

inside acat

■ Newspaper for customers, friends and employees

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PET RECYCLING WITH ACAT

Saves resources, protects the environment

POWER FOR ORGANIC WASTE

Screw press in the composting process

AN EXAMPLE OF CIRCULAR ECONOMY

Renewable raw materials for phosphate precipitation



Applied Chemicals International Group
Technical Service is our Success

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The starting point for plastics is crude oil and its availability is limited. The alternative: PET recycling with ACAT – saves resources and protects the environment.



Power for the organic waste: the ACAT screw press AS 800 S with 55 kW and 60,512 Nm used in a wet fermentation plant for organic waste in Finland.



An example of circular economy: ACAT offers regenerative raw materials for phosphate precipitation.

PHOTO: ALAMY(1)

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PHOTO: CLEMENS SCHILDBERGER

Manfred Zabl

Dear readers,

The 28th edition of our company magazine is to inform you again about the most important news and developments in our company and I hope that we will succeed to a large extent. Hardly a week goes by without innovations, changes or improvements, and the speed of change is increasing rapidly. Meanwhile, the global economy has experienced a marked recovery and now we are once again at the same level as about 10 years ago. We hope and we wish that we have learned from the painful experiences of the past decade to avert similar crises in the future. Today, economists are convinced that something similar will not happen again - but maybe something else? Hopefully not so soon, but certainly someday in the distant future.

In principle, the pursuit of profit is absolutely legitimate and necessary, but it is also necessary that the currently prevailing economic system of the capitalist market economy is socially and economically sustainable. Each privately economically run enterprise has to make a profit in order to establish itself in the market permanently. However, the rules of fair competition should be observed so that all competitors have the same chance of economic success. It is to be hoped that after a strong growth spurt the global economy will recover its economic balance, and that in the future professionalism and reason will again determine the economic life.

This year, ACAT is in its 25th year of existence. We are a partner for industry and municipalities as well as a supplier of speciality chemicals and machine technology and we have a high level of application know-how. However, our company history goes back much further, to the year 1947, two years after the end of World War II. Throughout the years our traditional company was able to defy the storms of time. Admittedly, this was not always easy, especially in storms with high wind speeds. But it is just like on a ship: it depends on the crew whether the sails are set correctly or not - and such a great team as the team of our company cannot be found easily! I don't want to anticipate too much yet, because the next issue of "inside acat"; will focus on our traditional family business on the occasion of the anniversary. But it is certainly not wrong for me to already express great praise and thanks to our employees for their effort, their competence and their sustained enthusiasm making many things possible although they seemed to be impossible at first. You are the heart, the brain and the true value of our group!

With this in mind I wish all our readers an interesting reading and a nice sunny summer!

Manfred Zabl
CEO Applied Chemicals International Group



Central topics in the modernization of the wastewater treatment plant Rottenmann are the new sludge dewatering with the ACAT screw press „AS 505 L“ and the modern ACAT polymer dissolving station „DMU 800“. During a visit, the invited guests from ten communities were able to get an idea of the extensive conversion of the wastewater treatment plant.

ROTTENMANN – The Waste Water Association Paltental and ACAT called and numerous interested parties came. The participation of 20 guests from ten communities shows how important the topic of „modern sludge dewatering“ is. On 27 March 2019 the plant manager Manfred Hollerer and ACAT presented together the reconstruction measures of the wastewater treatment plant Rottenmann. Currently the sewage treatment plant is being brought up to the state-of-the-



art and a central topic is the new sludge dewatering with the ACAT screw press „AS 505 L“. It is the latest generation of ACAT screw presses and it will replace an old belt press. Of course, part of the conversion is also the modern ACAT polymer dissolution station „DMU 800“.

During the visit of the sewage treatment plant, the invited guests were able to get an idea of the extensive reconstruction of the plant. The detailed technical explanations by the ACAT employee Ing. Christian Kozanda were met with great interest and after the subsequent Q & A everyone was convinced: The new system leaves nothing to be desired with its perfect running in operation. In addition, the ACAT employees Johannes Kaißl and Alfred Baier contributed their knowledge of the ACAT precipitants and flocculants. The guests were also able to interview the new operators to receive information first hand. The successful presentation ended with a lunch together at an inn. Would you like to know more about ACAT screw presses?

Contact us at www.acat.com/en/contact

Text: Johannes Kaißl

ACAT AT THE HUNGAROCOAT

BUDAPEST – The International Trade Fair for the Paint Industry, Hungarocoat, took place from 27 to 28 November 2018 at the ELTE Convention Center in Budapest. The fair and conference is organized by the Research Institute for Paint Industry of the Hungarian Chemical Society. Around 70 exhibitors and represented companies were present.

Once again, the ACAT Division chemtech was present as an exhibitor. The fair was very well attended and we were not only able to maintain contacts with existing customers, but we also made new contacts. There were also visitors from Romania, which underlines the growth of the circle of interested people of this event.

Based on the positive experience with this conference, we plan to be represented also at the next conference in 2020 with our own booth.

Text: Alexander Frank



PHOTOS: GABI HORAK (2)

EUROPEAN COATINGS SHOW: ACAT Was There Again



NUREMBERG – The European Coatings Show Nuremberg is a leading trade fair for the international paint and coating industry. Exhibitors from more than 40 countries provide information about the production of paints, coatings, sealants, construction chemicals and adhesives and present their products and services. The range includes, among others, coatings, printing inks and adhesives, construction chemicals, laboratory and production technology as well as testing, measuring and application technology. During the congress of the

European Coatings Show Nuremberg, numerous topical speakers from all over the world reflect topical topics of the industry in thematically structured technical meetings.

This year's fair took place in March, and in fact, it was delivered what the official announcement promised. An ACAT team was also on site again.

After three days of lively trade fair activity and a top-class exchange of knowledge, the European Coatings Show and Congress ended very successfully. ACAT was able to establish a large number of customer and supplier contacts.

With 1,135 exhibitors in nine trade fair halls and around 30,000 trade visitors from more than 110 nations, the European Coatings Show once again asserts itself as the world's largest and most important trade fair for the production of high-quality coatings, paints, sealants, construction chemicals and adhesives. In 2019, the show and congress clearly demonstrated that the trend towards sustainability is a key driver for innovation for the paint and coating industry. The next European Coatings Show will take place from 23 to 25 March 2021.

Text: Alexander Frank

PET RECYCLING WITH ACAT: Saves Resources, Protects The Environment



PHOTO: HANS BAXMEIER/PIXABAYPH

The word „Plastic“ - is colloquially synonymous for all kinds of plastics. It describes a substance that does not occur in nature, but must be produced. The starting point of the plastics production is crude oil - a resource not available indefinitely. And the final product poses more and difficulties with disposal problems. Two reasons why one should handle it with care and caution.

AUTHOR:**ERICH SAILER**

Plastics are produced by polymerization. Polymers: (poly = many, meros = part). Nomen est omen. In fact, carbon compounds are extracted from the raw material crude oil. In addition to these carbons, the plastic also contains the elements hydrogen, oxygen, nitrogen and

sulphur. By adding plasticizers, stabilizers, reinforcing agents, fire retardants and dyes, the properties of the respective plastic can be individually influenced. Thus, many different plastics can be produced with a wide variety of properties. Plastics are mainly distinguished according to the following properties:

THERMOPLASTICS:

Thermoplastics consist of long macromolecules making it possible to form these plastics under the influence

of heat. Thermoplastics can be processed in different ways; for example they can be melted, injection moulded, foamed or glued. Primarily we know the injection moulding, in which plastic is heated and pressed into a mould under great pressure. The starting material is granulated thermoplastics. In this way, for example, the PET bottles are produced, we use almost daily.

