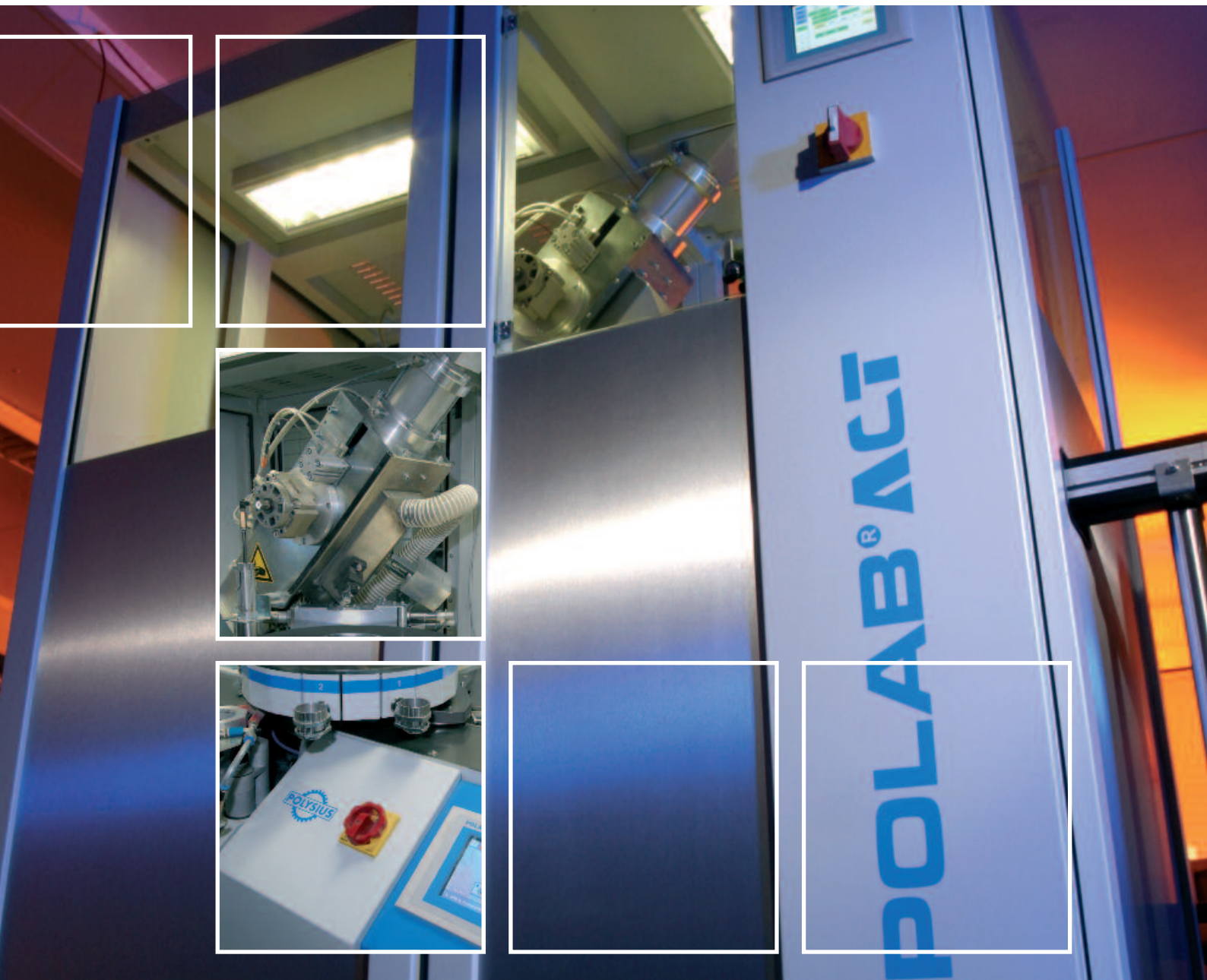


POLAB[®] ACT laboratory automation system.



A company of
ThyssenKrupp
Technologies

Polysius



ThyssenKrupp

POLAB® ACT.

The automatic system for small and medium-sized applications – but big demands.

