BvL
Oberflächentechnik

Cleaning technology for rail-bound traffic

in the maintenance and service areas

Your system partner for industrial parts cleaning

Cleaning technology for rail-bound traffic

Heavy soiling and extreme weights

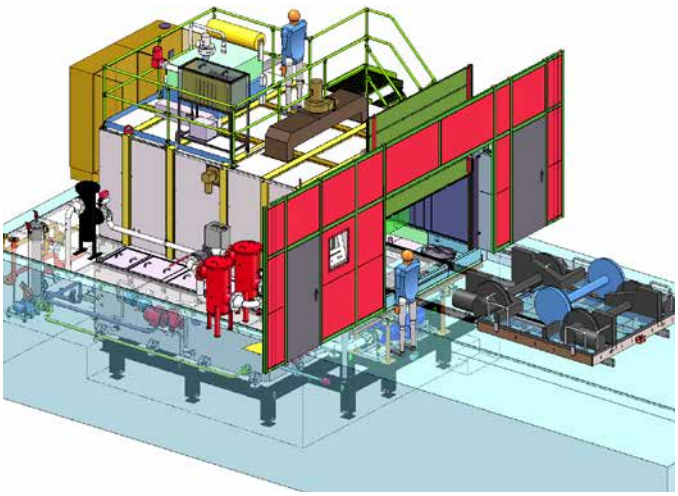
The evaluation or maintenance of the components would not be possible without thorough cleaning. Therefore, cleaning is a central element of service and repair. Long mileage of one million kilometers or more mean extreme levels of soiling, with hard encrustations, grease and dirt on the carriages and components to be maintained. Extremely heavy weights also complicate the work considerably.

The cleaning of the bogies, bearings, wheel sets and other components is difficult, because many places are only accessible with great effort. In addition, 100% drying and a very high-quality rinsing must be assured for electric motors. When this work is carried manually, it is very laborious, time-intensive and only provides unsatisfactory results.

Special system concepts for high efficiency

BvL has developed special system concepts for the cleaning of bogies, bearings, electric motors, wheel sets and other railway components. Robust stainless steel systems perform the water-based cleaning. With these solutions, various processes and system technologies, as well as the tank size and bath preparation, are adapted to the individual requirements of rail-bound traffic. The cleaning results are achieved with high temperatures, high spraying pressures and high flow volumes in combination with an optimally composed cleaning chemistry.

In the process, the cleaning task is implemented thoroughly with reproducible quality and an optimal output quantity. Due to the high level of automation of the cleaning, the efficiency of the service can be increased and unsafe manual steps can be eliminated.



The applied cleaning processes are environmentally-friendly and at the same time allow for an extremely high level of availability with minimal demands on your staff. In addition, workplace hygiene and workplace ergonomics are significantly improved for workers.

Cleaning technology specialist

BvL Oberflächentechnik GmbH has comprehensive expertise in system design for extreme applications. As a specialist for cleaning processes for rail-bound traffic operators, our multifaceted project experience is based on numerous applications spanning over two decades, including a number international projects.

Our systems are precisely tailored to the requirements of maintenance and service providers and are a guarantee for many years of fault-free cleaning service. The large number of satisfied customer is a testament to the trust bestowed on BvL.

Before the cleaning

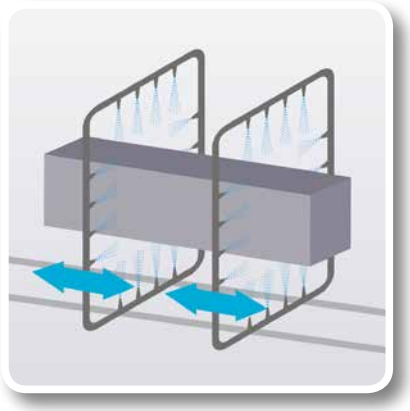
After the cleaning

Areas of application

The cleaning tasks of maintenance and service providers are numerous. Through intensive consultation, BvL engineers analyze your specific requirements together with you: part spectrum (material, geometry and weight), soiling, cleanliness requirements, throughput and parts handling. In the next step the system type and cleaning process are attuned to the most important cleaning task. The further layout of the system takes place according to individual requirements: as a special solution for specific tasks or as a combination solution for the cleaning of a wide range of components.

