Wire descaling and cleaning system ECOCLEAN
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Descaling and cleaning of wire surfaces and improving the wire quality

The system ECOCLEAN is a cost efficient and ecological procedure for descaling and cleaning of wire surfaces as well as for improving the wire quality for further processing.

1 Machine type: Exterior view of ECOCLEAN system for descaling of wire by integration in drawing line.

2 Finished product: Cleaned wire coils for sales, further processing and surface coating.
Wire descaling and cleaning system ECOCLEAN
universal – ecological – efficient

Batch sizes are becoming smaller, lead times shorter. Likewise, pricing pressures are increasing as are requirements for wire quality. In this situation, conventional methods for wire cleaning are reaching their limits more often and faster. The results of alternative techniques and devices to clean the wire by bending and brushing, blasting, scalping or even by chemical treatment are totally inadequate.

The ECOCLEAN series meets highest demands. Wire surfaces are descaled, cleaned and polished – the wire becomes smoothed and stress-relieved, its structure more consistent. Furthermore, the ECOCLEAN system provides an optimal wire material for further processing. In particular, the subsequent surface coating is made easier and the materials used in these operations are reduced significantly.

By the use of rotary cleaning heads the very universal ECOCLEAN system allows the production of clean wire at its highest level. The users benefit from wire of best quality and a very high system availability due to longevity of the cleaning heads and low wear of the overall system. Numerous options allow custom-tailored configurations of the machine for maximum productivity in manufacturing. Economic efficiency and quality are top priorities of modern wire production.

The ECOCLEAN system offers the ideal basis to manufacture high-quality wire environmentally friendly and cost efficient at maximum productivity. The ECOCLEAN series ensures success and opens up new opportunities in the market.
Wire descaling and cleaning system ECOCLEAN
Better wire quality by innovative technology

The system ECOCLEAN consists of a rotor unit for descaling and cleaning of wire in various diameters.

**Scaling of wire**
After common descaling by bending, the wire is guided through the system and is further descaled by means of rotary heads. The fine strands of the special cleaning heads cause a scraped effect on the surface of the wire without damaging it. The surface of the wire is only smoothed, as the suspended rotary cleaning heads adapt to the continuous wire. During the rotation of the heads the scraped scale falls into a collecting container. The scale can be easily removed by emptying the collection container.

- Universal system for descaling and/or cleaning of wire
- Working range for descaling of wire rod:
  5,5 mm–16,0 mm
- Working range for cleaning of wire:
  2,0 mm–16,0 mm
- Environmentally friendly method without the use of chemicals
- High system availability and low wear of cleaning heads
Cleaning of wire

The scraping effect of the cleaning heads is ideal for making a perfectly smooth wire surface after all processing operations by drawing or rolling. In order to clean the wire, the system ECOCLEAN is used between the drawing line and the spooler. The system removes all drawing residues and the wire gets a perfectly polished surface.

As the use of chemicals is not required for both types of application, the surface is activated by this non-chemical treatment and a passivation of the material is not needed. By processing of the wire through the cleaning heads the wire gets relieved from internal stresses. The method of the ECOCLEAN system achieves a clean and smooth wire surface, which is ideal for further processing operations.
High quality wire descaling at significant lower operation costs
Wire descaling and cleaning system ECOCLEAN
Uncompromising technology for wire descaling and cleaning

The ECOCLEAN series is a patented system for descaling and cleaning of wire. With many installed machines of this type, the series is the next generation development for the production of optimal smooth wire for further processing. The ECOCLEAN system delivers uncompromising results for subsequent chrome coating, nickel coating or galvanizing of the wire.

Impressive features include the sturdy machine construction, the small footprint as well as the great working range and scope of application for wire cleaning. The rotor, equipped with special cleaning heads, allows the descaling and cleaning of the wire to a cleaned surface, which is close to wire cleaning by pickling.

The ECOCLEAN system also impresses with very low power consumption and flexible control related options. The robust drive technology and low maintenance requirements of the ECOCLEAN series ensure maximum availability of the system.

- 80% lower operating costs compared to chemical or alternative mechanical cleaning methods
- Reduced machine downtimes for service and maintenance
- High drawing and running speeds
- Removal of all contamination
- Smooth wire surfaces
- Patented equipment and cleaning system for wire
Wire descaling and cleaning system ECOCLEAN
Innovative system with robust design and high productivity

ECOCLEAN system

- Large electrically driven rotor
- Wire treatment at the highest level
- Suitable for descaling and cleaning of high and low carbon wire
- Best wire quality, also at higher drawing speeds
- Total dimensions: L 2,000 x B 1,200 x H 1,300 mm
- Variable wire inlet heights for customer-specific solutions
- Electrically driven rotor with max. 28 cleaning heads
- Descaling of wire rod: 5,5 mm – 16,0 mm
- Cleaning of wire: 2,0 mm – 16,0 mm
- Drawing/running speed: max. 10 m/s
- Consumption data: 400 V; 3 Phases; 50 – 60 Hz; 2,5 kW
- Weight: 1,200 kg
The perfect solution for any requirement
Benefits of ECOCLEAN wire descaling and cleaning system
Comparison to alternative techniques and mechanical systems

The use of the ECOCLEAN system allows a drastic reduction in operating costs compared to chemical or alternative mechanical decaling and cleaning methods, a significant reduction of service and maintenance, high drawing speeds, removal of all scale and contamination, smooth wire surface free from scratches and adapted to receive a perfect lubrication.

Benefits of ECOCLEAN system:
- Very reliable and universal system at lower investment and operation costs
- Mechanical removal of all scale and oxide without any chemicals
- Environmentally friendly system with low generation of noise
- Excellent wire quality with almost no rest fractions of dry powder
- Clean and smooth wire surface with ideal properties for further processing
- No damage of wire surface due to suspended rotary cleaning heads
- Low wear of cleaning heads with working life of 750 tons
- Low power consumption of 2.5 kW resp. low energy costs
- Less machine downtimes and maintenance of the system
- Significantly lower operation costs in subsequent processes like drawing and galvanizing (Higher working life of drawing dies and less consumption of zinc)
- Easy integration in existing drawing or cold rolling line
- Large working range from 2 mm to 16 mm

Life cycle view of alternative mechanical systems versus ECOCLEAN:
ECOCLEAN ensures success and opens up new opportunities in the market.