

Optimising industrial production processes and products (1990 - 2019)

supporting and leading projects for optimising production facilities and products

- invention and implementation of measurement systems for optimisation of products, production equipment and production process - offline and online
- trouble shooting for optimising production facilities
- realization of about 1000 projects for different industries, mainly in the area of steel production and processing

leading different departments

- physical laboratory, measurement systems, condition and process monitoring
- foundation of mechatronic department at voestalpine Stahl

applications and inventions for steel production and processing (some examples)

- inline and offline measurements using physical contactless sensors in a broad range under difficult environment conditions including data evaluation
- temperature, thermographic, spectroscopy and optical applications for controlling coating purposes, surface and bulk parameters of steel strips during production process
- inline emissivity measurement for strip temperature control and product optimisation
- inline optical measurement of surface structures of coated products at big distances
- different condition monitoring tools based on vibration with many worldwide installations like condition monitoring of drives, gears, spindles, clutches of complete production facilities; mill chatter control, chipped off detection of rotating shears, control of roll grinding process
- forward prognosis systems for spot welding
- distribution of micro-flow for steel hardening purposes

projects for international companies (some examples)

- Germany /Thyssen: vibration analysis for long product rolling facilities
- Germany /Salzgitter: condition monitoring systems; forward prognosis of spot welding electrodes
- USA /Bethlehem Steel: vibration analysis of caster and chatter marks, mill chatter control system
- USA /Pittsburgh: level control of liquid steel at the strip caster
- South Africa /YSCOR: strain gauge analysis at electric arc furnace, taper control
- Italy /ILVA: vibration analysis of facilities for blast furnaces
- Iran /Mobarakeh Steel: mould taper measurement system, chatter and condition monitoring control of rolling mills and grinding systems
- South Korea /Posco: forward prognosis of spot welding electrodes and surface coatings
- China /Bao Steel: mill chatter control systems
- Switzerland: temperature distribution of steel moulds, nozzle control
- Europe in general: many companies, processing steel products for consumers, had been supported for optimising their processing lines

Geophysical prospecting (1981 - 1990)

supporting and leading projects for clients in the field of geophysical prospecting for ore, water, waste deposits, geothermal resources and coal - using physical measuring procedures, measuring systems and electronics in the fields of borehole-logging and infrared technique, geoelectric induced polarisation, seismic and geophysical survey in general.

developing different measurement systems like

- geoelectric measurement methods (mis a la masse, induced polarisation) for surface exploration
- infrared measurement (development and application of IR-systems) for surface exploration
- borehole logging application (ultra high precision temperature sensor for water investigation and flow estimation, induced polarisation for ore mapping) for subsurface exploration

more details ? → +43-660-3812929 office@mtron.eu