Pacific

System for large parts: for bogies, wheel sets, etc.

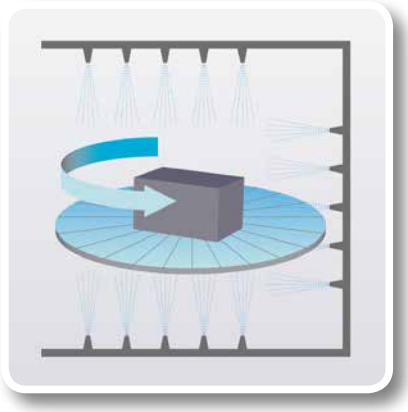


Bogies are moved in and out of the cleaning system at ground level. Alternatively, this concept enables the cleaning of small parts on a charging carriage, which runs on the same rail system. The cleaning takes place through an oscillating nozzle system. Wheel sets are cleaned with nozzle systems adapted to the contour.

In the process, the wheel set rotates around its own axis. Alternatively, it is possible to clean wheels sets on charging carriages equipped with rails. Depending on the requirement, large tanks are positioned below the system or, in the case of a pit installation, in the ground. The installation of a deep tank is also possible.

Ocean

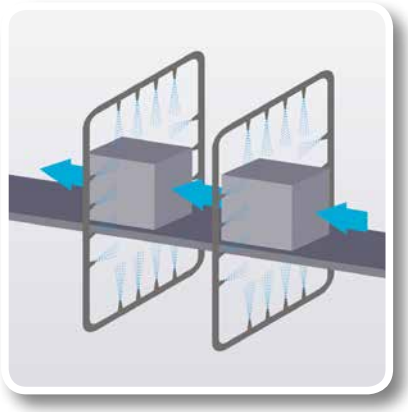
Turntable system:
for electric motors (stator, rotor) and bearings, etc.



The components are placed directly on the charging carriages. The spraying process with a rotating product carrier cleans the components on all sides. A lance system enables a thorough interior cleaning. With an integrated roller conveyor with automatic feeding and discharge, the handling is optimized and operating times are shortened.

Yukon

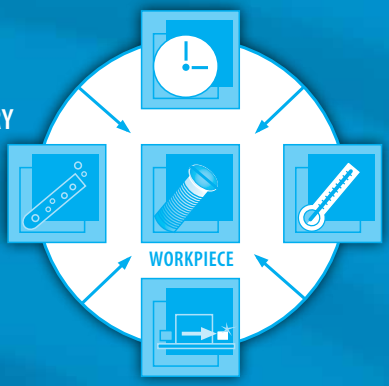
Conveyor system:
for bearings or bearing housings, etc.



With high process throughput rates, cleaning in a tunnel system and thus integration in the existing material flow is advantageous. The cleaning takes place through spray-cleaning in successive washing, rinsing and drying zones. The heavy amounts of grease brought into the cleaning bath are separated with special grease discharge units.

The path to the right combination of systems and process technologies is often reached through a series of test washings by BvL. Only the right mix of the four factors: technique, handling time, chemistry and temperature provides optimal cleaning results. Even the bath preparation plays an important role for us.

Although our cleansers are biodegradable, there are frequently oils, greases and other residues in the cleaning bath, which must be separated by plate-phase separators or using a special evaporation process.



- Aqueous
- Alkaline
- Inert
- Acid
- Biologically degradable

- Spray cleaning
- Injection flooding
- Vacuum flooding
- Ultrasonic cleaning

- Recirculated air drying
- Hot air drying
- Vacuum drying
- Compressed-air pulse blowing

- Product carriers
- Automation
- Preparation technology
- Bath monitoring

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Certified Specialist in accordance with the German Water Resources Act (WHG).
Certified according to DIN ISO 9001 - VDA 6.4

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