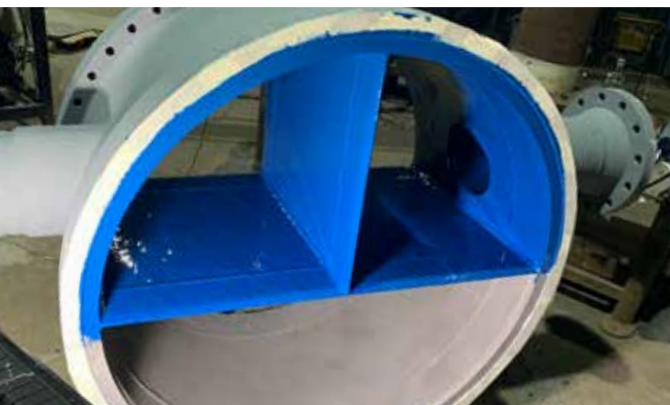




Best of Applications 2020





Repair of cavitation damages on bridge girders



Repair of cavitation damages in a hydroelectric power plant



Cleaning and maintenance of stainless steel surfaces in the kitchen



Adhesive bonding and sealing of distributors in underfloor heating



Repair of a conveyor belt



Coating a butterfly valve

Worldwide, we can provide the right answers to your application questions – whether it is for pipes, conveyor belts, automatic coffee machines, bridge girders or hydroelectric power plants. Our wide range of products offers our customers a variety of solutions – including our adhesives and sealants, technical sprays, technical liquids, assembly pastes, and high-performance greases as well as our cable stripping tools.

In this brochure, we present you with a selection of the most interesting WEICON applications we have come across this year. Take a look behind the scenes! We hope you enjoy our selection of “Best Applications 2020”. Have fun reading and discovering!



Production of automatic coffee machines



Gap filling on a press plate



Sealing and securing the screw connections of a gas pressure regulator



Sealing a leak



Repair of a drawer front



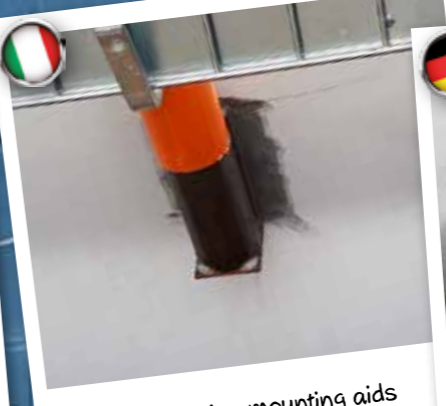
Repair of corrosion damages in a hydroelectric power plant



Bonding ID chips to waste bins



Coating of a heat exchanger



Attaching mounting aids



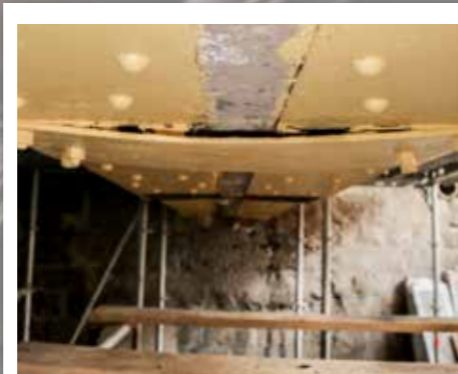
Removing flash rust

At the central station of the Wuppertal Suspension Railway, corrosion damages were detected on several bridge girders. As part of general maintenance works, these should be removed as quickly as possible.



First, the corroded and warped steel sheets were disassembled and the corrosion on the girder was sanded off.

Then the bonding surfaces were cleaned with WEICON Cleaner S.



The epoxy resin system WEICON HB 300 was applied to new steel sheets in a V-shape and generously. While mounting and pressing on the steel sheets, the surrounding gap is automatically filled by the excess material.

