

**BUCHEN®**

WORKING FOR THE FUTURE

## Industrial service – from start to finish



> **BUCHEN**

**Clean solutions for industry**

By providing tailored, integrated services for industrial plants, we are driving the success of our customers

[buchen.net](http://buchen.net)

The extensive experience of BUCHEN acquired across numerous industries as well as our highly-qualified and dedicated employees make us a competent and reliable partner



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# Our contribution to your success: Maximum efficiency

In order to be successful, industrial companies must optimise their performance and run their business cost-effectively. The BUCHEN industry service guarantees maximum safety, performance and availability of plants and machines and allows customers to concentrate on their core business.



## Comprehensive services – a single point of contact

Our service portfolio revolves around industrial cleaning processes that we have continuously refined and developed into a range of highly specialised and automated services. From heat exchangers, air coolers, tanks, piping systems and devices, vessels or columns used in large scale industry: From initial consultations through to efficient implementation and all the way to final documentation, BUCHEN provides everything from a single source.

## Network of specialists

The BUCHEN companies offer a wide range of specialised services, such as catalyst handling, efficient sludge dewatering, reactor service under a nitrogen atmosphere as well as

24-hour emergency management. As a result, our customers not only use the services of the individual companies, but profit in addition from comprehensive concepts covering all aspects of cleaning and maintenance.

## Sensitive areas – familiar terrain

In addition to standard tasks that we handle with our customary care and experience, our expertise is particularly important when it comes to mastering special challenges, such as handling chemical substances and working in potentially explosive areas or in nuclear installations.

BUCHEN is certified in the areas of environmental management (ISO 14001), quality management (ISO 9001) and safety management (SCC®). It is also the first company in the sector to be awarded the RAL quality mark 997 for industrial plant services

### > A strong partner from a strong group

Together with XERVON, BUCHEN and its subsidiaries and affiliates make up the "Industrial Services" division within the REMONDIS Group, one of the largest privately-owned service providers for recycling, service and water. The technical services provided by XERVON, such as scaffolding, insulation, surface technology and full service maintenance, perfectly complement our portfolio of services to our customers.

## Global presence

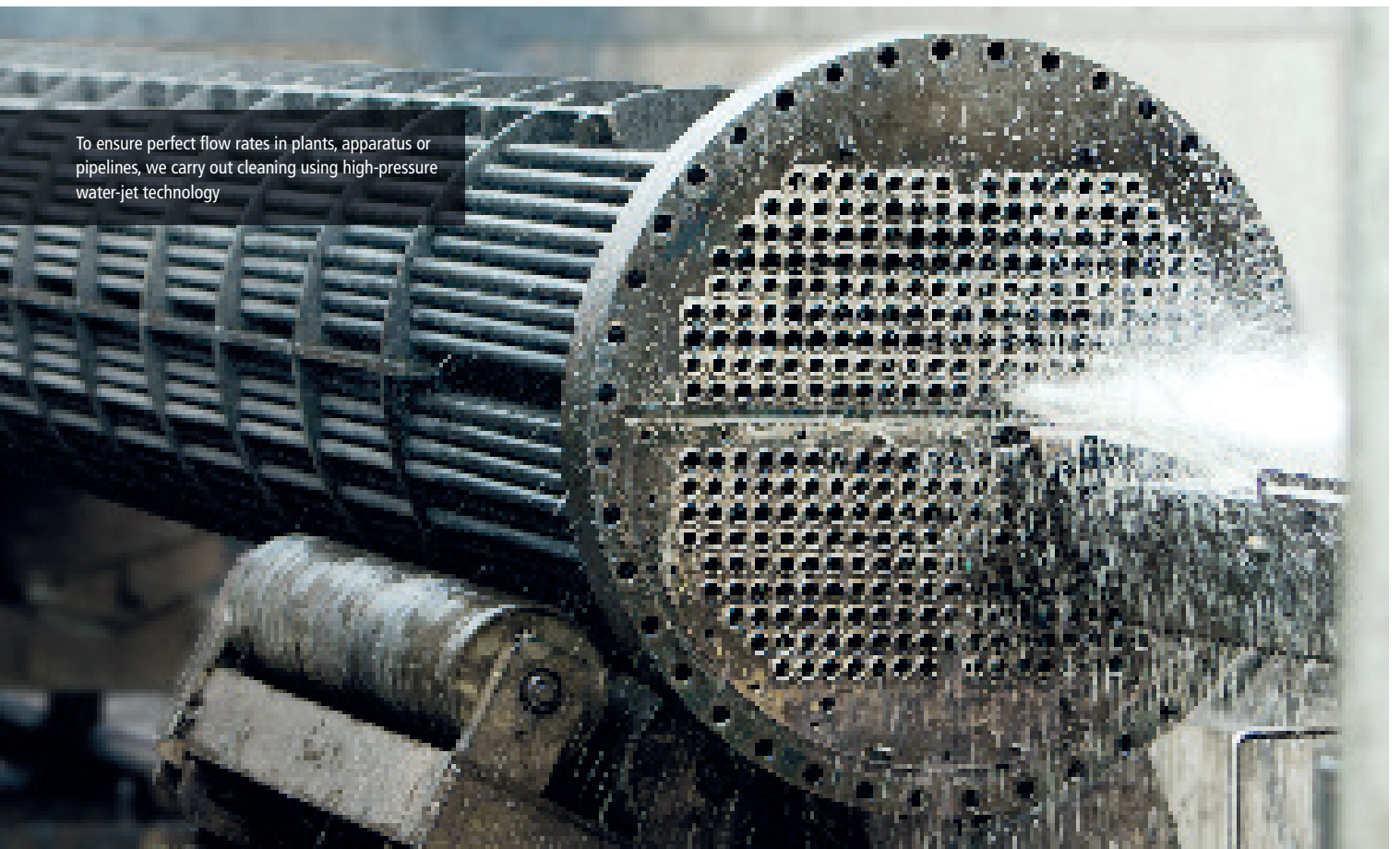
We maintain a presence at numerous locations throughout Germany, Europe and in the Middle East. This means we are always close to our customers, so that we can respond promptly to their individual wishes and requirements!