THERMOSETS:

Unlike thermoplastics thermosets are produced by the hardening of powdery basic substances. Under high pressure and high temperature the basic substance is pressed into a mold to link the macromolecules together. Thermosets are used, for example, in mattresses, shoe soles or protective helmets.

ELASTOMERS:

Elastomers are wide-meshed cross-linked polymers. The main characteristic of these plastics is their enormous extensibility. Elastomers are able to return to their original shape even after extreme elongation. We know elastomers as rubber bands or sterile disposable gloves.



The dirt particles are separated with FlocStar® products in a flotation and various other products are used in the cooling and in the boiler area.

One problem of all types of plastic is their disposal. We all know the frightening images of animals trapped in plastic waste and the reports of huge floating „plastic islands“ in the oceans. According to current studies, around 50 billion plastic parts are floating in the oceans of our planet.

These parts collect in the so-called current vortices of the oceans when they are carried along by the flow. Today there are five of these garbage collections in the oceans, two in the Pacific, two in the Atlantic and one in the Indian Ocean. The area of one of these „plastic islands“ is estimated to be 16 times the size of Austria. The surprising thing is that these huge „islands“ represent only one percent of the total plastic waste. The remaining 99 percent of the plastic in the sea is not visible on the surface.

WHERE IS THE REST TO FIND?

The answer is micro plastics! The majority of the packaging materials and other plastic products are not found in their original form in the oceans, but they appear much more inconspicuous: as micro plastics. This term is used to describe plastic pieces with a size of up to five millimetres, with the smallest particles being only a few micrometres in size and thus they are invisible to the naked eye. In this form, plastic can only be detected under the microscope.

In the form of micro plastics the plastic waste is less visible in the sea, however it is no less problematic. On the contrary! This makes it even easier for the small plastic particles to find their way into the ecosystem. For example, fish and other marine animals also absorb micro plastics in their natural environment in addition to their food. This can become particularly problematic because the micro plastics in water attract chemicals, bind them chemically and this way it can get toxic characteristics.

Primary micro plastics are plastics that are already small in their original form. This includes, for example, tiny plastic beads added to cosmetics to enhance the cleaning effect. These products and the containing micro plastics find their way with the waste water into the sewage system. However, these particles are so small that to the present day it has not been possible to develop suitable filters for sewage treatment plants to remove them from wastewater. Another type of primary micro plastics are small plastic pellets used to make other plastic products. They too can get into the rivers and finally the oceans via the drains of factories. The effects are devastating: On some beaches of the Canary Islands in one kilogram of sand up to 100 grams of micro plastics can be detected and plastic pellets account for a large proportion of the total quantity.

The secondary micro plastics are plastic particles having detached themselves from larger plastic parts, such as electronic waste or the like. Therefore, it is particularly important to be careful when using plastics. It is recommended to use recirculating plastic such as

The caustic solution is neutralized with AluStar® products to clean the waste water.





The PET bottles and the containers are shredded. In several further steps the labels and other impurities are separated.

PET if possible.

PET – RECYCLE PLASTICS!

For the production of PET polyethylene terephthalate (PET) no plasticizers and NO bisphenol A is used, as it is often wrongly claimed. In the recycling process PET must first be separated from other plastics such as PVC, HDPE bottles and impurities such as aluminum etc. Then the PET bottles and the containers are shredded. In several further steps the labels and other impurities are separated.

The PET flakes enter the mixing screw, where they are mixed with 50% caustic soda (sodium hydroxide). In the kiln the flake-lye mixture is heated to temperatures from 197 to 207 degrees Celsius. The hot caustic solves a thin PET layer from the surface of the flakes. In this way, the impurities are removed. The PET flakes are

washed with water and then dried. Finally, a laser sorter measures the structure of the flakes and ejects any foreign material particles (such as silicon). At the end of the recycling process, the flakes are of such a high quality that they are suitable for food packaging.

ENVIRONMENTALLY FRIENDLY CLEANING OF WASTE WATER

To clean the waste water the caustic solution is neutralized with AluStar® products. The dirt particles are separated with FlocStar® products and various other products are used in the cooling and in the boiler area. Thus, ACAT can make a significant contribution to the sustainable use of resources as well as to the protection of our environment, both in the reuse of PET products and in the water cycle.



HIGH QUALITY LIQUID-DISPERSION-POLYMERS



The tried and trusted is rediscovered and optimized for today's needs

AUTHOR:

ERICH SAILER

Numerous laboratory tests in Europe have shown that there is an enormous demand for high-quality liquid dispersion polymers. However, most producers of these products ceased to manufacture this type of polymer or they can only offer low concentration products. After a long period of development work, ACAT has succeeded in producing a new product series offering dispersion products for the highest quality standards.

The new 14xx series includes polymers for applications demanding the fastest dewatering properties, as well as for centrifuges and thickening machines. In contrast to conventional emulsion products they do not lose their activity even if they freeze and thaw again. Their storage stability is up to twelve months. Moreover, our polymers do not have to be stirred, because there is no settling in the merchandise.

For more information please contact our field service.

AN EXAMPLE OF CIRCULAR ECONOMY



AUTHOR:

MAURO BIGHETTI

“A circular economy is an economic system aimed at minimizing waste and making the most of resources. This regenerative approach is in contrast to the traditional linear economy, which has a ‘take, make, dispose’ model of production “. Wikipedia

Our responsibility toward the environment is an important pillar of ACAT’s mission.

ACAT is constantly making efforts to identify the direct and indirect impacts of its customers business on the environment to help minimize them.

ACAT is actively working on circular economy by promoting use of low-impact and regenerative materials.

Our team is working in the steel production field to contribute towards it’s re-use of acidic wastes.

In particular, ACAT is taking care, in collaboration with 2 multinational companies, of reuse of Spent Pickling Liquor (SPL) in two big groups of steel factories.



PHOTO: DAVID MARK/PIXABAY

Steel molten hot

PICKLING PROCESS

The purpose of pickling is to achieve a perfectly and chemically clean metallic surface of the steel to facilitate the metallurgical reaction that generate final desired product.

During the hot rolling of steel, oxygen from the atmosphere reacts with the surface iron to form a scale of oxides. This scale needs to be removed before steel is further processed in cold rolling mill.

Remove of scale is important for the following reasons:

- A dirty surface will cause the rusting of the strip.
- Scale accelerate corrosion.
- During coating of the strip, scale would causes poor to total adhesion failure.
- Scale removal is essential for cold rolling, annealing and coating operations.

SCALE REMOVAL

The most used method of scale removal for hot rolled strip is by pickling.

The pickling of hot rolled strips is one of the finishing steps of production process by which scale is removed from the surface of steel by dissolution in an acid before hot strip is cooled down and rolled.

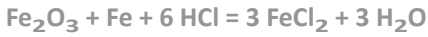
Pickling is a chemical process and it could be done either with Sulphuric Acid (H_2SO_4) or Hydrochloric Acid (HCl).

Pickling process with HCl acid started in 1964 and gradually main pickling installations have adopted HCl instead of H_2SO_4 .

Hydrochloric acid is now the primary cleaning agent for the process of steel production.

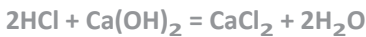
HCl solution dissolve the scale from the surface of the hot rolled strip without any significant attack on the steel strip.

