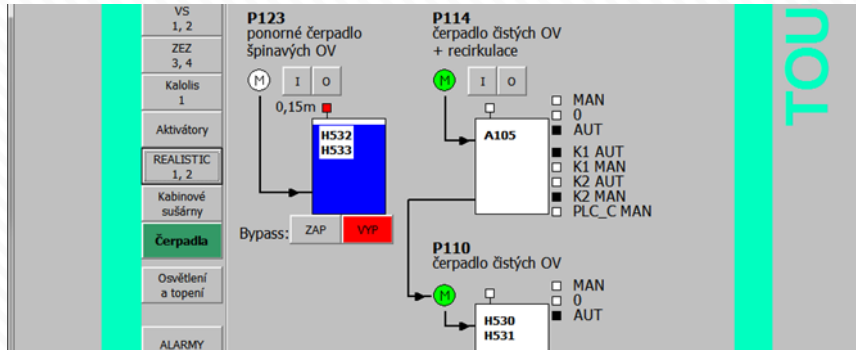


More references (2011 a 2012):

- Control systems for electric cabin furnaces Heraeus a Realistic (Siemens S7-300, HW + SW).
- Ash transport from two blocks of power plant reconstruction (BDEP).
- Production line for ENI T-Sand (turn key delivery, Siemens S7-1200).
- Modification of production line for BASF LT P1 (Siemens S7-300).

Waste water segregation (2014):

- BOD of industrial waste water segregation using conductivity measurement in all production lines.
- Turn key delivery (piping, pumps, tanks, electric, MaR)
- Siemens S7-1200, S-300 (HW + SW), TP Kinco.



Big bag automatic transport (2014):

- Automatic transport of big bags into the 6th floor using cargo lift, big bag conveyers and hoist.
- Turn key delivery incl. cargo lift, conveyers and hoist.
- Siemens S7-1200 (HW + SW), TP Kinco, freq. invert. Vacon.



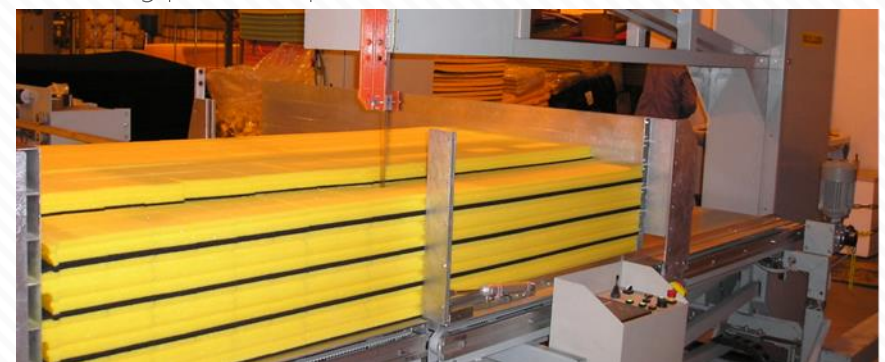
SASOL production line (2014):

- Design & realization documentation (electric & MaR).
- Manufacturing and montage of 17 cabinets (~800kW).
- Interior lighting design and delivery.
- Siemens S7-300 for approx. 50 technologies (HW + SW).



Automatic saw control system (2014):

- Design & realization documentation (electric & MaR).
- Replacement of current control system (Tecomat) for Siemens S7-1200.
- Sawing process optimization (20% more time effective).



MRU unit reconstruction (2014):

- Complete reconstruction of high temperature Superclaus unit MRU.
- Replacement of existing unit using original reactors.
- Control sys. modification (ADAM Advantech, ControlWeb).



More references (2014)

- Control systems for gas cabin furnaces ZEZ (Siemens S7-300, HW + SW).
- Control system for AVA mixer (high speed 50kW mixer, turn key delivery).
- Control system for extruder line Bonnot (turn key delivery).
- Laboratory vessel with agitator, electric heating and control system for continuous dissolving of chemicals.

Drying optimization (2015):

- Vacuum drying optimization by measuring temperature of vapors (fully automatic operation).
- Design & realization documentation (electric & MaR).
- Siemens S7-300 (HW + SW).



Rotating gas furnace control (2015):

- Design & realization documentation (electric & MaR).
- Manufacturing and installation of weighted hopper and floor scales. Mass flow control through the furnace
- Siemens S7-300 (HW + SW), TP Kinco.



Precipitation optimization (2015):

- Precipitation optimization of solutions at copper catalyst production line using pH measuring and continuous flow control (fully automatic operation).
- Siemens S7-300 (SW).



Hydrogenation optimization (2015):

- Design and manufacturing of new agitator for pilot scale autoclave for hydrogenation optimization (autoclave: 5L, H₂ pressure 200 bar).



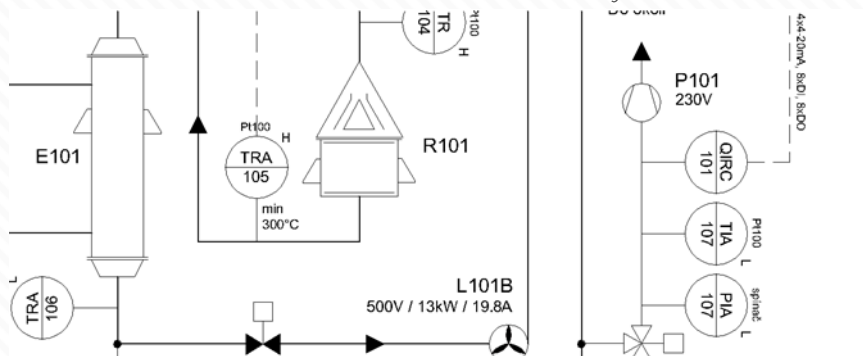
Electric substation reconstruction (2015):

- Design & realization documentation (electric).
- Dismantling existing cabinets, manufacturing and installation of 7 new cabinets (250 A).



ReNOx (2015):

- Unit for NO_x removal from air mass from furnaces by controlled dosing of NH₃.
- Design & realization documentation (electric & MaR)
- Siemens S7-1200 (HW + SW), NO_x analyzer ABB.



HCU lab unit (2016):

- Project documentation (electrical, M&R).
- Delivery of the control system (ADAM Advantech, Control web), delivery of the electric part.



HPU lab unit (2016):

- Design and production of high pressure reactor (300bar), modification of the unit.
- Control system (ADAM Advantech, Control Web, Siemens).
- Gas distribution: N₂, Air, CH₄, C₂H₄, C₂H₆.



Filtration & air conditioning of carcinogenic production line (2016):

- Turn key delivery.
- Fans total power 80kW, cooling/heating total 380kW.



Vacuum dryer control system (2016):

- Design & realization documentation (electric & MaR).
- Manufacturing and installation of electrical cabinet and all MaR components
- Siemens S7-1200 (HW + SW), TP Kinco.



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