## Sheer diversity

Only perfectly cleaned production facilities can achieve optimum efficiency. With this in mind, BUCHEN has developed effective cleaning processes for refineries, power plant, chemical companies and other large-scale plants. As a result, we have the right solution for every challenge: cleaning using high-pressure water, chemical cleaning and passivation, or our system flushing process.

To ensure perfect flow rates in plants, apparatus or pipelines, we carry out cleaning using high-pressure water-jet technology




Highly adhesive contaminants are carefully removed by water jet



### Cleaning system for tanks, vessels and columns

To clean tanks, vessels and columns, we employ high-pressure water-jet technologies that can carefully remove even highly adhesive contaminants. We supply tank washing heads with positioning units and a variety of nozzle types that guarantee residue-free cleaning.



For tanks and vessels, we can use a wide range of processes for emptying and cleaning depending on the particular requirement

**High-pressure water jet cleaning – manual or automated**

Cleaning using high-pressure water jet systems is an established industrial cleaning service and a core area of expertise at BUCHEN. In addition to manual cleaning, we offer automated processes that impress not only with their high efficiency, but also from a safety perspective.

**Chemical cleaning – two ways to achieve optimum output values**

Chemical cleaning processes in closed systems ensure material-friendly removal of deposits in industrial plants. We use two methods to do this:

- Chemical etching and cleaning technology – configured as circulation or spray processes
- System flushing process – an economical and environmentally-friendly alternative that can be used while a facility is operating and in advance of turnarounds

**Plate heat exchanger service – including seal replacement**

The plate heat exchanger service from BUCHEN can restore the performance of all standard makes. As part of a multi-stage process, plate heat exchangers are inspected, cleaned and completely overhauled by our experts.

**Biogas plant service – with technology and safety**

For biogas plants, regular maintenance and inspection are essential to ensure consistently high gas yields and to comply with statutory requirements. You can rely on our expertise! Our biogas plant service includes project planning, the creation of work and safety concepts and, of course, putting them into practice.

We make it our business to rectify the performance losses in yours. These are often the result of a continuous reduction in fermentation space, which we can effectively address with our biogas plant service

**> Industrial cleaning service portfolio**

- Tank-, vessel- and column cleaning: consultation, coordination, planning and execution
- High-pressure water cleaning: advising, coordination, planning, use of manual or automated processes
- Closed-loop chemical cleaning: system flushing processes for heat exchangers, vessels, columns, pipelines and crude oil plants as well as chemical etching and cleaning technologies for decalcifying, de-oiling, de-greasing and passivating plant components
- Plate heat exchanger service: maintenance and cleaning for all standard makes, retreading with seals of original or OEM quality, cleaning large unit numbers within a very short period, delivery of spare parts
- Biogas plant service: residue removal and cleaning of vessels, inspection, removal and application of vessel coatings, cleaning gas coolers and heat exchangers, pipe and sewer cleaning, pressure testing compliant with the German Water Resources Act (WHG), filter and catalyst handling

## Powering through problems

BUCHEN provides operators of conventional power plants, thermal waste processing plants as well as industrial incineration and steam-generating plants across Europe with special services that cover all aspects of cleaning, waste management and remediation. With service packages tailored to your requirements, we minimise your coordination and work expenditure and streamline your inspections and processes.

Customers across Europe are impressed by our services. Talk to us about a tailored service package and see for yourself how we can streamline inspections and processes!

### Cleaning and waste management: just two of numerous services

Of particular importance is the boiler cleaning services plus transport and disposal of all types of deposits found on heating surfaces and steam generators. If the properties of the fuel change in the boiler – such as its calorific value, moisture content or the size of the pieces – then this not only alters the speed that the fuel is dried out, ignited and burnt off but also where these reactions actually take place. The results are unwanted deposits along the whole of the heating surface and steam generator which in turn makes the plant less efficient to run.

A certain amount of residue is always left over when waste is incinerated. Different types of deposit and slag build up on the heating surface of the steam generators – a result of the chemical and physical properties of the fuel. This fouling affects the way heat is transferred, the greater flow resistance pushes up the plant's consumption of electricity and, in

the worst case scenario, the plant breaks down completely. Depending on the particular task, we draw on a broad pallet of different cleaning processes such as compressed air jet process using solid phases, vacuum blasting or high pressure water jetting.

### > Power plant service portfolio

- Boiler cleaning
- Air cooler cleaning
- Chemical cleaning
- Rotary air and gas preheater cleaning (LUVO/GAVO)
- High-pressure water cleaning
- Compressed air jet process using granulates
- De-pinning/pinning
- Waste management
- Remediation

We offer operators of power plants numerous other services in addition to cleaning



## Proper sludge treatment

Sludge dewatering is primarily concerned with preparation of industrial sludge using the solid-liquid separation process. Products such as lyes, acids or oils are filtered and oil-water-solid mixtures decanted. In many cases, mobile sludge dewatering is an essential component of an optimised overall concept.



### A key component of the waste management concept

An economical addition or alternative to in-house investment, mobile sludge dewatering can play a key role in a waste management concept while at the same time guaranteeing economical production. In addition, it is frequently indispensable when it comes to maintaining operations – for example, during inspection and cleaning work or in the event of interruptions to operations.

### In use internationally: our gas-tight decanters

When it comes to separating combustible or hazardous substances, customers from Scandinavia to the Bosphorus trust our mobile, nitrogen heterodyned and gas-tight three-phase decanter units that conform to the ATEX directive.