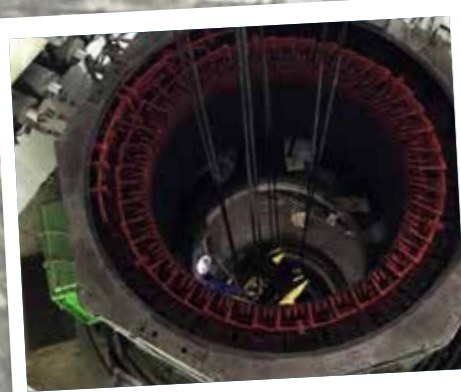
Thanks to the use of HB 300, a complete force closure is achieved. That way, penetrating moisture and thus further corrosion is prevented.

HB is wear-resistant and perfect for bridging gaps.



Repair of cavitation damages on bridge girders with WEICON HB 300

Over many years, the steel and concrete structures in a hydroelectric power plant had been suffering due to the high flow rate of the water. Previously, the cavitation damages had been repaired by time-consuming welding and new concrete.



As a first step, the surfaces were cleaned with WEICON Cleaner S, then sanded and cleaned with Cleaner S again.

The steel components were repaired with WEICON HB 300. To repair the concrete outlet, WEICON WR2 was used.



Thanks to the repair work, the efficiency of the rotation chamber could be restored.

Both plastic metal products are easy to use and provide high durability.

By using the epoxy resin systems, the exposure of the components to high temperatures during welding could be avoided.

That way, the original structure of the component could be moulded and restored.



Repair of cavitation damages in a hydroelectric power plant with WEICON WR2 and WEICON HB 300

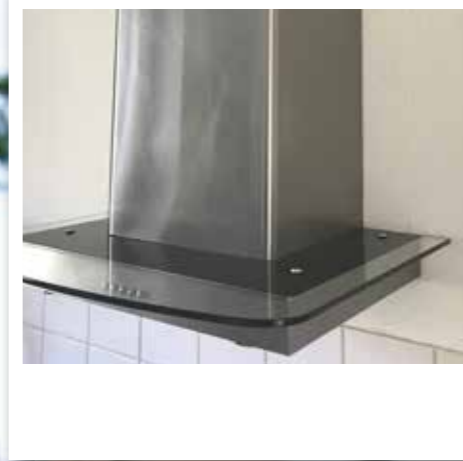
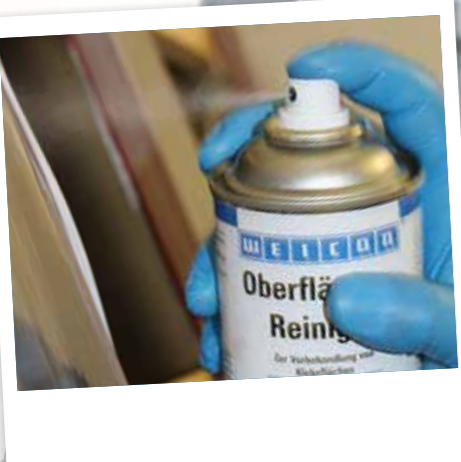
Usually, Bastiaan Peddemors frequently travels all around the world in his position as Area Sales Manager at WEICON. He used the unforeseen time spent at home in 2020 to keep his kitchen spotless with the help of WEICON products.



In most kitchens, you can find appliances made of stainless steel. Over time, heat, grease and food residues affect the stainless steel surfaces – just like on Bastiaan’s range hood.



After cleaning with WEICON Surface Cleaner, Bastiaan treated the range hood with WEICON Metal-Fluid.



WEICON Metal-Fluid provides a visually appealing surface finish.

It especially helps to protect heavily stressed surfaces in different environments against new contamination and residues.



Metal-Fluid is ideal for kitchen areas due to its NSF registration.



WEICON Surface Cleaner and WEICON Metal-Fluid for cleaning and maintenance of a range hood

A customer in Turkey used WEICONLOCK AN 305-18 to mount underfloor heating. Underfloor heating is becoming increasingly popular, as it combines several advantages: It replaces visible heaters, warms up the entire room and provides high-level comfort.



The adhesive bond was prepared with WEICON Cleaner Spray S.



Then, the distributors made of brass and stainless steel were attached and sealed with WEICONLOCK AN 305-18.



Distributor



WEICONLOCK AN 305-18 provides an excellent combination of sealing and securing of the connection.

The anaerobic sealing enables the bridging of gaps and immediate sealing.