In this process the following chemical reactions takes place :

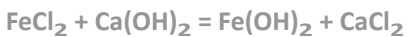


The exhausted acid solution (SPL) can cause severe environmental damage if discharged without an appropriate treatment.

In the small and medium-sized enterprises, the traditional treatment of SPL is an alkali neutralization. Neutralize excess of HCL with Lime.



This neutralize the acid but not solving the problem, as simultaneously a reaction converts the ferrous chloride (FeCl_2) to a solid ferrous hydroxide ($\text{Fe}(\text{OH})_2$).



With further flocculation, sedimentation, filtration, and sludge dewatering the treatment effect of this process is in general acceptable, but needs a large amount of chemicals, with production of a lot of sludge to be disposed.

Alternatively, concentrate solutions of ferrous chloride can be used to produce Ferric Chloride (FeCl_3), or used as coagulant in wastewater treatment plants in particular for precipitation of phosphorus.

The action of bivalent or trivalent iron salts converts phosphorus to a solid, insoluble precipitate that can be separate in the sedimentation tank and may be land-filled after separation or used for phosphorus recovery process.

FERRIC CHLORIDE

Ferric Chloride (FeCl_3) is largely used, as coagulant in sewage treatment and drinking water production. Ferric chloride is used due to its high efficiency, effectiveness in clarification and very good turbidity removal.

Ferric Chloride is usually produced and sold as a concentrated solution with a concentration around of 40% by weight.

Steel Coils after pickling process

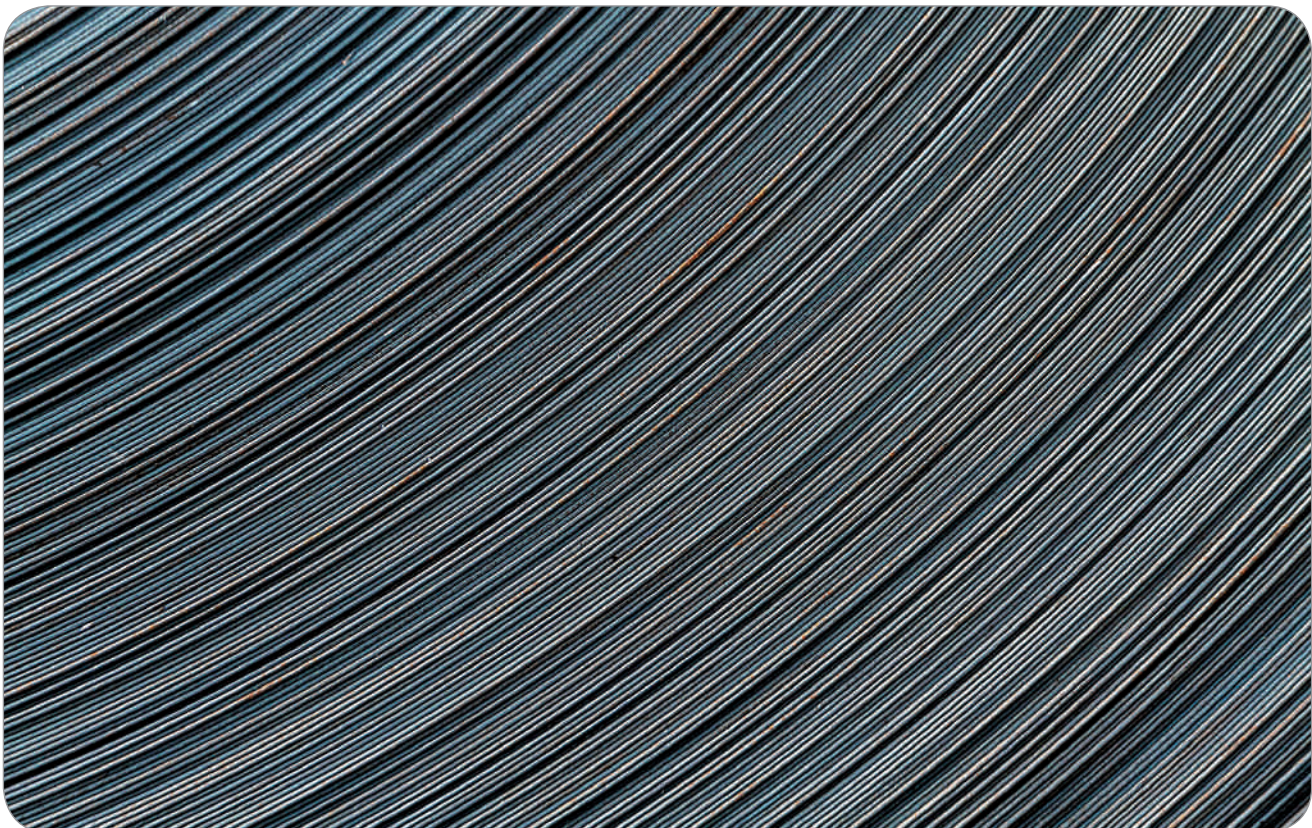


PHOTO: TONGPRADIT CHAROENPHON/PIXABAY



PHOTO: AREK SOCHA/PIXABAY

Ferrous Chloride (SPL)

PRODUCTION OF FERRIC CHLORIDE

Ferrous chloride can be converted to ferric chloride by chlorination:



Pickling solutions are an ideal iron salt source for above reaction, as these solutions are composed of ferrous chloride and diluted hydrochloric acid.

SPL (FeCl_2) is converted in ferric chloride normally using chlorine gas.

FROM A WASTE TO A RESOURCE

Production of ferrous metal products consumes high quantities of limited natural resources (iron ores) and is very energy consuming. However, ferrous metals are 100% recyclable and can be recycled unlimited amounts of times.

Re-Use of SPL (FeCl_2) coming from steel production process saves not only natural resources, but also reduce substantially impact on environment.

PLANT CONSTRUCTION AS ITS BEST: Our „Screw“ Transports Organic Waste

Installation of an ACAT screw press AS 800 S with 55kW and 60.512Nm at a wet fermentation plant for organic waste in Finland.

AUTHOR: CHRISTIAN KOZANDA

The order included the complete supply and installation of all necessary plant components.

This means that our scope of supply included not only the ACAT screw press type AS 800 S for a throughput capacity of 12 m³ / h with up to 14% DS and max. 60 ° C, but also a multi-storey platform construction, an ACAT double-shaft mixer to mix the polymer solution into the 14% sludge, the thick sludge discharge conveyor, the filtrate water tank, the pumps, all piping, the ex-exhaust fan, the measuring and control technology as well as the electrical switching and control system.

We also supplied the ACAT poly-

mer system for up to 54 kg/h powder polymer or up to 140 l/h liquid polymer including the crane system for Big Bag manipulation, the blower for powder polymer transport, the preparation tank with a capacity of 7.5 m³, the storage tank with a capacity of 9.7 m³ and a water tank with a capacity of 7.5 m³.

In the ninth and tenth week of the calendar there were adverse weather conditions in Finland with outside temperatures up to -15 ° C. Despite the adverse circumstances we were able to install the system within only 8 days. The commissioning of the entire sludge dewatering plant took place in the following weeks.