### The benefits at a glance:

- Safe processing of substances above their respective flashpoints
- Substances with flashpoints below 21 degrees Celsius can be processed directly at the point of production
- Separation of crude-oil slack wax, slop residues, residues left after tank cleaning, sludge containing oils and solvents

If requested, we can also provide other services in addition to sludge treatment, thus ensuring even greater efficiency and predictability

### > Sludge dewatering service portfolio

- Bespoke project engineering
- Process engineering laboratory investigations
- Recovery and conveying of sludge
- Chemical-physical treatment
- Loading/draining the separated phases
- Process monitoring
- Planning, construction and operation of plants
- Mobile and stationary treatment



We also offer catalyst handling in normal and N<sub>2</sub> atmosphere

> REACTOR SERVICE

## Specialists for the heart of your plant

Catalytic reactors are used in the chemical and petrochemical industry to refine products, to reduce environmental pollution and are at the heart of every industrial plant. BUCHEN is one of the leading international providers of reactor services.

In the run-up to a project, we carry out hazard assessments and risk analyses in cooperation with our customers and compile safety plans

### Effective interface minimisation

Our diverse portfolio of services includes all work on catalyst-relevant processing plants such as hydrocrackers, FCC-reactors or UOP-CCR reformers and extends from plant preparation through to catalyst handling all the way to regeneration, passivation or the recycling of catalyst material. Our portfolio also includes turnaround management for catalytic reactors – at all times taking into account safety and quality as well as on-time and on-budget delivery.

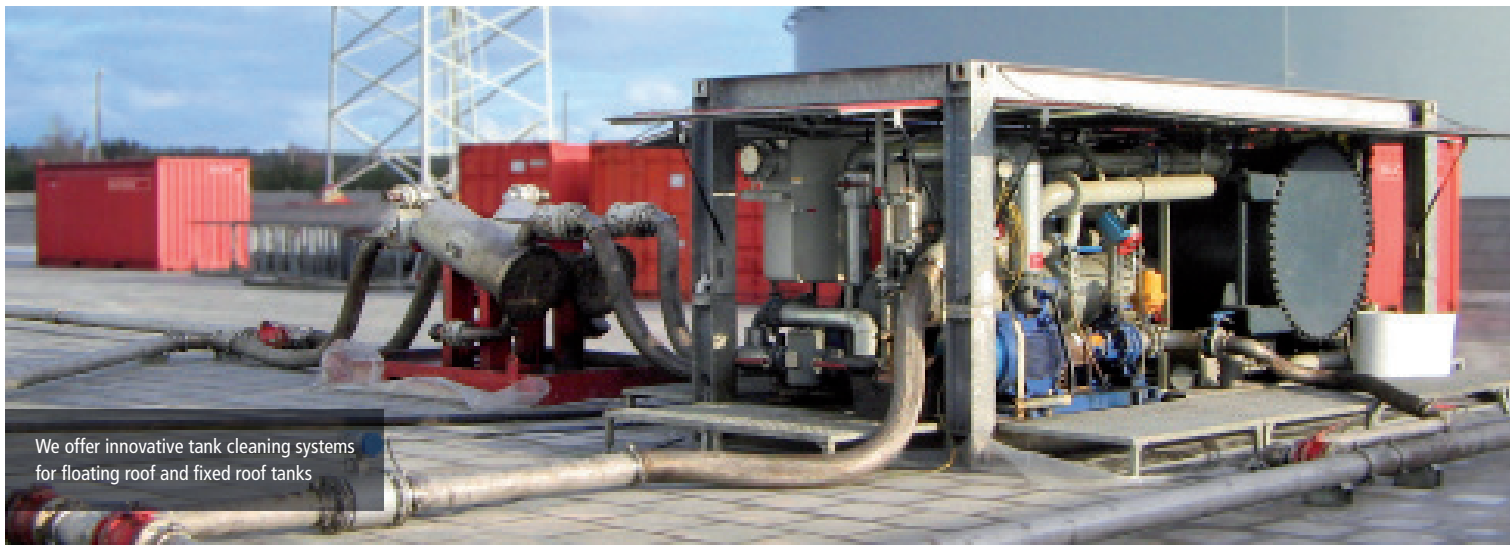
### > Reactor service portfolio

- Turnaround management
- Plant preparation
- Catalyst handling in normal and N<sub>2</sub> atmosphere
- Inspection in normal and N<sub>2</sub> atmosphere
- Maintenance of reactor internals
- Assembly work
- All-weather reactor loading with the Dense Phase Conveying System



# Using automated cleaning to maximum effect

Storage tanks and vessels for crude oil or heavy products require regular inspection and cleaning. If this is not done, residues bind the costly stored product. Deposits also reduce the tank volumes and therefore their storage capacities.



## State-of-the-art tank cleaning

Depending on the type and size of the tank as well as the consistency of the residues to be removed, BUCHEN uses different automated, closed-tank cleaning processes that largely avoid the negative factors involved in manual cleaning.

Modern non-man-entry systems eliminate the need for personnel to enter the tank. These modular systems are installed in shipping vessels to enable safe and flexible transportation. As is the case with all automated systems from BUCHEN, these are also closed systems – a feature that yields additional technological and economic benefits for our customers:

- Significant reductions in hydrocarbon emissions as compared with manual tank cleaning
- Short cleaning times
- High standard of safety for personnel, since they do not need to enter the tank
- High crude oil recovery rate
- Low waste management costs

## Exhaust air treatment – mobile, clean and quiet

The cutting-edge equipment employed by BUCHEN also includes the mobile combustion chamber for low-emission exhaust air treatment. It is designed for burning industrial gases at temperatures above 1,000 degrees Celsius pursuant to the rules stipulated in the technical instructions on Air Quality (TA air regulations). Hydrocarbons as well as explosive and harmful gases are burnt safely and quietly without open flames and the exhaust air is cleaned.