In addition, the adhesive is high-temperature-resistant and thus ideal to meet the special requirements of an underfloor heating system.

Adhesive bonding and sealing of distributors in underfloor heating with WEICONLOCK AN 305-18

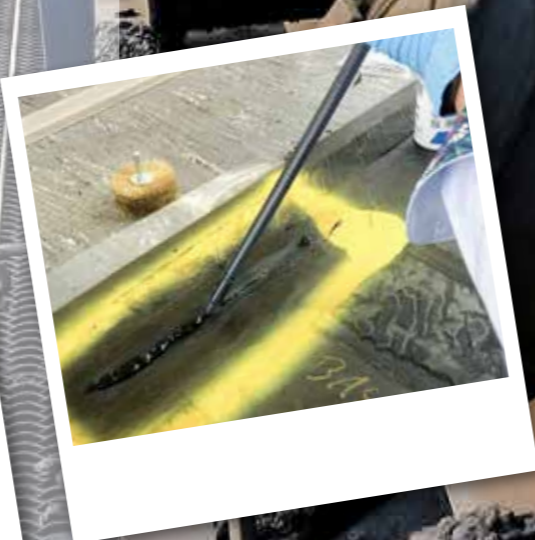
For a German customer in the mining industry, a conveyor belt made of rubber needed to be repaired. Previously, our customer had repaired this type of conveyor belt with vulcanisation.



First, the conveyor belt was cleaned with WEICON Cleaner Spray S.



Then, WEICON Primer G was applied. The bonding agent ensures a better adhesive joint for surfaces that are difficult to bond - like rubber, in this case. That way, the adhesive bonding was ideally prepared. Then, the WEICON Urethane 85, which is included in the WEICON Belt Repair-Kit, was worked in and moulded to match the surface of the conveyor belt.



With the help of the WEICON Belt Repair-Kit, the repair was perfect and the service life of the conveyor belt was increased significantly.

In a test run, three years of service life could be simulated.



Repair of a conveyor belt with WEICON Belt Repair-Kit

A water supplier from Abu Dhabi was looking for solutions for a damaged butterfly valve. Permanent opening and closing as well as the flow rate of the water had had a negative impact on the valve over time. The inner edge of the flange (gasket ring) had been damaged by corrosion and did not provide sufficient sealing anymore. Thanks to the use of the three WEICON products, the valve was repaired fast and easily.



First, the valve was pre-treated with sandblasting and WEICON Cleaner S.

To provide a new sealing, the plastic metal WEICON HBB 300 was applied generously to the edge. After curing, the epoxy resin system was sanded down to the original measurement.

Every material has a certain machinability. To ensure that the material does not break, the minimal layer thickness of five millimetres had to be strictly observed.

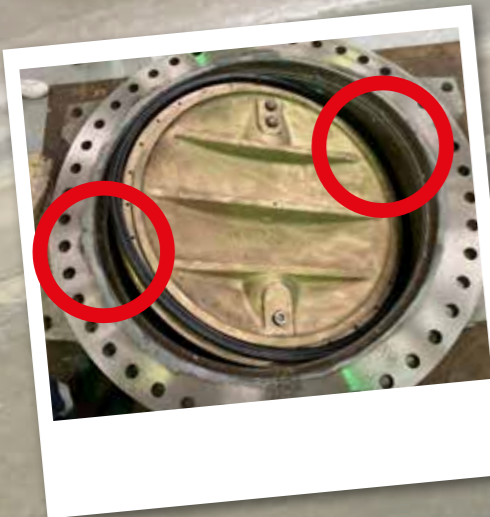
Next, a barrier layer made of WEICON HP was applied to the inner edge of the valve to prevent diffusing water.

Inner edge of the flange (gasket ring)

Thanks to the epoxy resin systems, the butterfly valve was successfully restored and a replacement could be prevented, which saved both time and money.

With WEICON HB 300 and WEICON HP, the required layers could be rebuilt.

The coating with WEICON Ceramic BL protects against external influences like water and suspended particles in the future.



Coating a butterfly valve with WEICON HB 300, WEICON HP and WEICON Ceramic BL

A well-known German producer of automatic coffee machines has been using our MS-Polymer WEICON Flex 310 M® Crystal for the production since the beginning of this year.



