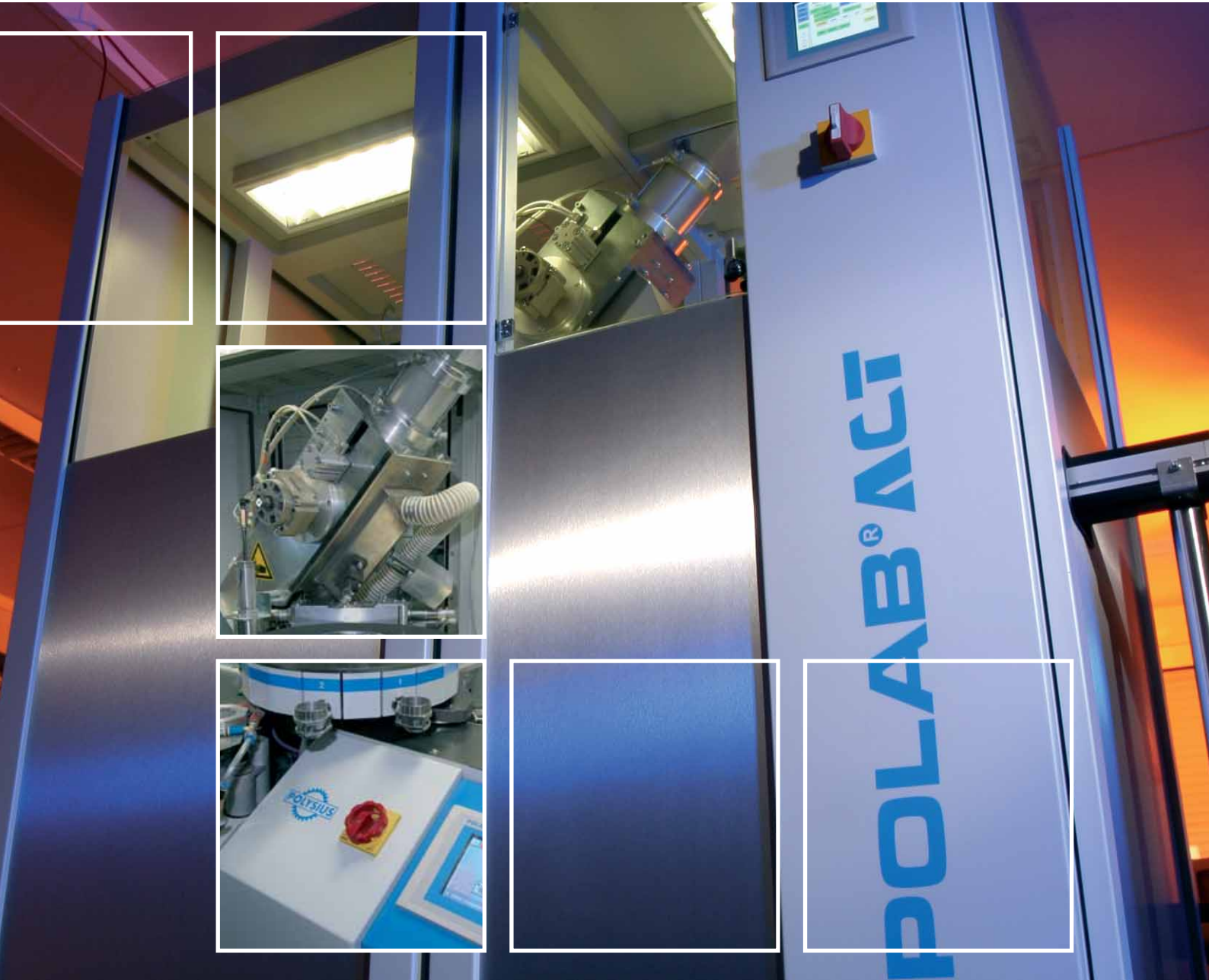


POLAB[®] ACT laboratory automation system.



A company of
ThyssenKrupp
Technologies

Polysius



ThyssenKrupp

POLAB® ACT.