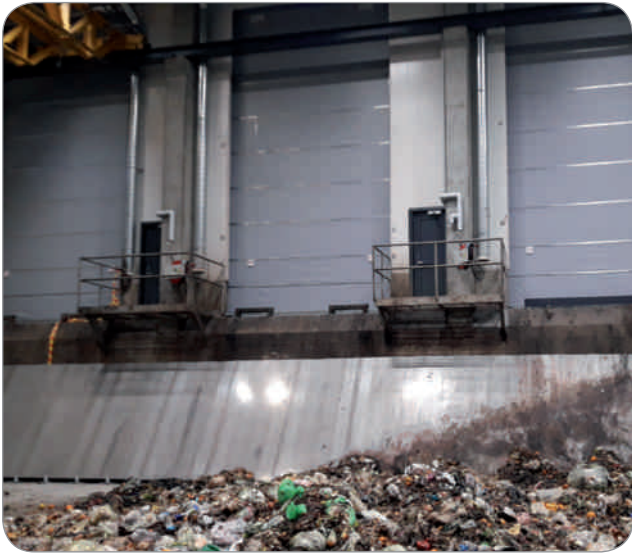
After we had successfully commissioned our new ACAT screw press type AS 800 S at the Salzburger Abfallbeseitigung GmbH in 2018, we received an order from the planning office RAB GmbH in Salzburg for the supply of a new sludge dewatering plant for the wet bio-waste treatment at Mustankorkea Oy in Finland at the end of 2018.



Dreamlike crystal clear Finnish nights



Start of installation despite adverse conditions.



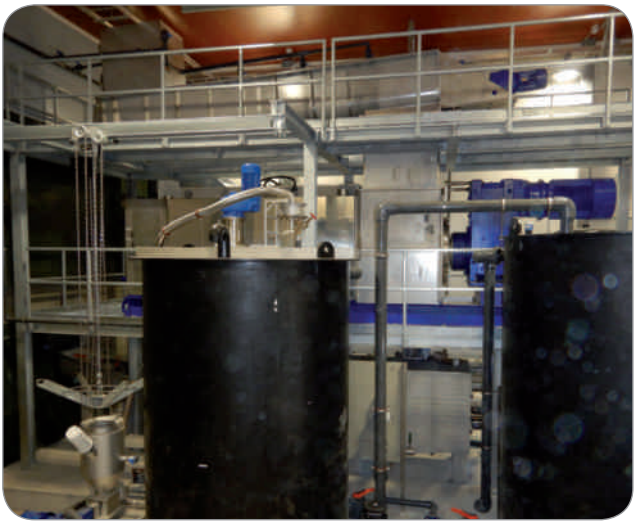
Bio-waste receiving bunker - product before grinding and before the addition of sewage sludge.



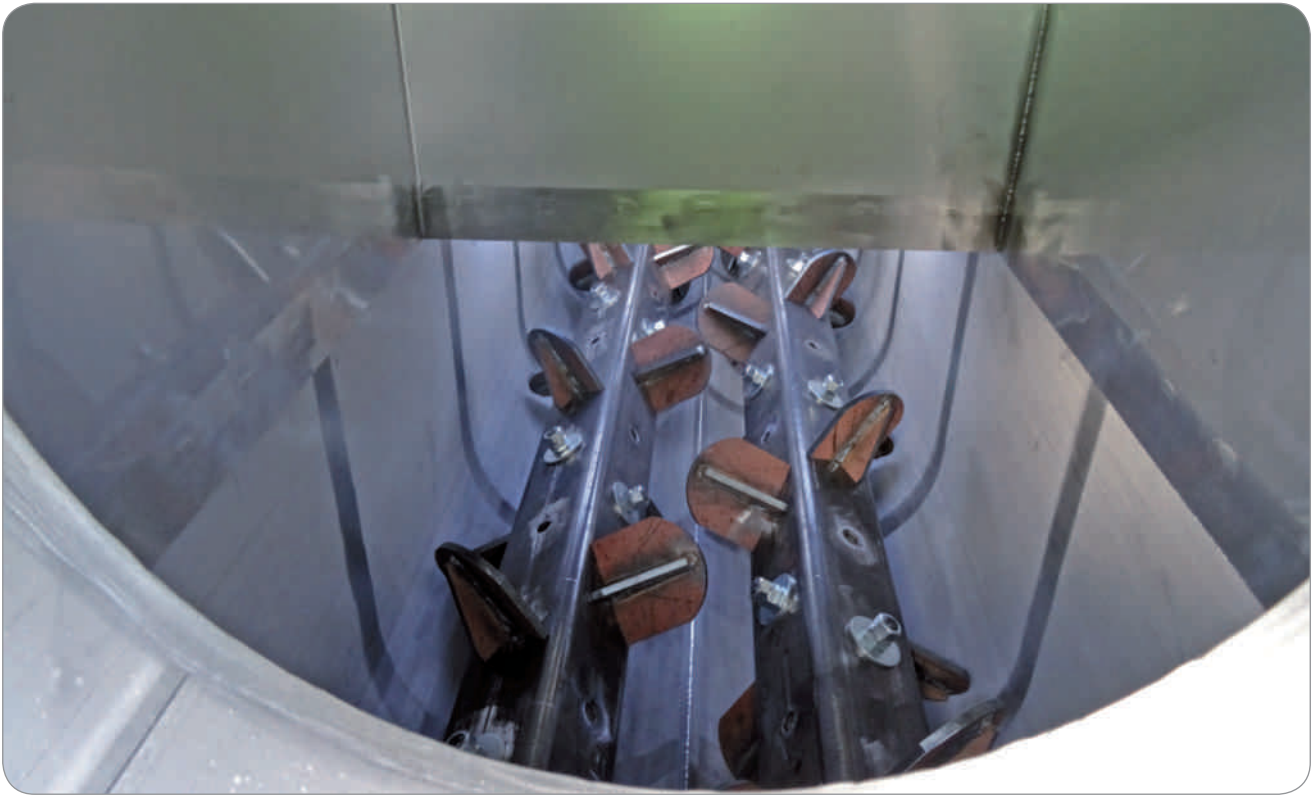
Installation of the screw press – millimeter work.



Double shaft mixer with several injection points



Polymer processing in the foreground with machine technology built up behind it



Double shaft mixer from the inside with Hardox paddle.



55 kW ready to go!

NEW DISPERSANTS AT THE EUROPEAN COATINGS SHOW

Also at this year's ECS, our supplier, the Münzing Chemie GmbH, presented exciting product innovations.



AUTHOR:

ALEXANDER FRANK

In an increasingly colourful world, colour pastes are an increasingly important ingredient for many applications. In order to correctly prepare the pigments, however, the appropriate dispersing agent is required. Münzing has developed three further products and expanded its portfolio in addition to the already existing broad range. Our field staff will be happy to advise you on the optimum selection of product and to support you in your laboratory work.

EDAPLAN® 916

EDAPLAN® 916 is a solvent-free dispersing and wet-

ting agent with an active ingredient content of 100 percent. It has been developed to disperse inorganic pigments for the universal use in both, water and solvent-based systems, including high-solids. It is ideal for the production of coatings as well as for the production of resin-free pigment concentrates.

EDAPLAN® 916 stabilizes dispersed pigments and reduces mill-base viscosity. Gloss and colour development are improved and re-flocculation respectively rub out is prevented. Using EDAPLAN® 916, there is no need to adjust the pH value of the grind/pigment concentrate. The product is free of organic solvents.

- Mixture of fatty acid derivatives, amphoteric
- 100% active content
- Designed for water based colour pastes for use in water and solvent based systems

- High efficiency with excellent pigment stabilization
- Recommended for inorganic pigments and fillers

EDAPLAN® 917

Properties / Applications: EDAPLAN® 917 is a solvent-containing dispersing and wetting agent with an active ingredient content of 35 percent. It has been developed to disperse inorganic pigments for universal use in both, water and solvent based systems, including high-solids. It is ideal for the manufacturing of coatings as well as for the manufacturing of resin free pigment concentrates. EDAPLAN® 917 stabilizes dispersed pigments and reduces mill-base viscosity. Gloss and colour development are improved and re-flocculation respectively rub-out is prevented. Using EDAPLAN® 917 there is no need to adjust the pH value of the grind/pigment concentrate. The product is VOC-free.