WEICON Surface Cleaner is suitable for a variety of materials. In this application, the spray is used to ideally prepare the plastic surface for the bonding process.



The challenge with this adhesive bond was the combination of stainless steel and SBR (styrene-butadiene rubber).

In addition, the adhesive bond should preferably be invisible for visual reasons.

That is why the transparent adhesive WEICON Flex 310 M® Crystal was used to bond the stainless steel covers to the front panel.



WEICON Flex 310 M® Crystal offers significant advantages for this application:

The elastic adhesive provides a flexible joint between components and is thus ideal to withstand daily use.



In addition, the MS-Polymer is perfectly suited for use in the food and beverage sector thanks to its ISEGA-certification.

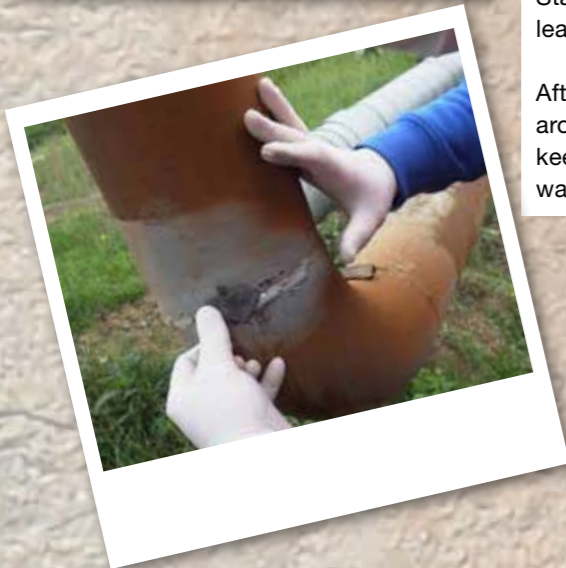


WEICON Flex 310 M® Crystal used for the production of automatic coffee machines

The petroleum pipe of one of our customers in Romania was leaking. A fast solution was needed without shutting down its operation for a long time. For fast repairs like this one, the WEICON Pipe Repair-Kit is perfect.



The surfaces of the leaking steel pipe were sanded first, then cleaned with WEICON Cleaner S.



Next, the WEICON Repair Stick Stainless Steel was applied to seal the leak.

After that, the Repair-Tape was wrapped around the pipe step by step, while keeping it moist by repeatedly applying water.



With the help of the WEICON Pipe Repair-Kit, a replacement of the pipe bend could be prevented, which saved costs.

The repair could be carried out during ongoing operation (the pipe was pressureless).

That way, the petroleum extraction could be continued right away.

The Pipe Repair-Kit offers a versatile solution for repairing various pipes and pipelines thanks to its high pressure resistance, resistance to many substances and easy handling.



Sealing a leak with WEICON Pipe Repair-Kit

In Genoa, Italy, the WEICON Easy-Mix RK-7000 Structural Acrylic Adhesive was used for the reconstruction of the well-known bridge.



The bonding components made of steel were pre-treated with WEICON Surface Cleaner first.



Due to its viscous texture, WEICON Easy-Mix RK-7000 is especially suited for application on vertical surfaces.



Thanks to the Easy-Mix dosing system, the impact-resistant adhesive, which cures with residual elasticity, could be applied easily.



The Easy-Mix dosing system offers high process safety especially in the tough environment of the construction site.

Thanks to the structural acrylic adhesive, an expensive and time-consuming welding process could be avoided. Moreover, the strong heat generation during welding would have additionally strained the material



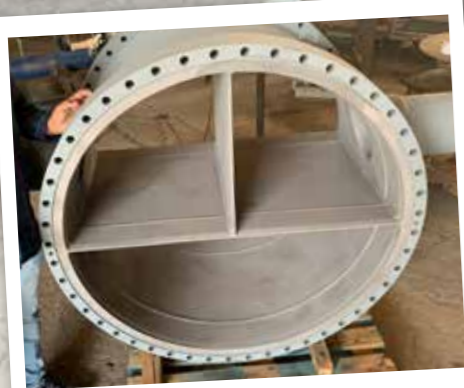
Attaching mounting aids with WEICON Easy-Mix RK-7000 Structural Acrylic Adhesive

On a heat exchanger in a fresh water treatment plant in Dubai, strong abrasion damages had formed. The heat exchanger cools down fresh water by using seawater.

