Nothing is so good that it cannot be even better.

Wallstein Service GmbH
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Technology from one source: Engineering, manufacturing, installation and maintenance

Wallstein Service GmbH is part of the Wallstein Group for good reason. Because heat and process engineering plant construction combines the following areas: project planning, engineering, construction and manufacturing, installation, commissioning, maintenance and repair.

The starting point is the technical data and specifications that are connected to the task. From this comes an idea, a solution and finally a product. All process and environmental technology components follow this cycle. It does not matter whether it is the calculation of heat exchangers for a power plant or an incinerator, the welding of a stainless-steel sterilisation tunnel for the packaging of drugs, or cleaning live electrical switchgear in a large enterprise.

Engineering, manufacturing, installation and maintenance — a chain of very different tasks that require very different engineering know-how to ultimately guarantee one thing: the high quality and long-term functionality of industrial equipment and systems. We know how!

The importance of offering process solutions from a single source, of mastering the entire bandwidth of engineering services, and ensuring the effective integration of all processes was recognised by senior director Dieter Wallstein when he founded Wallstein Ingenieur GmbH in 1989. He was consistent not only in expanding his team of engineers and specialists in environmental and process technology, but also in making Wallstein what it is today: a group of three companies with tens of millions in turnover and more than 100 employees, a medium-sized European player in heat and process technology, now also looking towards markets such as Eastern Europe, China and North America, and having large companies from energy, waste, pharmaceuticals, chemicals and petrochemicals amongst its customers.

A vision has become reality. This does not mean just the international focus, but also the customer-oriented perspective and integrated working methods of the three individual Wallstein companies. Wallstein Ingenieur GmbH (WIG), Wallstein Service GmbH (WSG) and Wallstein Apparate- und Anlagenbau GmbH (WAG) provide heat and process technology, equipment and construction as well as industrial services of the highest quality from a single source. Engineering, manufacturing, installation and maintenance — a perfect symbiosis that works perfectly within the Wallstein group. Now and in the future.

We are part of a whole.
We clean, test, measure and check
The basis of our success

Perfection in service and function

Industry and technology resemble life: nothing runs on its own — at least not permanently. Machinery and electrical equipment need maintenance, cleaning, servicing and care — in other words, a qualified, technical service providers such as Wallstein Service GmbH

With our continuous industrial service, electrical equipment and machine systems remain healthy, operate reliably and maintain their full performance and availability. This allows you not only to reduce repairs and lost production, but also operating costs, and all statutory requirements for sustainability, environmental protection, occupational safety and reliability are met.

The significant responsibilities operators of electrical plants in particular face are underlined by the fact that in September 2002 in the Operational Safety Ordinance, the legislature required that inspections, servicing and maintenance must be carried out at regular intervals. This duty also obligates us to always provide the very best service to our customers.

We get your equipment in top shape.
Trust us!

Cleaning of electrical equipment
→ Dry-cleaning of electrical equipment
→ Dry/wet-cleaning of electrical equipment
→ Special wet-cleaning of electrical equipment

Revision, servicing and maintenance of technical systems
→ Switchgear revisions according to manufacturer specifications
→ MS-switch maintenance
→ Torque tests
→ Tests according to BGV A3

Electrical system analysis
→ Thermal imaging, ultrasonic inspections, ESA
→ TEGG service with warranty

Fluid management
→ ESP — Electrophysical oil maintenance
→ Filtration and maintenance of consumables
→ Ruler test
→ MPC test
→ Transformer oil analysis

Vibration measurement
→ Level 1 and Level 2 measurements
→ Balancing and alignment
We ensure environmentally-friendly cleanliness
Wet cleaning is our speciality

When servicing and maintaining electrical installations, the type of cleaning required must be evaluated on a case-by-case basis, depending on requirements. If it is only a matter of loosely-attached contaminants such as dust or particles, dry cleaning is often sufficient. However, if the contaminants are firmly attached, crusted or consist of oils, fats, acids or salts, only wet cleaning is intensive enough to provide satisfactory results. Similarly, both methods can be combined as a kind of selective wet cleaning.