The tank cleaning systems are continuously refined by BUCHEN

### > Tank service portfolio

- Advice regarding the choice of suitable automated tank cleaning systems
- Detailed planning and coordination
- Transport and installation of the mobile cleaning system
- Waste management
- Mobile exhaust air treatment

## We have the core expertise

For the challenging tasks relating to all aspects of nuclear facilities, BUCHEN provides its customers with a range of services, from planning and implementing conventional decontamination work all the way to designing and realising complete decommissioning and dismantling projects.



The work that we carry out in nuclear power plants and nuclear installations is based on industrial service methods that we have adapted and further developed

To operate the plants, we provide a highly qualified team of engineers, foremen, technicians as well as decontamination and radiation-protection specialists certified by the German Chamber of Industry and Commerce

### Decommissioning, dismantling or decontamination

When it comes to nuclear installations, customers can count on the many years of experience accumulated by BUCHEN. For example, we took on the overall management of the decommissioning of Research Reactor FR2 in Karlsruhe Germany and acted as general contractor with responsibility for dismantling the main turbine condenser at the Würgassen nuclear power plant.

### Efficient cleaning of pipes, heat exchangers and vessels

As a certified company specialising in the disposal of radioactive products, we offer comprehensive services and high-performance technical equipment particularly in the area of high-pressure water-jet technology:

- Mobile blasting units for automatic and manual decontamination of plant components
- Hand-held blasting units for manual decontamination of plant components
- Mobile hand-held blasting unit with direct extraction for all surfaces
- Troughed belt with centrifugal blast cleaning unit

### > Nuclear service portfolio

- Consulting and planning
- Inspection work such as high-pressure cleaning of vessels, heat exchangers and pipeline systems as well as cleaning cooling water lines, intake structures and cooling towers
- Decontamination and cleaning by blasting components with abrasive media, using high-pressure water technology or chemicals
- Disposal of ionisation smoke detectors
- Operating decontamination facilities, waste reclamation plants and wastewater plants
- Provision of personnel for inspection, deconstruction, plant operation, maintenance cleaning, plant decontamination, transport and radiation protection work

# Rigorous recycling

For more than 20 years, BUCHEN has worked as an expert partner to the foundry industry, operating a closed recycling system for amines at its Voerde facility. In doing so, BUCHEN fully complies with the objectives of a seamless waste management system.

## Recovering valuable substances

Foundries use amines as catalysts for hardening moulding-sand binding mixtures. To protect the environment, surplus gaseous amines are suctioned off and passed through washers where they bind with sulphuric acid to form amine sulphate. In the BUCHEN amine recycling plant, this amine sulphate can then be converted back to amines of sufficient purity for re-use in the foundries. The amine recycling process conserves valuable raw material resources that would otherwise be used to synthesise new amines.

## It couldn't be simpler



Minimise your expenditure on handling, documentation and managing certificates and records. As a BUCHEN customer, you simply use a removal order to verify the whereabouts of your waste – it's issued for every shipment!

## > Foundry service portfolio

- Delivery of wash concentrate K 103 (sulphuric acid)
- Provision of mesh box containers (IBC)
- Removal of spent wash concentrate (amine sulphate)
- Creation of necessary documentation in accordance with German closed substance cycle act (KrWG)
- Creation of waste management certificates ourselves as a certified waste management company as per § 56 KrWG
- Notifications for the transboundary movement (importation) of waste in accordance with EC Regulation 1013/2006
- Logistics and analysis
- Distillation of amines (e.g. DMEA, DMIPA, DMPA)
- Delivery of recycled amines to the foundry supplier industry

In cooperation with long-standing partners, we also offer our customers technical advice, plant maintenance (as a certified specialist in accordance with the German Water Act) along with a spare parts service



BUCHEN is a professional partner to foundries that manufacture moulded parts using the cold-box process

## Short downtimes

Every hour of turnaround in refineries, chemical plants or power plants costs money. Consequently, operators have a keen interest in keeping downtimes short and bundling the different measures to be performed. This turns turnarounds into complex projects. As an experienced specialist, we not only understand the challenges involved in successful turnaround management – we deliver time and again with our professional planning and implementation.

As part of inspection work, we carry out repairs and cleaning work on heat exchangers, filters, tanks and vessels, air coolers, distillation columns and reactors

### Methodical approach for short downtimes

BUCHEN has particular expertise in performing cleaning, servicing and maintenance work during periodical turnarounds of plants or plant components. Speed and adherence to deadlines are top priorities for us – along with quality, cost-efficiency and occupational safety.

### End-to-end solutions for greater efficiency

Our service package covers all project phases. We coordinate all individual tasks and ensure smooth and efficient cooperation between the professionals involved – to the required quality standard, to strict deadlines and within confined spaces. Our planned measures are always based on an overall concept that we develop in advance of the turnaround.

### > Turnaround management service portfolio

- Consulting, design and planning
- Creating and implementing the safety concept
- Installing and maintaining the infrastructures on-site
- Coordinating human and technical resources
- Organising necessary additional work
- Deadline and cost control
- Providing waste management services
- Final documentation

Regardless of the industrial plant involved: turnarounds present complex challenges that call for optimum organisation



## Long-term retention of value

From steel hydraulics constructions, tanks and vessels to industrial plant components: wherever metal surfaces are exposed to the weather, corrosion occurs. Our corrosion protection services include all work required to carefully remove coatings and layers of rust and to apply new coatings.



Surface technology without the need for scaffolding – for small and large areas, we use the innovative, fully-automated “Spiderjet” system

### Fully-automated for improved safety and lower costs

Our innovative procedures cut processing times and further reduce costs by eliminating the need for scaffolding services. We remove old coatings and rust from surfaces by remote control. Cleaning water and residues of remnant layers are collected and subsequently separated to minimise waste disposal costs. Following the complete removal of the old coatings, new coatings are applied.

### Ultra-high water pressure as an alternative

In addition to conventional compressed air jet processes, we offer a cost-effective and environmentally-friendly alternative: de-layering with ultra-high water pressure of up to 3,000 bar!