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

POLAB® ACT – **A**dvanced **C**ompact **T**echnology – 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 (X-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

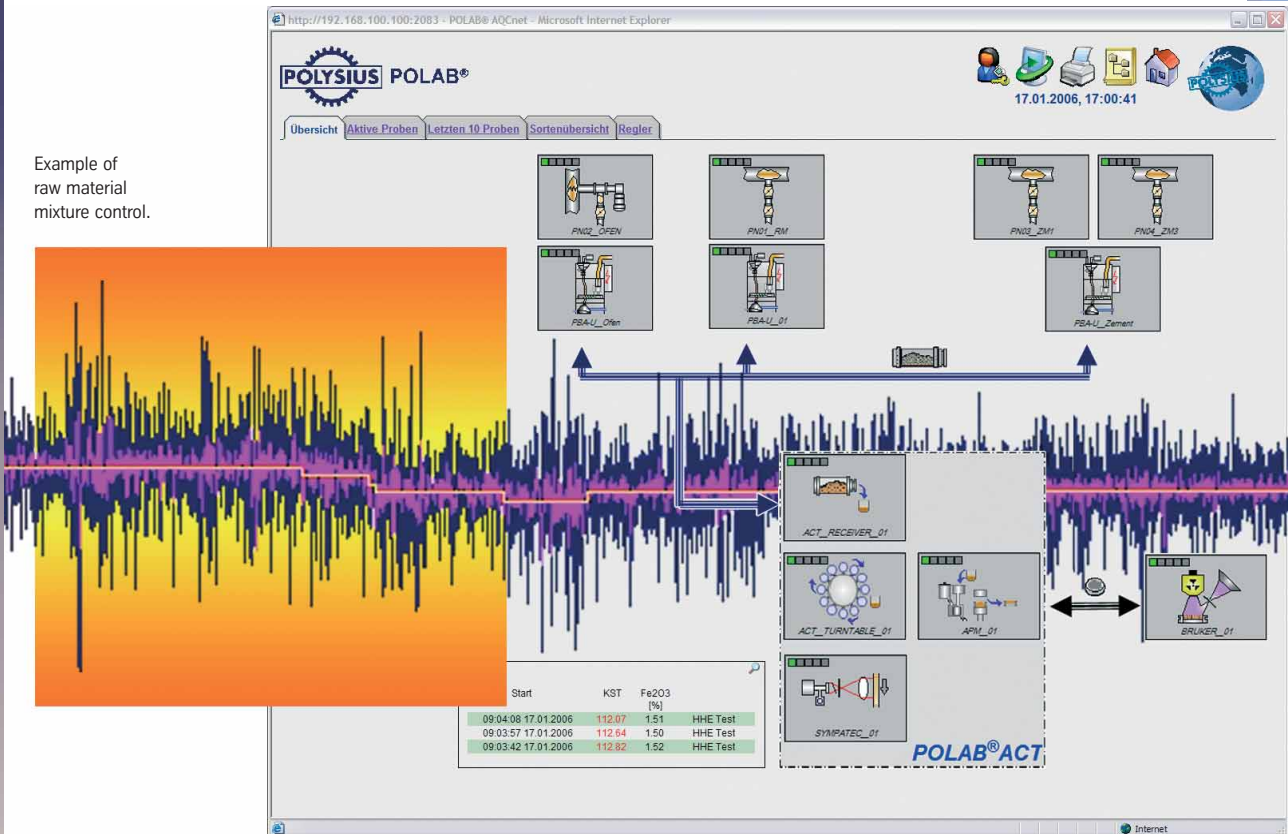
- dosed in accordance with the respective analysis requirements,
- transported via a turntable to the preparation system and/or a laser granulometer,
- stored in containers or discarded.

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

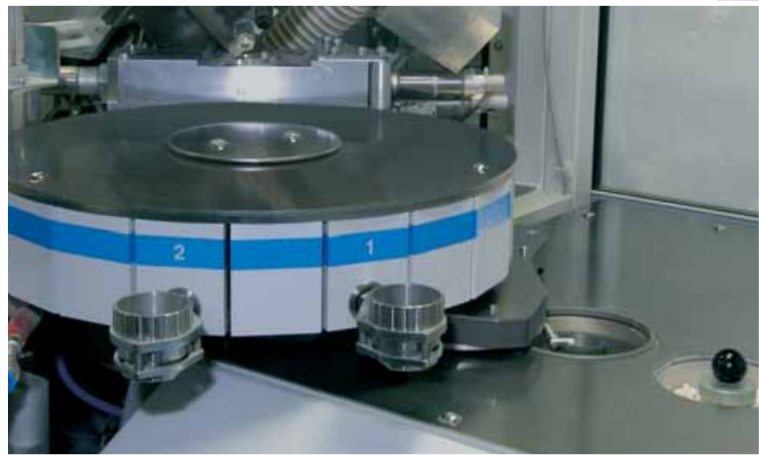
Example of raw material mixture control.



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.