

automation

MACHINE INTELLIGENCE IS THE
LAST INVENTION THAT
HUMANITY WILL EVER NEED TO
MAKE

- NICK BOSTROM -



www.imt-museum.de

Era of the individual units / local control panels

Start of the industrial development. To master the processes of automation measurement and control units are necessary. Assembly of these units (such as constant level regulators or steam gages) took place in the facility on-site.

1765 constant level regulator

1788 centrifugal governor

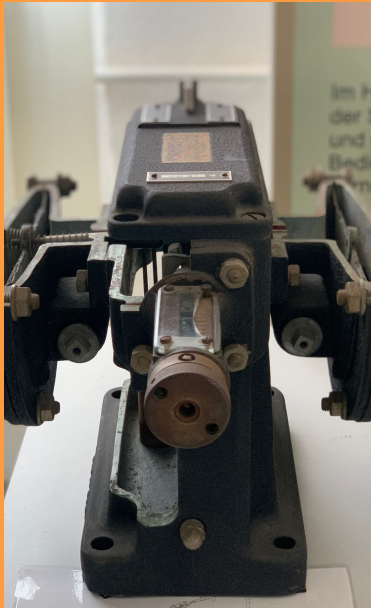
1871 establishment of the company Carl Bamberg, Werkstätten für Präzisionsmechanik und Optik (workshops for high precision mechanics and optics), predecessor of Askania

1900 manometer/thermometer

controllers with main switching contacts

1920 ring balance for drawing up of a balance sheet

1923 hydraulic steel tube regulator



Range of application of the automation devices:

steam engines, power plants for electrical power supply, chemical industry, metallurgy

Era of central line control stations/ analogue technology

Significant improvement of control of the process and the profitableness by introducing of the standard signal technique. Signal conversion on-site – Operation and observation at a hub.

1956 pneumatic unit system in low pressure and normal pressure

1961 electric measurement and unit system with standard signal (UEB)

1970 electric and pneumatic unit system in “Nulltrendtechnik”

1970 electric control systems in compact and component techniques

1971 manufacturing system ursamat K4000



Range of application of the conventional automation technology:

Power plants for electrical power supply, chemical industry metallurgy, oil industry, agriculture and food industry, traffic engineering, building service engineering

Era of central line control stations / digital technology

Microcomputer technology – intelligence in the automatism technology. Today modern processor guidance systems already support features like optimisation, management and preventive maintenance.

1984 process control system with microcomputers and plant bus system - audatec

1984 digital single and multiple transmission channels in component and compact techniques

1995 intelligent measurement and actuator technique (sensor-actuator-bus; fieldbus) after that increasing of process control systems with “open bus structure” (Ethernet and Profibus)

2012 Companies like Endress+Hauser and Siemens represent today the automatism technology in our region.



Range of application of the microcomputer-automatism technology:

Power plants for electrical power supply, chemical industry metallurgy, oil industry, agriculture and food industry, traffic engineering. Processes for the production of “high-tech” materials would be unthinkable without usage of the microcomputer technology.