### > Surface technology service portfolio

- Conventional compressed air jet process
- De-layering using ultra-high water pressure of up to 3,000 bar
- Use of fully automated, remote-controlled equipment for removing coatings and corrosion
- Collecting and separating cleaning water and residues of remnant layers
- Application of new coatings using all approved colour systems

## Our processes are a cut above

The Water Abrasive Suspension Cutting (WASC) process ensures that we comply with the highest standards of safety, precision, speed and environmental compatibility – whether we're cutting pipelines, tank openings, apparatuses, reactors or large tanks in industrial plants.

### Cutting with water and abrasives

Particularly in potentially explosive areas, the precise and vibration-free cold cutting made possible by the Water Abrasive Suspension Cutting (WASC) technique offers significant benefits. Our technology generates enormous cutting force but is also extremely gentle on the material. Even the hardest materials, double-walled elements and components featuring sandwich construction can be cut easily and with no heat generation.

### An overview of the advantages:

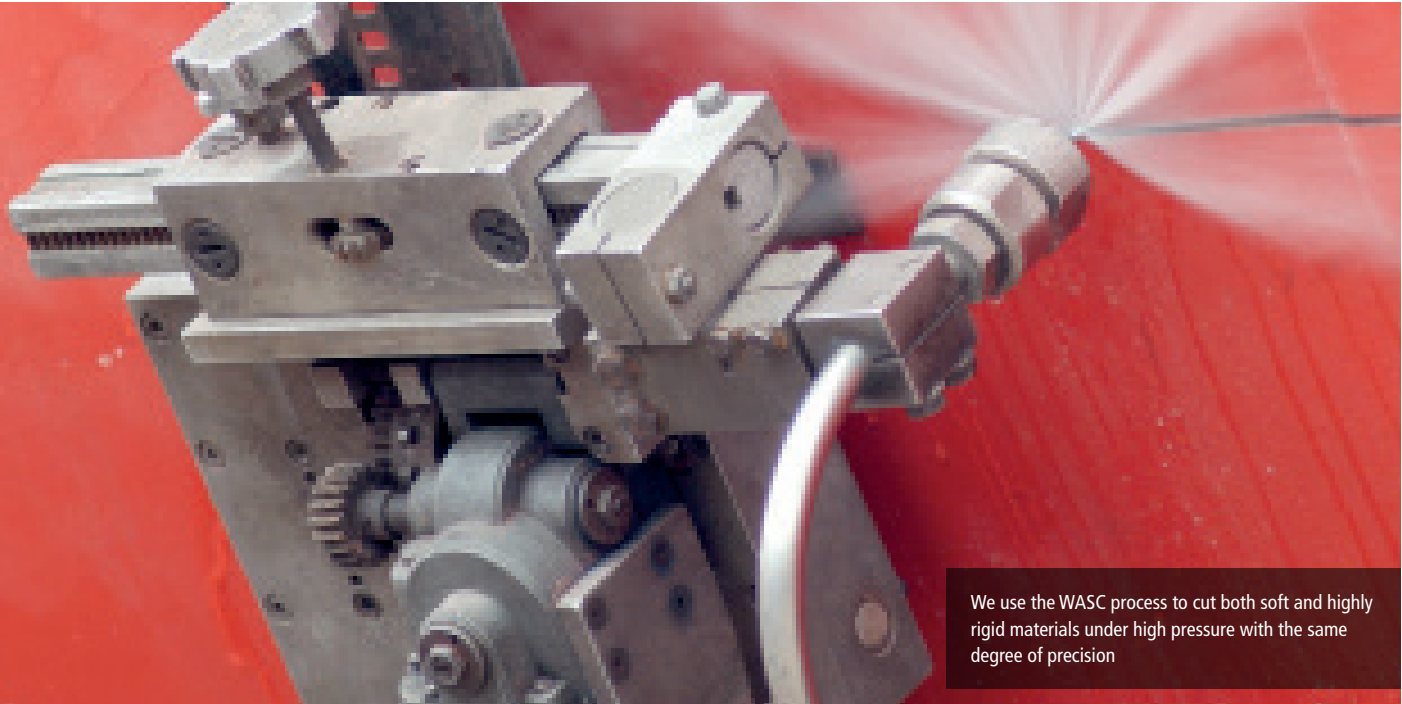
- No material changes due to thermal loads
- Low cutting and reaction forces
- Low kerf width conserves material
- Tool does not jam in cutting gap
- Cutting can start in the solid material
- No harmful dust emissions or exhaust gases
- Remote-control technology avoids unnecessary health risks
- Water and abrasives are physically separated

### Cold cutting with injector technology

Our service portfolio also includes a cold-cutting process that uses injector cutting nozzles and is particularly effective for use in dismantling chemical plants thanks to its accurate incision guidance and excellent cutting performance!

### > Cold cutting service portfolio

- Cold cutting tank openings, apparatuses, reactors or large tanks as well as pipelines internally and externally
- Processing materials from soft to hard-as-steel: Concrete up to approx. 350 mm, steel up to approx. 250 mm



We use the WASC process to cut both soft and highly rigid materials under high pressure with the same degree of precision

## Highest state of alert

Even the very best safety concept cannot completely rule out accidental damage. If an incident occurs, swift and professional intervention is required. Our emergency management is your guarantee of immediate support – particularly if your company manufactures, processes, transports or stores hazardous substances and compounds.

### When every second counts, well-drilled routines make the difference

Each year, more than 500 million tons of chemical substances and compounds are manufactured and used in Germany. As an experienced service provider to industry, we understand that the need to handle chemicals can sometimes pose potential risks to humans and the environment. And as experienced experts in all matters of emergency management, we know how important it is to take the right decisions quickly if disaster strikes.