- Mixture of fatty acid derivatives, amphoteric
- 35% active in TMP
- Designed for water based colour pastes for use in water and solvent based systems
- High efficiency with excellent pigment stabilization
- Recommended for inorganic pigments and fillers

EDAPLAN® 918

Properties / Applications: EDAPLAN® 918 is a solvent-free dispersing and wetting agent with an active content of 100 %. It has been developed to disperse organic pigments, carbon blacks and inorganic pigments for universal use in both, water and solvent based systems, including high solids. It is ideal for the manufacturing of coatings as well as for the manufacturing of resin free pigment concentrates. EDAPLAN® 918 stabilizes dispersed pigments and reduces mill-base viscosity. Gloss and colour development are improved and re-flocculation respectively rub Out is prevented. The product is free of organic solvents.

- High molecular block-copolymer with pigment affinity groups, non-ionic
- 100% active content
- Designed for water based colour pastes for the use in both water and solvent based systems
- Good compatibility in various applications such as solvent based systems, high solids and 100% UV compatibility
- High efficiency with excellent pigment stabilization
- Strong viscosity reduction in the low-shear range
- Recommended for organic pigments, carbon blacks and inorganic pigments.

Source: Münzing Chemie GmbH

Meeting point Nuremberg: Dr. Büthe, MÜNZING, Manfred Zabl and Alex Frank, ACAT (from left to right)



SUSI IS COOKING TCM According To The 5 Elements Of The Traditional Chinese Medicine



PHOTOS: CHRISTINE NESTLER-KENZIAN (2), ZVG (1)

Slender and - despite chronic disease – she is healthy! Susanne Durst is the perfect example of: you are what you eat! As a trained TCM nutritionist, our Susi likes to pass on her knowledge about the doctrine of life and food according to the five elements.

AUTHOR:

SUSANNE DURST

In 1988 after graduating from high school, I fell ill with Crohn's disease (an inflammatory bowel disease) and so my interest in a healthy diet was aroused. When I was 35 years old, I decided to do the training for "nutria counselling according to the five elements" at the Vien-

na School for TCM. On the one hand for myself to learn more about the thousands of years old traditional Chinese dietetics and on the other hand to pass on this knowledge and my own experiences to those people, who have to go through a similar suffering like me, or who simply want to change their diet to stay healthy for as long as possible.

I eat a healthy diet following the principles of TCM, accompanying the medical treatment. My own positive experiences led me to write my diploma thesis in 2012 on the topic: nutrition according to TCM for irritable bowel disease.



Having developed a passion for cooking in recent years, Susanne Durst spoils the ACAT staff every Thursday at lunchtime with a vegetarian meal.

This was followed by several further training courses, such as the training as a „cooking course instructor“ with Dr. Ing. Claudia Nichterl and the 1.5-year course „TCM Practitioner“ with Dr. Ing. Georg Weidinger, where I was allowed to immerse myself in the depths of Chinese herbal and meridian teachings.

Since 2015 I have been a board member and the chairwoman of the association „Society for nutrition according to the 5 elements“ (www.tcm-ernaehrung.at), and I help to organize the nutrition days for the annual TCM Congress in Graz. At this point, I would like to draw your attention to the free newsletter that can be requested via this website. The newsletter is sent by e-mail once a month and it contains a profile of a seasonal food from the Western and Eastern points of view and a matching TCM recipe.

WHAT DOES COOKING ACCORDING TO THE 5 ELEMENTS ACTUALLY MEAN?

The five-element system is based on the five phases of transformation of nature or of the course of life. These five elements - wood, fire, earth, metal and water - are assigned to body organs, seasons, colours, emotions and other manifestations.

The focus is primarily on the energetic effect of a food on the body in terms of taste and thermal. For example, the sweet taste migrates to spleen and stomach and therefore it supports and strengthens these organs in their task of breaking down and transforming the food. The respective thermal indicates whether the food cools or refreshes our body, whether it is neutral, warms or heats it.



PHOTOS: PRIVATE

With her regular cooking workshops at the association „Menschengarten“ in Mauerbach, Susanne Durst wants to convey in addition to a healthy nutrition also the joy of cooking.

Therefore, when preparing a dish, it is important to make sure that it contains the flavours of all five elements. The main taste should be the sweet taste of the element earth. All other tastes should be rounded off with herbs and spices. Thus all organs are energetically strengthened.

THE THEORY OF YIN AND YANG

The theory of Yin and Yang plays an important role. It's about polar forces complementing each other, flowing into each other and supporting each other. All phenomena of this world can be divided into Yin and Yang. For example, there is no day without night, no activity without rest, no beginning without an end. That means transferred to our body that the body fluids and the material parts (tissues, bones, etc.) are YIN and the immaterial parts like energy and mind are YANG. If Yin and Yang are in balance, the human being will be healthy according to the view of TCM.

For more information on this topic I recommend the book "Die Heilung der Mitte"; by Mr. Dr. Georg Weidinger, because he describes the TCM, its five elements and how they affect and influence our body in a very understandable and humorous way, suitable even for laymen.

Having developed a passion for cooking in recent years, I spoil the ACAT staff every Thursday at lunchtime with

a vegetarian meal consisting mainly of vegetables, cereals and legumes.

With my regular cooking workshops at the association „Menschengarten“ in Mauerbach, I want to convey the joy of cooking as well as healthy nutrition. During the waiting times, I also give one or the other tip for a diet according to the TCM guidelines.

WHEN DOES A TCM NUTRITION CONSULTATION MAKE SENSE?

Nutrition counseling helps people with indispositions as well as healthy people, who wish to maintain their state of health preventively. However, it is particularly recommended for the following problems:

- Digestive disorders and food intolerances
- Concentration disorders, fatigue and exhaustion
- Weight problems
- Sleep disorders
- Headache / Migraine
- Menopausal problems
- Skin problems
- Pregnancy and others

More information about nutritional consultation and many other interesting information are available on the website www.susi-kocht-tcm.at



WASP VENOM ALLERGY: The Safe Protection Against The Serious Stings

Eating in the garden, picnicking in the park, barbecuing with friends - these pleasures of the warm season can be marred by one thing: wasps. For more than 200,000 Austrians, their presence is not just annoying, it is a real danger. They are allergic to their stings. A wasp venom allergy is the most common cause of a severe, sometimes life-threatening allergic reaction in adults. As dangerous as it is, it can be diagnosed with a targeted diagnosis and treated with an insect venom immunotherapy. The success rate is almost 100 percent. No other medical therapy can show such a good efficacy, experts explained.



PHOTO: SHUTTERSTOCK_GUDRUN MUEN

AUTHOR:

ELISABETH LEEB

www.initiative-insektengift.at

Every year, the overwintering wasp queens re-establish their colonies. Therefore, they need a little longer "to get into gear" than the honey bees. With the bees the entire population hibernates, and if they have survived the cold season well, they will fly immediately to collect pollen dust. This in turn brings benefits for the wasps to thrive, because the bees feed the wasps by pollinating the plants. „Wasps are particularly aggressive in nest proximity and they are not afraid of people. Although they are vegetarians they collect meat for their larvae, that is why they also visit our well-laid tables and they

can become quite intrusive, „explains the biologist Univ.-Doz. Dr. Wolfgang Hemmer from the Floridsdorf Allergy Center (FAZ).“With the growing wasp population in the summer, the risk of being stung increases.“ Therefore, allergy sufferers should be careful.

