

**BUCHEN®**

WORKING FOR THE FUTURE

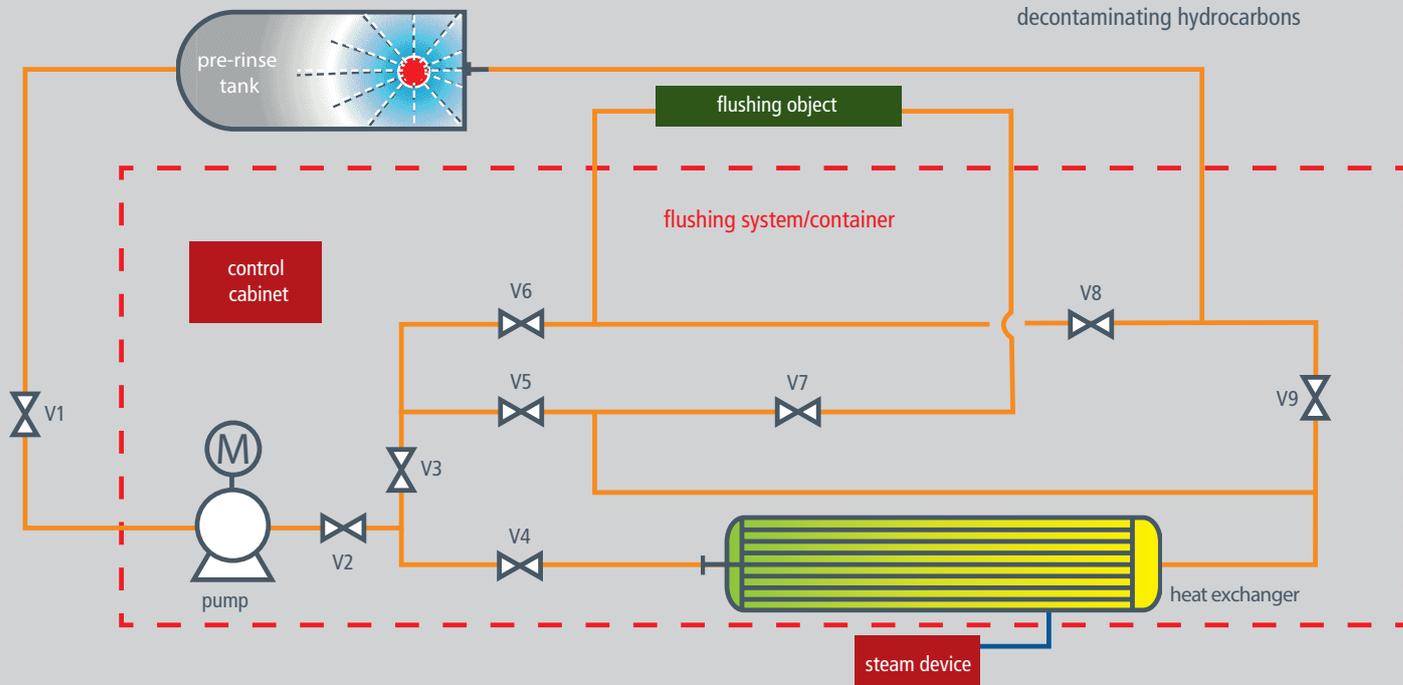
Chemically clean – without compromise!



> Industrial Chemical Services

Cleaning-in-place processes without the need to dismantle plant components during inspections and turn-arounds, new construction and renovation of process engineering plants and decontamination of hydrocarbons

[buchen-ics.com](http://buchen-ics.com)



## > PROCEDURE

# Decontaminating hydrocarbons

At the heart of our cutting-edge equipment is a mobile separator unit. It flushes and separates decontaminated solid phases from the process circuit in refineries and chemical plants.

### Laborious plant preparation for inspections

Plants that are shut down for inspection and maintenance purposes must normally be steamed and ventilated for extended periods to eliminate hazardous contaminants and toxic hydrocarbons. This has a major environmental impact on the one hand and involves labour-intensive dismantling and reassembly work on the other. In addition, personnel entering the tanks in the plant must wear special breathing apparatus to guarantee their safety.

### Using chemistry to decontaminate hydrocarbons

Instead of the conventional steam process, we offer an effective, economical and, above all, safe and environmentally-friendly process. Liquid chemicals are used to flush and separate hydrocarbons, toxic gases, pyrophoric substances, hydrogen sulphides and oil sludge

from the plant. The cleaning progress is continuously analysed and documented by the on-site measurement of relevant parameters.

