Advanced Process Control (APC)
Plant performance on a new level

SIEMENS
Ingenuity for life

Status Quo	Our Solution	Your benefit
• Interdependencies of process factors often lead to high fluctuations of operating parameters • Thus a necessity is born to fix a disadvantageous target value in order to operate the plant with a sufficient safety margin • Consequently, operation deviates from its designated mode which causes inefficiencies and unrealized profits	• Collection, analysis and evaluation of process parameters with optimization potential • Optimization of the control concept • Plant tests and model building • Software-based/ lab-scale modeling • Control loop adjustment (e.g. dynamic models) • Delivery of necessary hard- and software • Consulting, Engineering and Implementation in PCS7 • Installation and Commissioning • Trainings	 Increase of throughput  Increase of quality  Reduced consumption of resources and energy  Reduction of operator intervention  Support of start-up, load and product changes  Optimized control

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Project information	• The customer produces approx. 650,000t / a of phenol at a plant in Germany • The aim was to increase the automation of the plant and to reduce energy and material consumption
Challange	• APC project parallel to the migration of the process control system • Long time constants (8 hours to reach steady state) • Difficult model formation due to strong coupling of the different parts of the plant (columns); Thus difficult to include interfering factors
Siemens solution	• Implementation of automation in two steps: • Tuning of the existing basic automation (PID controller) • Development and implementation of a model-predictive multi-variable control for a column in a column network • Training of plant personnel and EMSR managers
Benefit for our customer	• Critical head concentration can be kept stable • Savings in energy requirements and additives • Sustainability of optimization through combination of automation and process know-how