200.000 SEVERE WASP VENOM ALLERGY SUFFERERS ONLY IN AUSTRIA

About each 30th Austrian (3.3%) is severely allergic to the bite of a bee or a wasp. Most of them (about 75%) react to wasp bites - that's about 200,000 people in Austria. A single sting is enough to endanger their lives within a few minutes. „After the sting, the entire limb

can swell. However, this skin rash is not a reason for panic, „reassures Priv.-Doz. GDR. Wolfram Hötzenecker, Chairman of the Department of Dermatology and Venereology at the Kepler University Hospital in Linz, which recently had opened a new interdisciplinary allergy center. „ It only becomes threatening when the allergic reaction affects the entire body and when there are additional swellings in the face or neck, tingling on the palms of the hands and feet, nausea, shortness of breath, dizziness or tachycardia.”

The extent of the allergic reaction is unpredictable and also the course is incalculable. Therefore Allergy sufferers have to carry their emergency medication always with them, above all, an adrenaline auto injector that quickly stabilizes the circulation. **IMPORTANT: The handling of the auto-injector must be practiced regularly so that valuable time is not lost in the case of emergency.**

PRECISE DIAGNOSIS WITH BLOOD TESTS

If an allergy is suspected, an allergy test should be carried out about one month after the sting reaction. The right persons to contact are established specialists in allergy (dermatologist, paediatrician, ENT medicine, and pulmonary specialist), allergy centres or outpatient departments in hospitals or outpatient clinics. The diagnosis consists of a detailed doctor-patient consultation as well as a skin and blood test. Hötzenecker: “In recent years, diagnostics has been improved considerably. With the so-called component diagnostics it is possible to specifically find out which protein components of the respective poison are responsible for the allergy. Meanwhile with the poison of the wasp the accuracy is almost 100 percent.”

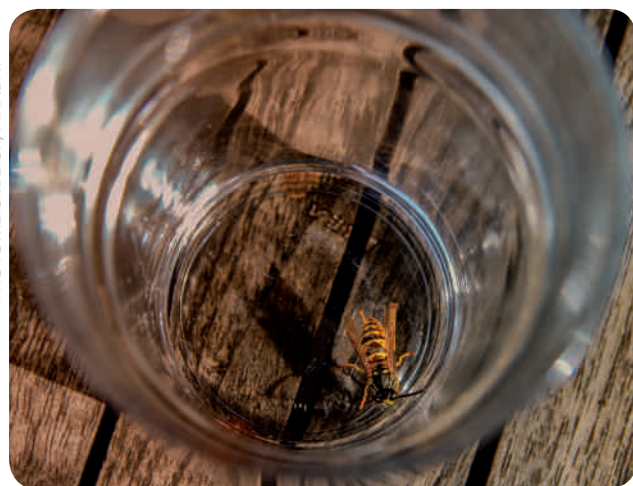


PHOTO: KLIICKBLICK/PIXABAY

Caution when drinking: Cover also glasses!

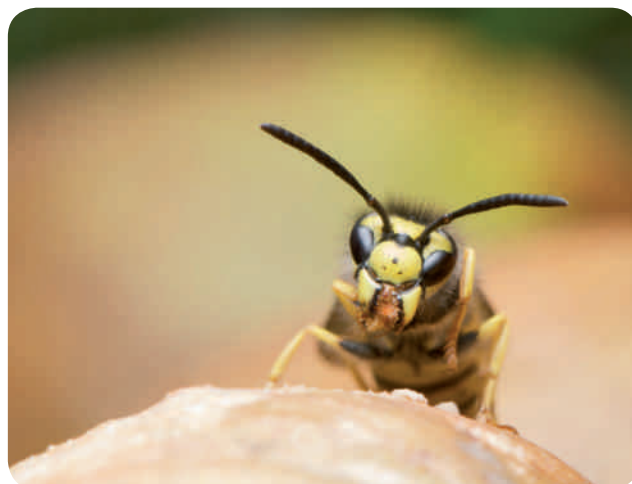


PHOTO: SSKZEZE/PIXABAY

TIPS FOR ALLERGY SUFFERERS TO AVOID INSECT BITES

- No hectic movements when bees or wasps are nearby. Take special care when playing and exercising outdoors.
- When a bee or wasp lands: Shake off or strip, do not chip!
- Keep away from flowers, overripe fruits (plums, apples) and fallen fruit.
- Be careful when gardening, working outside, picking fruit and flowers. If possible, wear head protection, long-sleeved clothing, long trousers, closed shoes, gloves, but do not wear loose-fitting clothing; because it may catch the insects
- Never walk barefoot in the grass, bees may collect honey.
- Avoid picnics if possible - sweet food and drinks attract insects.
- Wasps love litter bins. Keep garbage cans always closed and clean.
- Wash hands and wipe mouth after eating.
- Never drink directly from a bottle or can. It is best to use a drinking straw.
- Do not use highly scented perfumes, hair sprays or perfumed cosmetics.
- Keep house and car windows closed during the day and/or install insect screens
- Avoid bee and wasp nests (hollow trunks, stumps, attics, sheds, hedges) and their catchment areas.
- For wasp nests on and in the house (e. g. attics, roller shutter boxes) or in the garden: consult experts and have the nests removed (fire brigade).
- Avoid places where animals are fed. Scattered food remains attract wasps in particular.
- Take especially care on hot and sultry days, then the wasps are particularly aggressive.

THE TRANSFORMATION PHASE WOOD IN THE TCM: SEASON SPRING

In TCM spring corresponds to the element wood. This phase is determined by a lot of strength, movement and the urge for dynamics. The meadows turn green again and everything blooms, grows and prospers.



PHOTO: CHRISTINE NESTLER-KENZIAN

AUTHOR:

SUSANNE DURST

The functional groups liver and gall are assigned to the element wood. According to TCM, emotions such as anger, rage and aggression and, above all, stress disturb this element. A lot of time and exercise in the fresh air help us to relax and to promote a harmonious flow of energy in our liver.

In addition to a sufficient exercise in the countryside, we can also strengthen our wood element with a proper nutrition. According to TCM the colour of the wood is green. Therefore, especially in spring lots of green food should end up on our plate, such as bear's garlic, dandelion, nettle and many other tasty wild herbs.

The wooden element is also assigned to chicken meat. On the one hand, the animal itself embodies the spring

energy due to its fluttering movements and on the other hand, chicken meat influences blood formation and thus can strengthen the functional circle of the liver. The associated taste of the wood element is the acid taste. We can find it among others in many types of fruit, in vinegar, white wine, lemon, yogurt and tomatoes. But watch out! As often in TCM, this does not mean eating as much of these foods as possible, but paying attention to balance.

MORE FOOD THAT IS ASSIGNED TO THE ELEMENT WOOD:

Unripe spelt grain, spelt, wheat, pomegranate, kumquat, parsley, lemon, pineapple, rhubarb, kiwi, sorrel, sauerkraut, pickled gherkin, sour apples, tangerines, oranges, strawberries, cranberries, gooseberries, duck, cream cheese, sour milk and curd cheese.

Turn the page and find two simple recipes to try!