Your benefits are as follows:

- No need for personnel to enter a toxic environment
- Fewer emissions
- Decontamination time reduced by half
- Lower energy/water consumption
- No mechanical rework after the flushing process

The chemical used is biodegradable and free of carcinogens

The separator unit can be deployed in individual plants as well as with inter-connected systems

### > Fields of application (selected)

- Crude oil facilities
- Desalination plants
- Fluid catalytic crackers
- Gas treatment
- Hydrocracker units
- Water treatment
- Thermal crackers

# Experts in clean solutions

Whether it is inside or outside your plant, the team at BUCHEN Industrial Chemical Services specialises in removing unwanted deposits of all types using chemical cleaning processes – quickly, safely and in an environmentally-friendly manner. We only use high-quality chemicals from specialised manufacturers and all our equipment is regularly inspected.



We maintain your plant with the highest degree of professionalism and offer tailored solutions to meet every customer's needs

**BUCHEN – A partner to industry throughout Europe**  
BUCHEN is an international service provider that sets standards in the areas of industrial service and waste disposal. The comprehensive range of services by BUCHEN includes industrial cleaning and turnaround management, along with numerous special services such as chemical cleaning, tank cleaning, catalytic converter treatment, silo cleaning, nuclear service, mobile sludge dehydration and much more. We provide bespoke solutions that allow our customers to concentrate on their core business. Continuous process optimisation and technical improvements guarantee the ongoing development of our comprehensive range of services for the chemical and petrochemical industry.

### A strong partner from a strong group

Together with the companies of XERVON, BUCHEN and its subsidiaries and affiliates make up the "Industrial Services" division within the REMONDIS Group. With the support of this major privately-owned service provider for recycling, service and water, we can offer proper disposal of all substances after our cleaning work is complete.

### QHSE is a top priority

From the outset, Quality, Health, Safety and Environmental protection (QHSE) are the top priority in every project. Handling chemicals is a challenging task with regard to humans and the environment and calls for a high degree of safety awareness. Our experienced employees understand their responsibility and adhere firmly to our QHSE standards. They receive regular training in all safety aspects. With the help of training and further education programs at our certified training centre, we make sure that our employees' technical expertise is always up to date. All our work is carried out exclusively using the appropriate protective equipment.

### The highest standards – fully certified

Throughout Europe, all divisions of BUCHEN are certified to quality, safety and environmental standards. Among the many regulations we adhere to in this regard are the statutes of the internationally recognised SCC standard. Our compliance with this standard is regularly checked by independent auditors. This serves to verify the proper and safety-oriented execution of our services!

### > BUCHEN certifications

- Quality management ISO 9001
- Environmental management ISO 14001
- Safety management as per SCC<sup>p</sup>
- Certified waste management company as per § 56 KrWG
- RAL quality mark 997 for industrial plant services
- and many more

# Your requirements are our challenge

Does your plant need to be cleaned quickly and effectively? We use the Cleaning-In-Place process to reduce waiting times. This localised chemical cleaning process does not require time-consuming dismantling of plant components during downtimes or new process engineering plants are installed or existing plants converted and renovated. The process and the chemicals used are carefully matched to your requirements. Neutralised residues are properly disposed of.

In sensitive hydraulic systems, we use a mobile, fully automated compressed air dryer for safe and reliable drying

Our portfolio also includes the provision of special equipment for filtration or for chemical treatment of exhaust gases

We are looking forward to developing a bespoke concept for your project and provide the relevant budget calculation. Talk to us!

## > Your requirement

### Restoring and improving system efficiency

Removing unwanted deposits that arise during operation or due to a chemical reaction, e.g. on

- Plate or tube bundle heat exchangers
- Heating/cooling circuits and product lines
- Towers, boiler systems, reactors, vessels, tanks
- Desalination plants

### Restoration of surface condition e.g. on newly built plants

Removal of scale, rolling skin, annealing colours or foreign particles after welding or assembly work.

### Preparation and disposal of product residues

Acidic or strongly alkali media such as flushing wastewater, sludge, etc. must be rendered pH-neutral prior to disposal.

### Preparation of hydraulic pipe systems for trouble-free commissioning

Your hydraulic pipe systems must operate safely and efficiently under high loads for extended periods. Therefore, it is essential that all systems function flawlessly prior to commissioning.

