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SURFACE  
TREATMENT  
LINES

## Surface treatment equipment and waste water treatment plants producer

KOVOFINIŠ is a modern Czech company with a tradition dating back to 1951. During its existence KOVOFINIŠ has successfully implemented projects all over the world. Our company has its own technical, development and production facilities. Thanks to the continuous development of know-how, we are the leading European manufacturer of equipment for surface treatment and disposal of industrial waste water. All the equipment we supply is designed with the environment in mind and according to the customer's needs.

### Services:

- › Technology proposals
- › Project outline incl. documentation for negotiation with government and local authorities
- › Drafts for building works
- › Planning, design and efficient construction process
- › Production, delivery and installation incl. commissioning
- › Auditor's reports
- › User and service training, Participation during Test Run Operation
- › Operation and maintenance instructions incl. technical documentation
- › Service
- › Commercial - financial consulting, Technical consulting
- › Process automation systems and visualization

The KOVOFINIŠ company premises consist of an administrative building, production facilities, warehouses and a canteen. The production facilities cover 17,500 m<sup>2</sup>. The production area includes - electroplating coating line, painting line, research laboratory and waste water treatment plant.



The quality of our management is certified according to ISO 9001. The environmental management of the company is certified according to ISO 14001. We are also holders of the German WHG certificate for surface treatment and waste water treatment.



**Surface treatment is one of the key factors which has major impact on utility value of final product. Surface treatment serves not only as protection of the material against external influences, but also to improve final product's aesthetics.**

Customer requirements for surface treatment consist of quality criteria, financial effectivity of process and environmental protection.

We always respect individual needs and possibilities of each customer.

Our product portfolio consists of wide variety of equipment for chemical, galvanic and electrochemical surface treatments.

We use our experiences to reach the best technical and technological level, efficiency, functional reliability, long lifetime and maintenance simplicity along with respecting environmental protection. Efficiency of final system helps to minimize consumption of water, energies, chemicals and labour. We control the project from the beginning to its commissioning, to ensure, that all of our commitments are fulfilled. Each project is designed, constructed and commissioned by our own sources.







Surface treatment lines for parts on racks or in baskets







### Surface treatment lines for bulk treated parts in barrels

- › Single or twin barrels
- › Blowing and rinsing system to save chemicals and rinse water







- › Very gentle parts processing, minimal take out of bath, higher surface quality
- › For bulk treatment of small-sized parts in rotary baskets with tilting vertical axis
- › Rotation in both directions
- › Special transport manipulators
- › Suitable for final treatment (passivation, sealing) after zinc plating in barrels
- › Barrel washing station





- › Highly effective
- › Suitable for large series of the similar parts
- › Constant work cycle
- › Barrels or racks





- > Stands for loading and unloading on/from racks
- > Loading and unloading on manual carts outside of lines, carrying carts into lines
- > Roller tracks for racks transport
- > Automated loading and unloading of barrels
  - Tipping units for pallets and boxes
  - Vibrating channels
  - Belt conveyors
  - Scales
- > Rack and barrel buffers







### Various types of transport manipulators for racks, barrels and baskets in lines

- › Overhead
- › Gantry
- › Side-type
- › With triaxial movement
- › With tilting and rotation for centrifuge baskets
- › Carts for movement between lines



### Accessories:

- › Drip pans
- › Exhausted booths
- › Spray systems
- › Blow through and rinse units





Circulation ion exchanger



### Solutions for improving effectivity and quality of process

- › Degreasing, cleaning and rinsing with ultrasound
- › Bath ejector agitation
- › Horizontal, vertical and two-dimensional rack movement, rack tapping and vibration
- › Diaphragm frames
- › Selective bath cleaning
- › Rinse water saving systems with controlled water refilling
- › Rinse water circulation through ion exchangers
- › Tank and dryer covers
- › Heat recuperation from waste air



Tank covers



Rinse with ultrasound



Diaphragms, ejector agitation, vibrating saddles



Vacuum evaporator



### Recovery and recycling applications in order to reduce:

- > environmental pollution
- > consumption of chemicals

### Used technologies:

- > Oil separation from degreasing baths – separators or microfiltration
- > Sludge removal systems
- > Bath regeneration with
  - Crystallization
  - Ion exchanging
  - Retardation

Scrubber



Sludge removal system

Microfiltration



Retardation unit

- > Bath recycling with the use of evaporators
  - Atmospheric
  - Vacuum
- > Precious metal extraction
- > Waste air cleaning with scrubbers



Demineralization station



### Equipment for securing the operation of the line and facilitating the maintenance and control

- > Chemical preparation units
  - Baths
  - Chemicals
- > Automatic additives dosing units
- > Online bath analysers
- > Dehydrogenation ovens
- > Demineralization stations
  - Ion exchangers
  - Reverse osmosis units
  - Storage tanks for demineralised water
- > Air supply duct-work



Chemical preparation unit



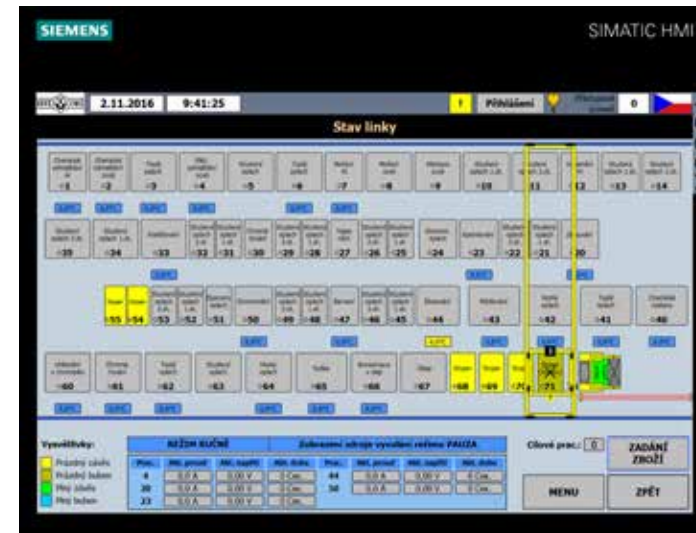
Online bath analyser

Dehydrogenation ovens



Automatic additive dosing unit





Equipment for technological process control based on SIEMENS platform

› Display of device activity on

- PC screen
- Touch-screen

› Batch parameter settings

› Alarm signalization

› Access control system

› Remote access

› Radio Frequency Identification (RFID)

› Archiving

- Records and parameter lists
- Product records: product code, date and real-time, process duration, temperatures
- Event records: date and time of start-ups, alarms, idleness and additive dosing
- Performance records: number of batches in selected time period





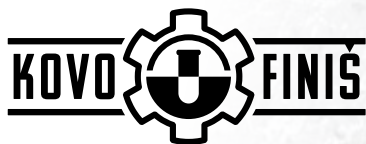
**We provide warranty and after-warranty service for all installed plants:**

Service includes complete care of the installed equipment and preventive maintenance inspections

- › Assistance during the production start-up
- › Regular equipment inspection to extend operation life-time
- › Service on demand including 24-hours intervention







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