We have developed our special wet process for electrical equipment, electrical panels, transformers and electronic components in various industrial fields such as railway signal boxes, automation or energy providers and utility companies. We are able to carry out the work even with voltages of up to 36 kV. In addition to technical expertise, and the routine of our trained staff, we also use special cleaners and methods ranging from the spray aerosols to electric spray guns with needle jets. This guarantees the best results, absolute cleanliness and full system functionality.

We clean your electrical equipment:

- de-energised wet cleaning
- wet cleaning of live equipment at voltages up to 1000 volts
- dry-wet cleaning at voltages of up to 36 kV

We offer excellent services including:

- complete documentation of the equipment and lubricants used after each cleaning
- environmental protection and sustainability have the highest priority with our methods and processes
- We use only cleaning products from the renowned manufacturer Bremer & Leguil, which are biodegradable and meet the highest environmental standards

We clean effectively, sustainably without disruption!
With us, you stay clean!
We ensure cleanliness without shutdown
Successful and safe live-line working

Live-line cleaning saves time and money

There are electrical systems and equipment in all companies, industrial facilities and production processes. If this live equipment is not maintained regularly and conscientiously, current leakages, arcing and short circuits threaten. It used to be that necessary maintenance work required interrupting the power supply and accepting loss of production and large financial losses, current methods provide the decisive advantage that electrical systems can remain in operation during the entire cleaning cycle. We specialise in exactly such live-line cleaning. Downtime and „nothing’s working“ in the production process are a thing of the past with our form of maintenance. When we work, you can switch off but your electrical equipment doesn’t need to.

We are there for you if

→ thorough cleaning of live equipment is required,
→ Switch maintenance for low and medium voltage systems and switch revisions to manufacturer’s specifications are specified on the plan,
→ you are looking for general or special wet cleaning of electrical equipment,
→ maintenance work must be planned and calculated, or
→ checklists for electrical systems need to be compiled.

As we understand it, all these bespoke technical services require not only years of experience and special equipment, but also the consideration of very individual customer requirements, production and plant processes. Thanks to effective preparation and accompanying service management, and with the help of our highly qualified project team of engineers, technicians, master craftsmen and specialists, we can find solutions and provide the finest services around the clock 365 days a year.

Remember: good technical service also works without stopping the machines. All electrical systems remain available. So take another step into the future of maintenance and servicing for your company.

We provide technology that works! Uninterrupted! Challenge us!
We have the perfect old-age care for your plants
Preventive maintenance — with system

Lack of maintenance and contamination on electrical equipment and electronic controls often lead to production losses and significant consequential losses. In most cases, these threats to the system I noticed too late. Even loose connections and corrosion can cause electrical components and equipment such as switch cabinets to overheat.

Some 30% of the fires recorded by property insurers are caused by defects in electrical equipment.
Long downtimes, the costs of losses of production and increased insurance premiums can be the consequences. Fires and downtime can be avoided if the electrical equipment is free from defects. However, to achieve this they must be properly planned, installed and subjected to regular maintenance and inspection.

To ensure safe and efficient maintenance, we therefore use a mix of thermal imaging, ultrasound and ESA.
Thermal imaging is a fast and efficient means of detecting hotspots on equipment. The latest ultrasound technology can find partial discharges, arcs, coronas or mechanical vibrations, and ESA identifies disruptions in the power supply.

The initial situation
⇒ What impact will a power failure have for your business?
⇒ What are the safety/financial risks?
⇒ Which servicing and inspections can already be carried out regularly?

The procedure
We draw up an inventory of your entire electrical system, consisting of:
⇒ Inventory of all electrical components
⇒ Identification of critical areas
⇒ Evaluations of the current state

The advantages
⇒ Reduction of the costs of the disruption of operations
⇒ Extending the life of your equipment
⇒ Savings in energy costs
⇒ Significant reduction of repair costs
⇒ Minimising the risks that may arise due to poor power quality
⇒ Increasing safety
⇒ Reduction of carbon dioxide emissions

We have the right ingredients for your maintenance! A partnership with a future!
We get electricity under control
In customer service, we make no compromises

As an authorized TEGG® service partner, we are able to offer a combined process of thermal imaging, ultrasound and electrical system analysis, which is almost unbeatable in terms of efficiency, reliability and cost savings.