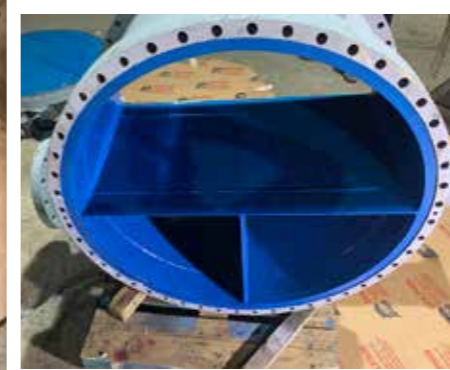


The surfaces were pre-treated by sandblasting to SA 2.5 and then by cleaning with WEICON Cleaner S.

The abrasion damages were repaired with WEICON HP.



Then, WEICON Ceramic BL was applied as additional wear protection.



As the unfiltered seawater gets into the heat exchanger, due to shells, sea sand and the seawater, a highly abrasive mixture forms. The coating with Ceramic BL protects the surface of the heat exchanger against this mixture.

WEICON HP serves as additional barrier layer as protection against extreme impacts, which can be caused by large stones.



Coating a heat exchanger with WEICON HP and WEICON Ceramic BL

The beloved vintage car of one of our German customers showed significant rust spots on the car body. Previously, our customer had treated these kinds of rust spots with an angle grinder. WEICON offered a faster and gentler solution.



The steel sheet was cleaned with WEICON Cleaner S first, then the flash rust was removed with WEICON Rust Loosener Fluid.

Then the surface was polished again.



Matford fender



Thanks to the use of WEICON Rust Loosener Fluid in combination with a sanding fleece, the rust could be gently removed from the steel sheet.

Due to its excellent capillary action, the Fluid can even reach extremely narrow spaces. The spray permanently protects against corrosion and oxidation.



Restoring a Matford vintage car



Removing flash rust with WEICON Rust Loosener Fluid

At the location of a producer of gas pressure regulators in Hamburg, WEICON products are used for the assembly and mounting of the components.



First, the screw connections of the gas pressure regulator that needed securing were cleaned with WEICON Surface Cleaner.

To secure the cutting ring screws, the high-temperature-resistant threadlocker WEICONLOCK AN 302-72 for threads and stud bolts was used.



As a separate protection against manipulation, the red WEICON Threadlocking Varnish was applied.

The solvent-based and fast-curing threadlocking, marking and sealing varnish provides good adhesion to nearly all materials.



Here, the resistance to gas and the excellent sealing effect at different pressures and temperatures provide a safe solution – especially when handling flammable gases.

Thanks to the Threadlocking Varnish, the gas pressure regulator is protected against manipulation and unauthorised loosening of the screws.

Sealing and securing gas pressure regulators with WEICONLOCK AN 302-72 and WEICON Threadlocking Varnish

In a quarry in Dubai - one of the largest quarries in the world – the support surface of a burst, 400 kg heavy press plate did not provide a 100% force closure anymore. Our solution: gap filling with WEICON HB 300. WEICON Products often provide the opportunity for long-term maintenance of components instead of their replacement.



Previously, the press plates of this machines had been exchanged every two months.
To prepare the gap filling, the press plate was cleaned with WEICON Cleaner S.



WEICON HB 300 is the ideal solution to reattach the press plate to the substrate and to minimise vibrations and a possible risk.
As a replacement of the press plate could be prevented, a cost saving of approx. 35,000 € could be achieved.



Then, WEICON HB 300 was applied generously to the surface and the press plate was reattached.



Disassembled press plate



Gap filling on a press plate with WEICON HB 300

A German recycling company was looking for the right adhesive to bond transponder chips. More and more waste bins are equipped with a chip, which stores the bin ID.

