

## Metal Products

ActiveFactory software, InTouch HMI,  
Wonderware Historian

Huta Bankowa

# Production processes analysis at Huta Bankowa

by ASTOR Sp. z o.o., Poland

*“It is impossible to describe here all positive economical effects of implementing discussed system. Integrating computers and production environment with specialized software enable new technological solutions, rather limited with the human imagination, than technical considerations.”*

Robert Harazinski, Chief Automation Engineer,  
Huta Bankowa



### Company Overview

Huta Bankowa - Dabrowa Górnicza, Poland  
Huta Bankowa is a manufacturer of steel products with over 170 years history. The company is one of the oldest iron and steel making companies in Poland. The offer divides onto two areas: Rolling Mill Products and Wheel Tyres & Rings. Company invested in newest technologies and is proud of having Forged-Rolled Ring Wheel Tyre Department. It's the most modern installation of this kind in Poland.

Modern systems used in industry include not only monitoring and controlling of production processes, but first of all analysis of these processes as they last. Different kinds of balance-sheets, reports or tendency graphs enable to draw conclusions concerning parameters and quality of production, which allow proper business decisions to be made. It is necessary to have suitable computer tools to carry through such detailed and quite often complicated analysis.

In case of Huta Bankowa such tools appeared to be: industrial database Wonderware Historian (formerly known as IndustrialSQL Server or InSQL) and ActiveFactory client software for versatile analysis of gathered data.

Database system is assigned for power industry media monitoring, such as gas and electric energy, and chosen technological parameters of heat furnaces. Data gathered and processed in the system is the source of knowledge about power states and variations in entire plant. The system will aid the costs management, and upgrading quality and reliability of power grid in our company. Wonderware Historian database allows evaluating grid capacity, excessive load of the devices and symmetrical load of the outputs and other electrical devices. This enables power grid optimization, which extends electrical devices lifetime.

Gas consumption monitoring system has enclosed only high-consumption devices, which is sufficient to estimate overall steelworks consumption without any hazard of overflow the assigned limit.

PLC controllers trace individual objects functioning, providing such gas parameters as: counter state, temperature, pressure and flow. The data is read directly from controllers or, if possible, from individual object's visualization software.

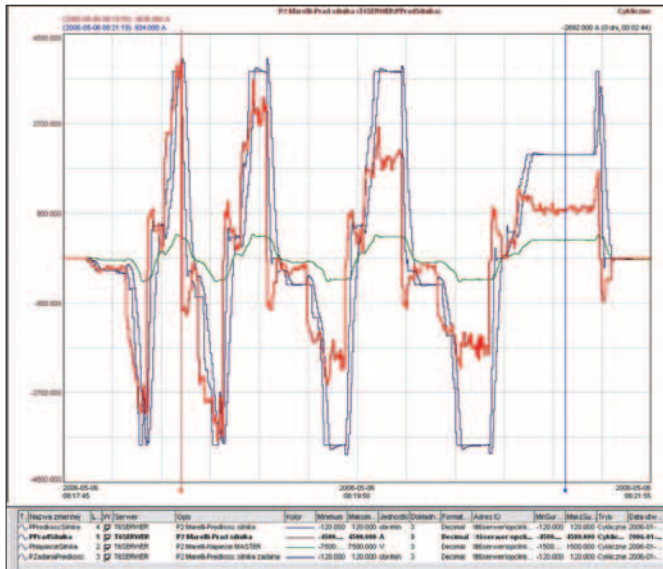
Visualization of furnaces' run is implemented with Wonderware InTouch HMI (Human Machine Interface) software, which provides good communication and coherence with Wonderware Historian database. Server communicates with the visualization software through Ethernet, created especially for the system.

Database system allows presentation of electronic gas resolvers data, both current and historical. A report for any period of time can be generated on the basis of recorded data. Monitoring of individual objects' current gas consumption and possibility of generating alert conditions is a significant function.

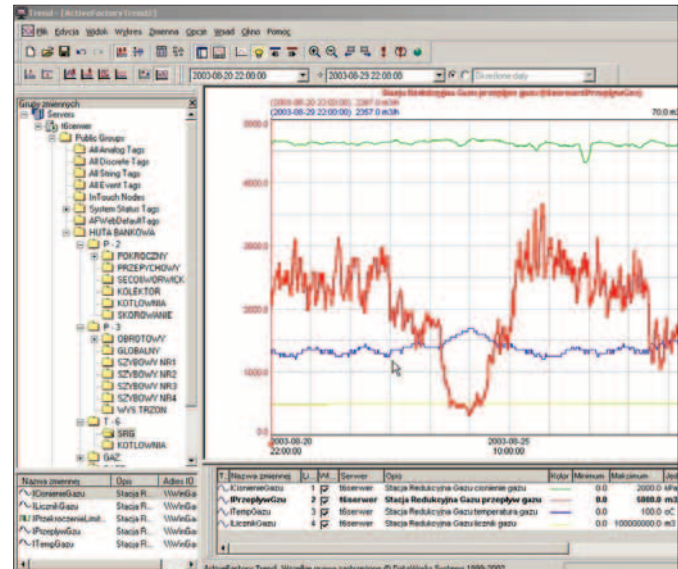


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Trend showing parameters such as current, voltage, speed in Marelli Mill



Walking Beam Furnace gas flow trend

balance-sheets and any calculations concerning parameters of this valuable medium. Taking advantage of database system architecture, the installation was extended with the function of monitoring chosen heat furnace technological parameters. It is possible to record and analyse chosen production parameters, like temperature, pressure, flows, combustion factors, track and orientation measurements, regulators gain, analogue and digital I/O values. Having access to such amount of data it's possible to quickly diagnose and eliminate failure causes. Another great advantage of this system is possibility of analysing the data from a dozen or so sources simultaneously in any time interval, using one operator station. Monitoring system is under constant development because of its strategic position for Huta Bankowa.

Nowadays the system is also collecting data for equipment monitoring. Wonderware Historian, ActiveFactory Client tools and InTouch HMI workstations were upgraded recently to the newest versions. Storage hardware servers were adjusted to amount of gathered data and the server room was modernized. It is impossible to describe here all positive economical effects of implementing discussed system. Integrating computers and production environment with specialized software enable new technological solutions, rather limited with the human imagination, than technical considerations.

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