We use

→ thermal imaging to measure heat emissions from machinery, components and electrical systems, and with our infrared cameras, we can reliably and safely detect all thermal losses without service interruption.

→ ultrasound, using high frequency sound to find leaks in heat exchangers, boilers, or seals, to check bearings, lubrication, pumps and conveyors or inspect switchgear, cables or insulators and transformers for electrical discharges.

→ of electrical system analysis to evaluate which consequences and safety risks power cuts would have on your company’s production processes, and to

Our service

We have put together various service packages for our TEGG® service to meet your individual needs. Comprehensive electronic documentation is ensured thanks to our proprietary TEGG® Software Electrical Asset Manager. If desired, as a customer you can even directly access this web-based software and view the results of our tests.

TEGG® STANDARD

→ Inventory of the electrical components to be tested
→ Visual inspection
→ Using thermal imaging, ultrasound and ESA technology to check the electrical system
→ Comprehensive IR report
→ Functional test
→ Supplemental individual services available at any time

Our services include, depending on the package

→ Warranty on repairs and replacements for the entire duration of the contract
→ Warranty repair or replacement of parts in case of a sudden failure
→ Supplemental delivery service (Express)
→ Installation and cleaning (also live-line)
→ Emergency generator

We give you a guarantee and not just a promise!

Use innovation with security!
We’ll make your consumables shine
High-level consumables care

**Fluid management**
Without hydraulic oils, greases and coolants, industrial manufacturing processes would be unthinkable. Fluids keep machines going. Therefore, the analysis, level testing, cleaning, preparation, refilling and consumption recording must never be neglected. Machinery and equipment only run smoothly when fluid management is flawless.

Wallstein Service GmbH does all the necessary work for lubricant care, so you can focus on your core business. All the work, from the particle count to a comprehensive analysis to refilling can be handled by us.

With our comprehensive fluid management, we offer you a complete solution for your machinery and reduce the number of used oils.

**Electrophysical oil maintenance**
Rotating turbines drive success. The availability, efficiency and longevity of the equipment, however, always depend on the purity of the oil used. With increasing load and use, the oil becomes susceptible to premature aging. The high performance requirements can no longer be satisfied; deposits and sludge affect the coefficient of friction.

Therefore, determining the remaining useful life of oils is extremely important. Alongside conventional analysis techniques, Wallstein Service GmbH uses two further innovative procedures:

→ The RULER test: The different antioxidants added to the oil are measured then compared with new oil and previous samples, and thus reliably predict the remaining useful life of the oil in place.

→ The MPC test: Currently, the only method that can not only find oil residues, but also qualitatively evaluate them. Index numbers indicate exactly what action is necessary.

Using the results of the tests, the so-called electrophysical separation process (ESP) is used to clean the oils. This process can remove just the particles responsible for the varnish-like deposits in oil. There is a considerable improvement in oil quality; oil changes and system cleaning are no longer necessary.

Be on the safe side with oil.
We know how!
We get top performance from your plants
Energy efficiency and optimum machine utilisation — it all goes smoothly with us

Vibration diagnostics
Industrial equipment contains rotating parts such as motors, turbines, pumps, compressors, blowers or gears. Their rotation and permanent movements inevitably lead to vibrations that can cause damage. Whether it is a case of permissible or unacceptable affects should not first become clear when the equipment fails. In particular, the main causes such as imbalances, the misalignment of shafts, wear or loosening can be detected in advance. Therefore, our specialists use proven tools for vibration measurement. The measurement is only a first step. We interpret the results and provide you with practical solutions.

Your benefits: impending machine damage is identified early, targeted maintenance and repairs can be carried out, the life of the system components increases, reducing costs fall and production can run continuously without downtime.