POLAB® ACT – Advanced Compact Technology – is a compact and powerful POLAB® system for small and medium-sized applications, in which the process samples arrive in pneumatic delivery capsules and are automatically prepared for routine and Rietveld analyses.

The POLAB® ACT consists of the modular components

- pneumatic delivery receiving unit,
- POLAB® APM sample preparation system for fast but gentle sample preparation for X-ray fluorescence spectroscopy (XRF) and X-ray diffraction analysis (XRD) in a single functional step,
- material storage container and
- laser granulometer.

POLAB® ACT provides the highest degree of flexibility during the dosing and distribution of automatically received or manually input samples and fulfils stringent requirements regarding reproducibility and freedom from contamination.



POLAB® ACT with conveyor belt to the analysers.



POLAB® ACT with the core item of the sample preparation system: the integral POLAB® APM.

On the basis of defined sample preparation procedures, the sample material is

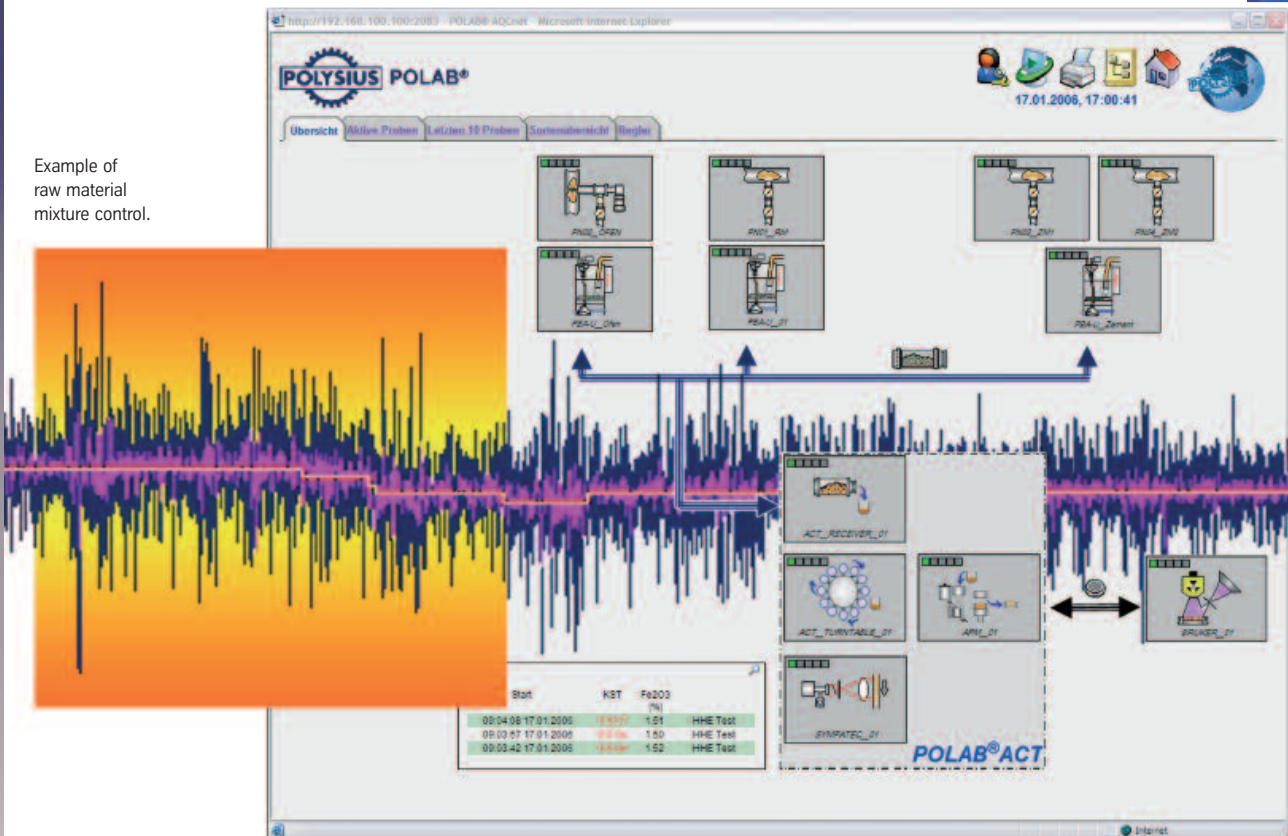
- dosed in accordance with the respective analysis requirements,
- transported via a turntable to the preparation system and/or a laser granulometer,
- stored in containers or discarded.