SAUERKRAUT SOUP WITH FISH DUMPLINGS (for 4 people)

Ingredients:

- Wood:** 200 g sauerkraut, parsley, some sour cream
- Fire:** pinch of turmeric
- Earth:** 1 tbsp butter, 1 potato, vegetable broth
- Metal:** 1 onion, pinch of pepper, pinch of cumin
- Water:** salt, 2 fish fillets (e.g. char or catfish)

Preparation:

Melt 1 tbsp of butter in the pot and fry 1 small chopped onion in it. Add 200 g sauerkraut, some cumin and turmeric and steam. Grate the potato, add it and continue steaming for a short time, then add the vegetable stock and boil until soft for about 20 minutes. Add some sour cream and puree with the hand-held blender, pepper and salt it. Cut the fish fillets into small pieces, season



with salt and pepper and you can either put them raw in the soup plate and pour the soup over them or fry them briefly in a pan and put them in the soup. Sprinkle with herbs, e.g. parsley. Enjoy your meal!

THAI CHICKEN SOUP TOM KHA GAI (for 6 – 8 servings)

Ingredients:

- Wood:** 1 stick of fresh lemongrass, 2 kaffir lime leaves, 300 g chicken breast fillets without skin, 200 g cherry tomatoes, 3 tbsp lemon juice
- Fire:** coriander fresh
- Earth:** 750 ml coconut milk, sugar to taste, 200 g mushrooms in slices, 1 carrot cut diagonally into fine slices
- Metal:** 2 g galangal fresh or as a paste, 3 small Shallots, 2 tbsp Elephant Tom Kha paste, optional chilli without seeds, cut into fine rings
- Water:** salt, 2 tbsp fish sauce, optional fried shrimps as solid ingredients added to the soup

Preparation:

Bring the coconut milk with the slightly pressed lemongrass sticks, the galangal, the kaffir lime leaves, the finely diced shallots and the Tom Kha paste to a boil in a saucepan. Cook until the spices have developed their taste. Add the sliced chicken meat as well as the fish sauce and the sugar and simmer for five minutes, stirring constantly, until the chicken is done. Pour boiling water over the cherry tomatoes, strain off water, cool off and peel off the skin. Put aside. Blanch the carrots in salted water and set aside as well.



PHOTOS:RISE-A-MUIJ/PIXABAY

Slice the mushrooms and add them to the coconut chicken soup, continue cooking for two to three minutes. Shortly before the end of the cooking time, add lime or lemon juice and the chilli. Season the soup with salt, if necessary. The soup should not be overly spicy, but it should taste sweet, salty and sour. Remove the kaffir lime leaves and the lemongrass from the soup before serving. Pour the soup into preheated cups and serve it with the peeled cherry tomatoes, the carrot slices and decorate it with some coriander leaves.

ANNIVERSARIES

Bernhard Anzenberger 30 Years ACAT Scheibbs

Unbelievable, but true! For 30 years now Bernhard has been decisively involved in the construction of all systems ever left the old and later also the newer halls of ACAT. It is rumored that he started up one of the first, maybe perhaps the first polymer plant in the paper sector in Austria. Pioneering work!

At the end of the 1980's it was extremely difficult to get plants for polymers and bentonites. If at all, they were only available in the English electric version. Therefore, two older adolescents thought about how we could build also such a plant in order to be able to respond to the needs of the constantly growing market. The first systems were manufactured and tested in the hobby vaults of an old laundry room in the small sleepy Neustift near Scheibbs. This was completely in line with the new zeitgeist of garage startups. Of course, the plants did not yet have an information technology system or and a Programmable Logic Controller, PLC, and they did not have a touch panel. The relics of that time can still be seen today.

„Anzi“, as he is affectionately called by us, made the circuit diagrams at the kitchen table with ink and pencil. In the beginning a technical documentation as it is common today did not exist. Now there is no document he does not find, no matter how old it is. His accuracy



is legendary - and it has driven many a youngster to despair. But they have all learned a lot from him! For years, Anzi has been ready to work at any time of the day and night to maintain and clean the plants. In emergencies, there was even a late Christmas roast at his home. In 2000 he was significantly involved in the construction of „his hall“ in Scheibbs. Since then, there have been only a few days he did not enter the hall to see that everything is all right.

Today Bernhard Anzenberger is slowing down his pace of work, but he supports us with advice and assistance

- and he meticulously checks the entire project bills, despite Excel & Co. In the meantime our great team has relieved him of the hard work and so he has more free time to enjoy with his wife Ilse - if there were not his children and his soon grown-up grandchildren needing his manual help.

I am now the department manager of the Technik Center Scheibbs and I am happy that since my childhood I have been able to experience Bernhard's enthusiasm and his attitude and I have really learned a lot from him. Dear Bernhard, on behalf of the entire ACAT group I wish you from the bottom of my heart health, happiness and joy in your activities. I hope, that I can congratulate you also on your 35th anniversary and that you will continue to be our consultant and supporter for many years to come.

WT

Barbara Scaramelli 30 Years ACAT Italy

Barbara started in ACAT family as Cell International in May 1989 based in Milano office in Italy. She supported sales of non-woven fibers and disposable field products until 2001 when ACAT was founded.

Telephone at that time was the way to deal with customers and Barbara was successful and full of enthusiasm in her daily job.



Barbara is actually working in ACAT Envirotech and Ecosorb is her focus and passion.

Barbara congratulations on achieving this anniversary with us! We know you have worked hard for this accomplishment and we truly appreciate your dedication and your loyalty.

We have achieved a lot together during our first 30 years, but what matters most now is what we do next. Thank you for helping make ACAT a fantastic company now and for the years to come.

MMB

ANNIVERSARIES

Karel Skoda
20 YEARS ACAT

At this point I would like to congratulate our colleague Dr. Karel Skoda on his 20 years of employment with our company. Karel is an enthusiastic and excellent technician and during his period of service he has built up the Münzing product line from scratch. Without him, we would not be where we are today. He is characterized by a high level of expertise and tireless commitment.

In my private life, I like to remember the trips we made together and the nice weekends in his house near Olomouc. Karel is also an enthusiastic hiker and a dog lover. Especially his bulldog "Posenka" is very close to his heart.

I am very pleased to work with Karel in a team and I would like to take this opportunity to thank him for the excellent cooperation.

FR



PHOTOS: CHRISTINE NESTLER-KENZIAN (3)



Per O. Bjöörn
15 Years of
management in
his own family
business

On 1 January 2004, a new future began at ACAT when Per O. Bjöörn, the son of our sole shareholder,

the CEO and Chairman of the Board, Dr Staffan O. Bjöörn, joined the family business. With him, the third generation of the Bjöörn family is already active in this company.

After studying economics and business administration at the University of Basel Per did his three-year militia training in the Swiss Army, which he completed as a captain of a tank brigade. In order to gain first experience Per started his career at an IT consulting company. Equipped with his academic knowledge and some practice it was time to learn the business at ACAT, and so he moved to his father's family business.

Per is a proud father of three, therefore he has only little free time for hobbies, but certainly his family is his favorite and most beautiful leisure activity. But if there is time left for him besides the strenuous work and family happiness, he will indulge in golf and cycling and if there is snow in winter, he will indulge in cross-country skiing in the magnificent Swiss mountains.

Per, we all wish you much joy and success for the coming decades! May what you have achieved so far be a good basis for a further healthy and sustainable company development and for continuous growth!

MZ

Günter Rauch
10 Years ACAT

How time flies! For ten years now, our Günter has been speeding along the country roads of northern Upper and Lower Austria. Preferably in his homeland, the Waldviertel, he looks after many customers as well as after his family, which has grown in the meantime, and his agricultural business. He is working to full capacity at home and so far nobody has managed to



lure our Günter too far away from "DAHOAM (home)". But this is not necessary, because not only at ACAT but also in his home country busy colleagues are highly appreciated. Dear Günter, thank you very much for your great effort - and may the roads in the rough north always be free for you!