The inspection methods:

Level 1
→ Creating a measurement route
→ Defining alarm limits
→ Saving measurement results
→ Interval analysis of trends
→ Creation of log and documentation
→ Recommendations for further Level 2 diagnostics if required

Level 2
The vibration specialist diagnoses the abnormalities detected by Level 1 using:
→ Time signal
→ FFT analysis
→ Bearing diagnosis
→ Transmission diagnosis

Intelligent vibration measurements.
We give you „good vibrations“!

Balancing and alignment
If we diagnose impending damage to your drives or systems during the vibration diagnosis, we will of course provide immediate help. Entirely practical and straightforward. Regardless of whether it is a case of misalignment, loose fittings, shifted components, worn-out bearings, shaft couplings or drivetrains.

Precise balancing and alignment.
We promise: With us everything runs smoothly!
We even make cleaning innovative
"Full steam" ahead

During the production process, depending on the industry, deposits on mechanical and electrical construction and installation parts can arise. If these are not removed immediately, the impurities become so stubborn that neither the safety nor the availability or workplace cleanliness can be guaranteed. The risk of, for example, overheating and thus production loss increases.

Cleaning with dry steam
Unter dem Gesamtaspekt der zukunftssorientierten Instandhaltung As part of the overall aspect of forward-looking maintenance, mechanical and electrical components, in particular electric motors, should be cleaned of loose oily and persistent contaminants. One of the pieces of equipment we use is a powerful dry steam cleaning apparatus in which the produced steam emerges from the nozzles with a maximum pressure of 10 bar and a temperature of up to 180 °C. A dry-steam cleaning device can also be used on electrical components, as the saturated steam is not conductive and is dry. Through the use of special accessories such as lances, brushes, scrapers and wipers, it is possible to clean places that traditional techniques can reach only insufficiently or not at all, such as corners, drill holes, folds and more. Through the addition of special cleaning agents, the dissolving and penetrating power can even be further increased, and the formation of rust can be avoided at the same time with passivated additives.

Another advantage of dry steam, due to the high temperature of the steam, is fast drying. Cleaned installations can be quickly returned to service and downtime can be optimized.

RELUNA® gentle cleaning of filter bags.
RELUNA® is an innovative method developed by Wallstein Engineering GmbH for gentle cleaning of fabric filter bags from baghouses at waste incinerators, power plants and other industrial facilities. Instead of very expensive acquisition of new filter bags, using the gentle cleaning process RELUNA®, the life cycle of the filter bags can be extended by several years. The advantages of the RELUNA® process at a glance:

→ especially fabric-friendly cleaning
→ Cost savings of up to 90% compared to new filter bags
→ no plant shutdowns thanks to chamber-by-chamber, cleaning and mobile plant
→ optimum plant operation after cleaning thanks to the small loss of pressure achieved
→ developed for membrane and conventional needle felt bags

Safe and optimised plant operation. With us, you can achieve this goal!
Partnership into the future

Across Germany, our customers are supported on-site by our professional, knowledgeable and friendly sales staff. Due to this proximity to our customers and continuous market monitoring, new or changed requirements for maintenance are quickly recognized and consistently implemented by our team. Custom and bespoke solutions are our strength and your gain.

Quality assurance, labour and environmental protection

Compliance with and implementation of nationally- and internationally-recognised standards of quality assurance, health and safety and environmental protection are a key component of our corporate strategy.

With the appropriate certifications, we emphasise to our customers and partners our commitment to responsible business conduct.

Certified to

DIN EN ISO 9001/14001/13485, AD2000 - HPo, TRD 201, DIN EN 3834-2 (729-2)/18 800-7, European Welding Engineer (SFI/EWE) and European Welding Specialist (SFM/EWS), various process certifications under EN 288-3/DIN EN ISO 15614 – 1, welders certified in accordance with EN 287-1 and DIN EN ISO 9606 – 4 (nickel and nickel alloys), Re-stamping agreement with TÜV Nord, specialised company under §19l WHG, SCC, SeSaM, AÜG-certified.

Authorized TEGG Service Partner

www.wallstein.de