### Prepared for everything – around the clock

With the 24-hour emergency management service provided by BUCHEN, you have the security of being fully prepared for even the worst-case scenario. On receiving notification of the incident, we initiate immediate measures to limit or

eliminate the damage – always in close cooperation with the customer, authorities, experts and insurers. However, our expertise doesn't just end there. In addition to documenting every incident in detail, we can implement all necessary remedial measures – quickly and to optimum quality standards.

#### > Emergency management service portfolio

- 24h emergency measures
- Oil brigade
- Environmental protection
- HAZMAT team
- Accidents



If called upon to intervene, our emergency management team can draw on all of the technical equipment and specialist expertise of BUCHEN

## Suction instead of dredging

Whether you are uncovering pipes and lines, emptying silos, removing contaminated materials or repairing track systems: The use of a suction dredge offers numerous benefits.

### Getting the job done with minimum expenditure

Wherever the high risk of damage or other factors prevent the deployment of conventional hydraulic excavation machines, the suction dredge offers a gentle and quick alternative. Since extensive construction site set-ups are not required, deployment times are also significantly reduced.

### The benefits at a glance:

- Selective uncovering without damage
- Suction of wet and dry materials such as soil, gravel, ballast and dust
- Use also with contaminated media
- Dust-free exhaust air
- Collecting chamber in the vehicle
- Efficient suction capacity of up to 8 m<sup>3</sup>/h
- Suction hose with 250 mm Ø, suction material up to 20 kg

### > Suction dredge service portfolio

- Uncovering pipes, lines and cable trays for maintenance and repairs
- Emptying bunkers and silos
- Track maintenance and repair
- Environmentally friendly removal of contaminated materials
- Suction of spilled loads following lorry accidents, cleaning and excavation of soil from ditches, hard shoulders and central reservations
- Replacing filter media, cleaning slurry tanks and aeration basins in waterworks and wastewater plants
- Tree and root maintenance



Our machines work quietly without the need for extensive construction site set-ups and with a low environmental impact



## In-depth expertise

For industrial companies and local authorities alike: sewer systems are the foundation of every functioning water management. BUCHEN has many years' experience in maintaining key wastewater treatment infrastructures. Consequently, we are an in-demand partner to private and public clients.

### The perfect programme for every channel

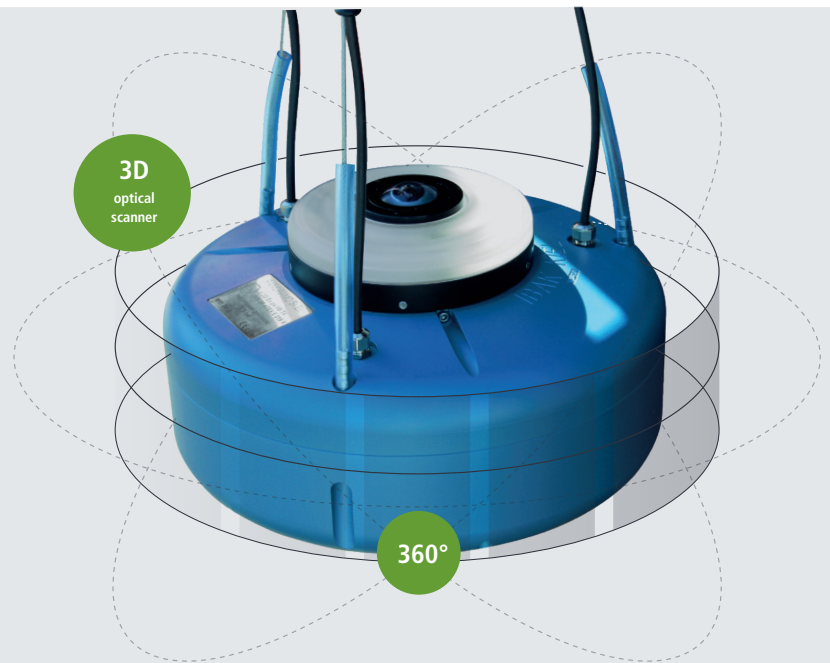
Our sewer service programme includes cleaning, inspection, leak analysis and remediation of sewer and pipe systems, culverts and separators. Know-how, tried-and-tested processes, and high-performance special equipment are our tools of choice. We perform leak tests using ultra-modern sewer TV and cleaning vehicles. We also use inliner technology to carry out repairs without the need for excavation – easy and efficient.

We use a 3D optical scanner to inspect shafts and other confined spaces (e.g. chimneys). This digital recording gives us an interactive view of the structure and enables us to draw up a precise assessment of its condition. The data can be processed and measurements carried out at a later date whenever they are needed. Operatives no longer have to enter these confined spaces to record the information manually.

### We are the long-distance specialists

For our customers, we can perform cleaning over long distances of up to 400 metres. Our equipment is guaranteed to perform to the highest standards even under difficult conditions:

- Combined high-pressure washer/suction units, on request with integrated water treatment
- Mobile air conveyor units
- Special appliances for milling away drain obstructions caused by encrustation, solid salt deposits or projecting branch connections



Our 3D optical scanner for inspecting shafts

### > Sewer service portfolio

- Comprehensive and professional advice
- Cleaning using special equipment
- Disposal of accumulating waste material
- Sewer inspection using the very latest TV technology
- Satellite camera systems
- Electronic positioning sensors
- Leak tests
- Light liquid separator tests (as per DIN EN 858)
- Creation of remediation concepts
- Sewer and manhole remediation
- Separator remediation

## Safety that benefits you

BUCHEN is a recognised expert in the field of safety technology. Our expertise and comprehensive logistics service also benefit our customers. They can have their safety material maintained by us, supplement their own inventory with equipment from our rental pool, or source all their safety material from us.