The prepared and cleaned sample tablets are transported to the analysers via an external conveyor belt.

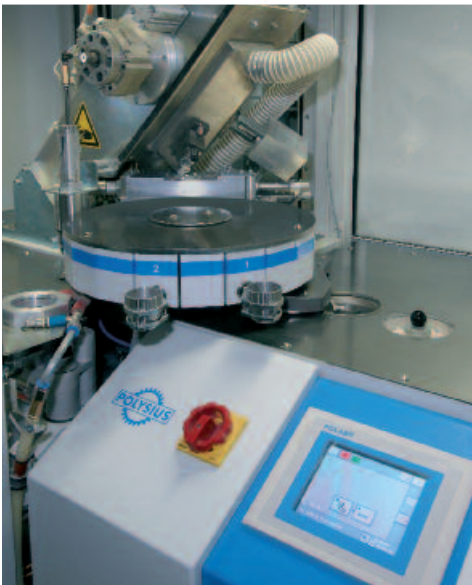
The POLAB® computer system coordinates and monitors the operational sequence of the overall system and directly influences process control in the production plant on the basis of corresponding software.

The POLAB® software system was developed by POLYSIUS according to the latest state of the art and on the basis of Microsoft Windows®, ensuring optimal process control through the use of innovative control strategies and neural networks, knowledge-based

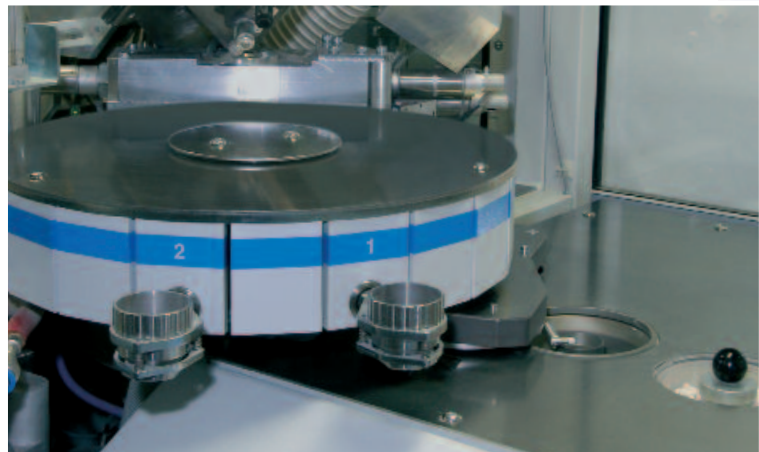
Example of raw material mixture control.



System configuration.

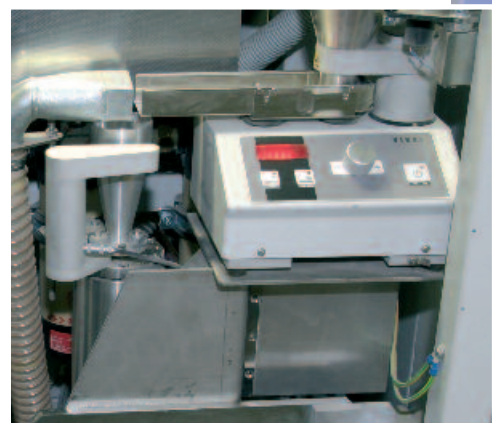


Automatic pneumatic delivery receiving station ...



... and turntable in the POLAB ACT.

algorithms and cluster analysis systems. Employment of the POLAB[®] system with its high-performance hardware and software for quality monitoring, together with systematic use of existing optimisation systems for optimum process control is the state of the art for assurance of a high quality standard in the cement manufacturing process.



Integral laser granulometer for fineness analysis of cement or raw meal samples.