With a special reader, the code can be decoded and each bin can be associated with a building or property. Thanks to the new Ident system, processes can be organised more effectively and transparently, e.g. collection routes can be planned better or the last collection of the bin can be retraced.



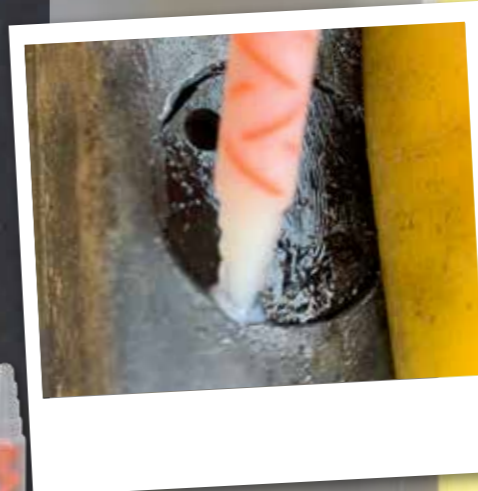
The plastic chip was cleaned with Cleaner Spray S before bonding.

WEICON Easy-Mix PE-PP 45 was used to bond the transponder chip into the chip nest.



WEICON Easy-Mix PE-PP 45 is especially suitable for the structural, high-strength bonding of low surface-energy plastics like PE, PP and TPE.

Pre-treatment with a primer was not necessary, as the "integrated primer" in the adhesive activates the surfaces and enables a high-strength bonding.



Adhesive bonding of ID chips with WEICON Easy-Mix PE-PP 45 Structural Acrylic Adhesive

In a hydroelectric power plant in Romania, corrosion damages needed to be repaired. Due to the water masses flowing through the plant, its components are constantly exposed to high stresses. Even though the plant is designed for the permanent contact with water, these components inevitably show corrosion damages over time. With the help of WEICON products, these damages can be repaired.



First, the surface was sanded and cleaned with WEICON Cleaner Spray S.

Then, WEICON Rust Converter was applied.



With the WEICON Rust Converter, which is based on epoxy resin, rust neutralisation and base coat could be achieved in just one step.



Thanks to WEICON Brushable Liquid Zinc Paint, the hydroelectric power plant is permanently protected against the formation of new rust.

The high amount of zinc in the coating ensures efficient cathodic corrosion protection.



Using WEICON Rust Converter and WEICON Brushable Liquid Zinc Paint in a hydroelectric power plant

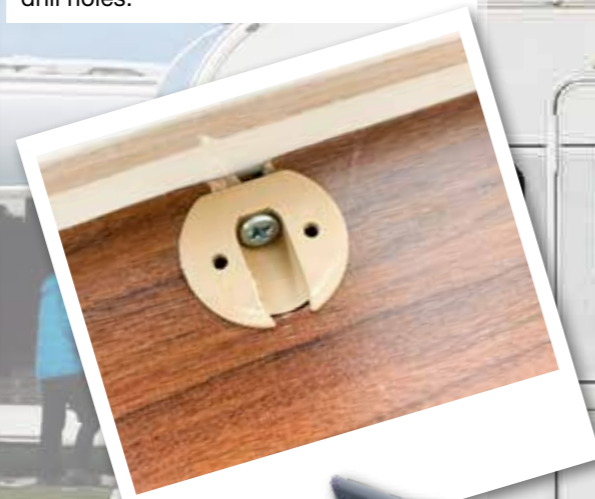
The kitchen drawer in a caravan had broken off while driving, as it wasn't secured with so-called push-locks. The solution: WEICON Easy-Mix S 50.



First, the wood of the kitchen drawer was cleaned with WEICON Cleaner Spray S.



In the next step, the plastic furniture connectors were bonded into the frayed drill holes.



Next, the screw holes were filled with WEICON Easy-Mix S 50.

Then the screws could be inserted and tightened.



Thanks to the epoxy adhesive, the drawer could be repaired fast and easily.



Repair of a broken drawer front in a caravan with WEICON Easy-Mix S 50

Do you need help with finding the right adhesive?
 Or do you need support for a specific application?
 We are happy to help! Feel free to send us your
 questions, photos or videos – we are now on
 WhatsApp, too!

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We look forward to your applications in **2021!**

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