Particularly in the area of safety technology, breathing protection, gas detection technology and personal protective equipment (PPE) to prevent falls are particular priorities

### Consulting for all aspects of safety logistics

No two solutions are alike, but each begins with a conversation. This gives us an opportunity to explain the numerous benefits we can offer you:

- Cost reduction
- Precise inventory levels
- Uniform safety standard to the highest level
- Reduced stock loss
- Constant availability

### Around the clock 365 days a year

On request, we can take over the administration of all safety materials, including the monitoring of test intervals, equipment maintenance as well as documentation of issues and returns.

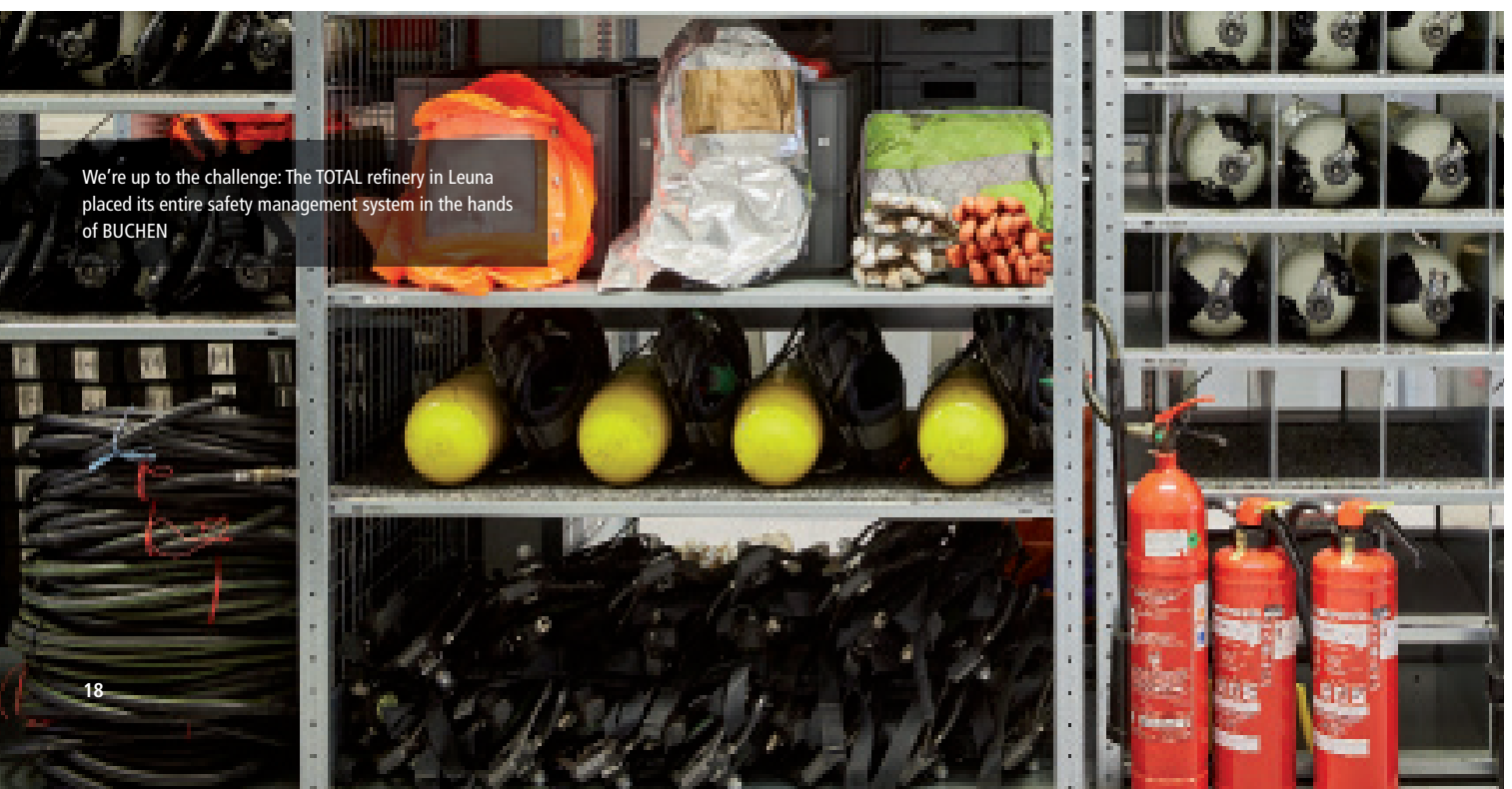
For enhanced safety in your company, we offer you two convenient solutions:

- Safety shops: In the BUCHEN safety shops, BUCHEN employees issue the necessary safety material. You decide when the shops are to be staffed. If necessary, we can also maintain a 24/7 on-site presence
- Safety dispensers: Our 24-hour dispenser system guarantees the availability of safety material without the need for staff. Employee access is provided, for example, in the form of a transponder or a code that is entered using a keypad

### > Safety service portfolio

- Consulting
- Leasing of safety material
- Administration of safety material including monitoring of test intervals, maintenance and documentation
- Safety shops
- Safety dispensers

We're up to the challenge: The TOTAL refinery in Leuna placed its entire safety management system in the hands of BUCHEN



# Detecting, containing and eliminating harmful substances

Whether dismantling industrial plants or rehabilitating buildings – for every project, BUCHEN develops a bespoke solution concept that meets all safety and efficiency requirements. In this context, our service portfolio extends from accurate assessment of potential hazards through to construction management all the way to the disposal of hazardous building materials.



BUCHEN cleans contaminated buildings and passes on the accumulated material for safe treatment

## All that's required for a new beginning

The dismantling of industrial facilities can involve the most diverse requirement profiles. In some cases, it is necessary to clean individual components, while other situations may call for the dismantling of an entire facility with subsequent reconstruction at the new location. As diverse as the tasks may be, we always carry them out with highly-qualified personnel, modern equipment and thorough safety precautions.

## Making contaminated buildings safe

The process of cleaning contaminated buildings and technical facilities is considered to be a particular challenge – with good reason. That's because building materials that contain pollutants are frequently highly toxic and damaging to the environment. You can count on us. As a company specialising in the reliable and safe removal, transportation and treatment of the corresponding hazardous materials, BUCHEN is thoroughly familiar with all safety measures for the protection of personnel and the environment.