ES

ANNIVERSARIES

Dietmar Strecker 10 Years ACAT

It wasn't so long ago that I took over the management of the machine technology department, so I got to know Dietmar better only recently. But the short period of time was enough to realize that he is an extremely kind and helpful colleague and that he is a real enrichment for the team. The "Gyro Gearloose" of the machine technology department is mainly responsible for the development of our MAP-



Star process for the separation of struvite in sewage treatment plants. For this and for the outstanding commitment to our company over the past ten years, he deserves a lot of praise and recognition from me personally and of course from the entire company. Dietmar, all the best and hopefully we will invent together many more new effective processes in the next years!

ES

NEWCOMERS

Detre Szakàcs

Since March 2019, Detre Szakàcs has been strengthening the technical support of our paper department at home and abroad. He has already gained experience in manual assembly and machine set-up during his many years of working in the pharmaceutical industry. His open-minded and his motivated nature convinced us at the job interview. Detre Szakàcs is currently assembling his first plants in Scheibbs. But he is flexible and open-minded and he is already looking forward to working in the field as well.

Born in Hungary, he completed his training in Germany and now he lives together with his girlfriend in Ybbs an der Donau. We wish him every success in his new area of responsibility.

WT



PHOTOS: CHRISTINE NESTLER-KENZIAN



Thomas Berger

At the beginning of April, Thomas Berger took over the warehouse management and plant engineering at the Technical Centre Scheibbs. In addition, he partly supervises the facility management of the location. Thomas is a trained car mechanic

and after he has been working as a truck driver for many years he was looking for change. Although he expects a completely different field of activity in our company, we are convinced that Thomas will master the new challenges well with his technical skills and his all-round knowledge and that he will do his job to our full satisfaction.

Thomas Berger lives in the brewery town of Wieselburg. As a father of three he cannot pursue his hobby of repairing and maintaining old motorcycles very often at the moment.

WT

NEWCOMERS

Lukas Feichtegger

At the beginning of April Lukas Feichtegger took over the very complex key position „Sales Support“ in the Technical Centre of our company in Scheibbs. His responsibilities include the billing of large and small projects for the entire field of technology, agendas concerning the products Skyvell and Odostar, as well as the purchase and management of the warehouse with its large number of items. Last but not least, he will also support the department manager in the sometimes complicated customs processings required for domestic and international transports.

Lukas Feichtegger attended the business school in Ybbs an der Donau. He gained his first practical experience in the retail trade for sporting goods and subsequent-



ly he worked as a personal assistant at a professorship in Vienna. Then his professional career took him to Germany, where he worked in the laboratory trade, and finally back to his hometown Scheibbs, where he wanted to take root and settle down. After graduating from high school he looked for new professional challenges and he found them!

Privately, Lukas is enthusiastic about everything that has to do with sports. He is particularly successful as the football coach of a youth team. For many years he has also been working as an honorary stadium announcer for the football club Scheibbs, because he is very communicative and he has a powerful voice. We wish Lukas Feichtegger a successful start in our company and a long-term, sustainable cooperation!

WT

WELCOME BABY!

Hooray, Little Julius Is Born!

PHOTOS: CHRISTINE NESTLER-KENZIAN (2), PRIVATE (1)



The joy of the family Nowakowski was great: on 16 February 2019 the son and heir Julius was born. The little man was 51 cm tall, and weighted 3040 g and from the first moment he was Mom’s and Dad’s darling. With David Nowakowski the entire ACAT family is happy.



Andreas Lorenz

Since April 1st Andreas Lorenz has been a member of the chemtech team. Andreas will initially be responsible for the technical field service in Switzerland. In the future also Austria will be part of his area of responsibility, because Gerhard Zima will go soon into the well-deserved retirement. Currently we are training Andreas on our product portfolio, and his many years of experience in the development of construction products will certainly be very helpful to him. In his spare time, Andreas likes to go climbing in the mountains, but he is always anxious to be well secured. He lives close to Switzerland in the „Ländle“ in Bregenz and therefore he will feel quite comfortable in Switzerland, especially concerning the language. The team of the ACAT chemtech division, wishes Andreas every success in his new job and we look forward to working with him in the future.

FR

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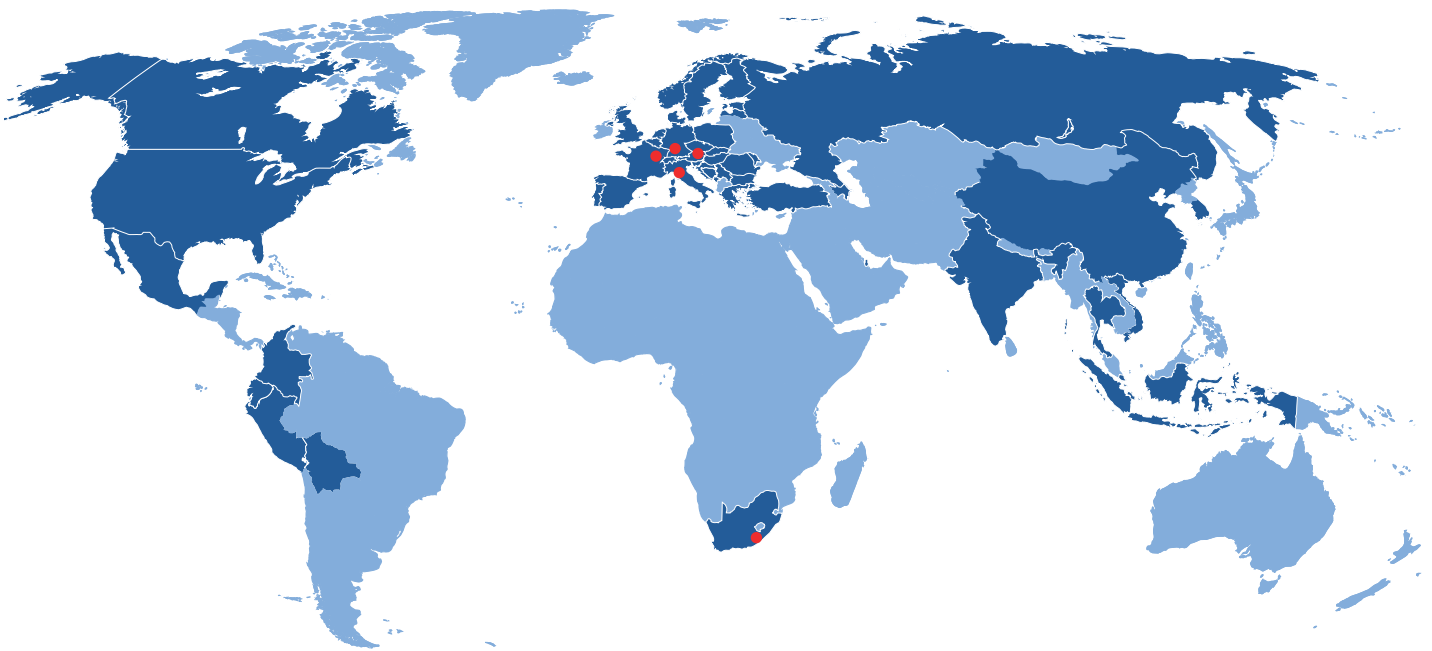
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