## > Our solution

### Chemical cleaning configured as circulation, immersion or spray processes

We carefully remove various deposits from carbon steel/stainless steel components. Examples of these deposits include

- Limescale, rust, oils and greases
- Product, fuel or combustion residues
- Various organic residues, such as hydrocarbons, polymers, micro-organisms, etc.

### De-greasing, etching, passivation

By means of de-greasing, etching – also in combination with pigging technology – and passivation, we restore the surfaces of newly built carbon steel/stainless steel plants.

### Neutralisation and proper disposal

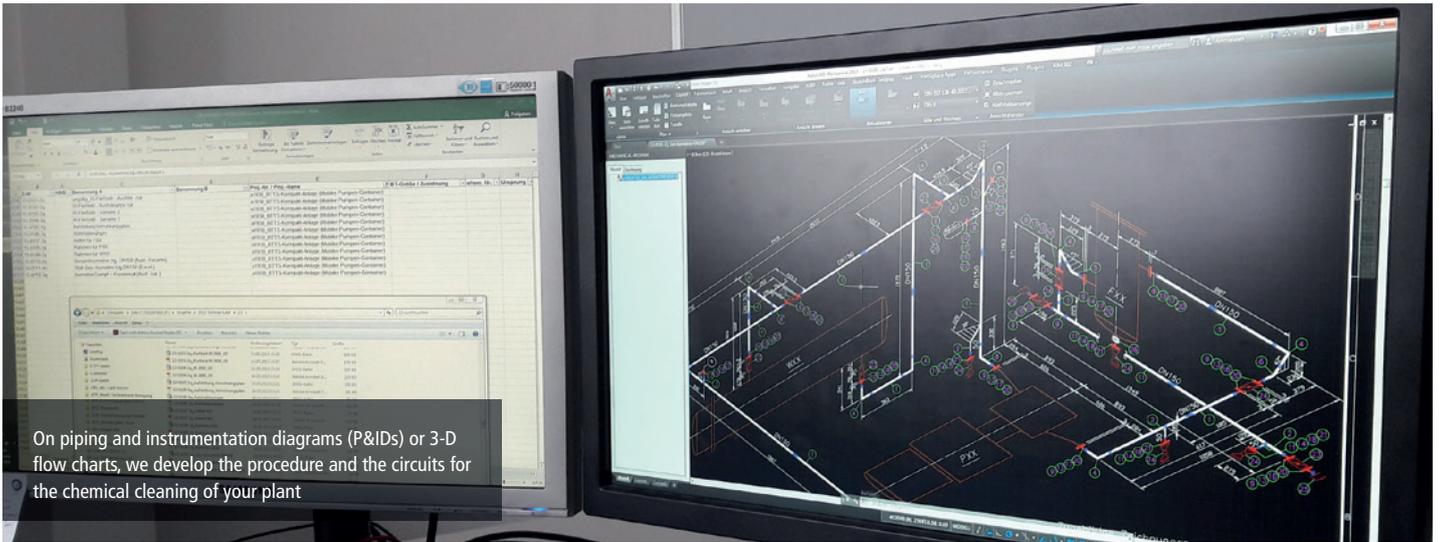
A chemical reaction is used to neutralise the residues in preparation for correct disposal.

### Oil flushing with hydraulic oil

We enable trouble-free commissioning of your hydraulic pipe systems with the help of oil flushing using hydraulic oil based on the etching process. In this case, we take all necessary measurements in accordance with NAS cleanliness standard DIN 1638.



Example of a pipeline before (photo left) and after chemical treatment (photo right)



On piping and instrumentation diagrams (P&IDs) or 3-D flow charts, we develop the procedure and the circuits for the chemical cleaning of your plant



Regular analyses are conducted during the cleaning process. We check pH values, acid concentrations, iron content, conductivity and inhibitors in the mobile laboratory



Mobile equipment in two containers for deployment for decontaminating hydrocarbons



# BUCHEN®

WORKING FOR THE FUTURE

BUCHEN-ICS is part of the REMONDIS group, one of the world's largest recycling, service and water companies. The company group has branches and associated businesses in more than 30 countries across Europe, Africa, Asia and Australia. With over 30,000 employees, the group serves around 30 million people as well as many thousands of companies. The highest levels of quality. Working for the future.

**BUCHEN-ICS GmbH**  
Industrial Chemical Services  
Emdener Str. 278  
50735 Cologne // Germany  
T +49 221 7177-0 // F +49 221 7177-218  
info.ics@buchen.net // buchen-ics.com

A company of the REMONDIS Group