## Combating the ravages of time

Frost, road salt, carbonisation, alkaline reactions, overloading or defects in material and workmanship – damage to concrete surfaces has numerous causes. BUCHEN has suitable measures to remedy each one. We use high-pressure water jet systems operating at up to 2,500 bar for controlled removal of concrete. We then treat corrosion of the steel reinforcement underneath and carry out long-lasting surface repairs or replacement.

We cooperate closely with the responsible authorities and obtain all the necessary approvals for our customers

### > Remediation service portfolio

- Construction management, demolition and decommissioning services, waste management, recycling of scrap and building rubble
- Removal of hazardous materials in and on buildings (e.g. asbestos, PCB, dioxins), treatment of mould, repairs of fire damage
- Securing all necessary approvals
- Remediation of concrete areas using high-pressure water jet systems up to 2,500 bar
- Corrosion treatment



BUCHEN is well versed in handling waste material that is particularly hazardous to health, air or water

> WASTE MANAGEMENT

## Hidden value

Organisation, equipment, expertise and reliability play an important role when it comes to the quality of waste recycling and disposal. From collection through to transportation and storage all the way to treatment, BUCHEN complies with the very highest standards. In doing so, we adhere at all times to the principle that unavoidable waste must be materially and energetically recycled!

**Safety and environmental protection are certified at BUCHEN: Virtually all locations in Germany are certified waste management companies under the terms of § 56 KrWG**

### Always in focus: optimum company procedures

As part of our waste management system, we begin by carrying out a detailed review of your business. Under the terms of the Closed Substance Cycle Act, we prepare a comprehensive and environmentally compatible waste management concept that is tailored specifically to the needs of your company.

### Proper and careful disposal

Regardless of whether they are dealing with chemicals from a laboratory or from industrial production, our chemists, laboratory technicians and waste disposal specialists are thoroughly familiar with all laws and regulations governing the disposal of hazardous substances. They ensure that materials are properly packed on-site and select waste disposal facilities that are approved for the respective hazard potential.

### Many waste substances are valuable materials



Effective waste management can save companies money. For this reason, our waste management advisory service focuses on the avoidance of waste and the cost-effective recovery of the precious substances it contains!

### > Waste management service portfolio

- Collection, transportation, storage and treatment of waste material
- Advice on how to avoid, recycle or safely dispose of commercial waste
- Detailed reviews
- Creation of commercial waste management concepts

# Equipment and special vehicles that achieve results

Our stated objective of working to make our solutions even more effective, economic and environmentally friendly results in the continuous optimization of methods, technologies and equipment. As a consequence of this process, a whole range of ultra-modern and field-tested special equipment for new areas of application and challenges is available to us and to our customers.

## High-tech mobile systems

Since we provide most of our industrial services on the customers' premises, we operate a wide range of mobile systems and devices. Many of these systems operate autonomously and only require a supply of electricity and water. This is advantageous during day-to-day operations, but all the more so in the case of special tasks and in exceptional situations.

## The building blocks of our capabilities

We can always respond flexibly to our customers' needs and are equipped for every situation thanks to our comprehensive logistics capabilities. Below are just some of the available options:

- High-pressure pumps up to 3,000 bar
- High-pressure and ultra-high pressure water jet cleaning equipment
- Mobile washing areas
- Air conveyor units
- Vacuum trucks for suctioning, transporting and filling liquids
- Combined high-pressure vacuum trucks
- Transport vehicles for hazardous waste



## Professional equipment

BUCHEN has the right solution for all requirements. As a result of many years' experience, we work with the very latest processes and innovative technologies, many of which can be traced back to in-house developments!

## BUCHEN mobile crane service

The BUCHEN location in Stade provides mobile crane and heavy-duty transportation services. Around the clock – even during emergencies – the experienced team is ready to assist our customers with mobile telescopic cranes, articulated vehicles, flat-bed trucks and trucks with loading cranes.



> SAFETY

## Safety for people and the environment

The highest standards of safety as well as health and environmental protection are what set us apart. We set out our principles of occupational safety long ago. Today, they are an integral component of a process-oriented management system.

When it comes to industrial services, it pays to choose a partner whose safety standards set benchmarks internationally

### Employees who understand their responsibility

Those who know the dangers they face can effectively avoid them. For this reason, we cultivate the risk and environmental awareness of our employees with regular training courses. Training and further education programmes keep our employees' expertise up to date. And at our certified training centre, technical expertise and craftsmanship skills are continuously developed.

### Safety is a matter of team work

In critical environments and for tasks with extreme requirements, we only ever deploy experienced and safety-conscious employees. Our specialists can rely on their state-of-the-art equipment such as breathing apparatus or HAZMAT suits, as they are maintained in our own company workshops.

### The highest standards – fully certified



Throughout Europe, all divisions of BUCHEN are certified to quality, safety and environmental standards. We also adhere to the statutes of the internationally recognised SCC standard. Our compliance with this standard is regularly checked by independent auditors, thus verifying the proper and safety-oriented execution of our services!

### > BUCHEN certifications

- Quality management ISO 9001
- Environmental management ISO 14001
- Safety management in accordance with SCC<sup>P</sup>
- German waste disposal specialist act in accordance with § 56 KrWG
- RAL quality mark 997 for industrial plant services
- and many more



**BUCHEN®**

**ÜBUNGSSTRECKE**

GREIF ZU!

Our safety measures provide maximum protection for people and the environment

BUCHEN is part of the REMONDIS group, one of the world's largest recycling, service and water companies. The Group has branches and associated businesses in more than 30 countries in Europe, Asia and Australia. It employs more than 40,000 people who work for millions of citizens and many thousands of companies. The highest levels of quality. Working for the future.