



Dear reader,

the first Infa-Aktuell issue of 2014 welcomes you with news and stories about Infastaub projects and products. A special project is the de-dusting of slight radioactive residues, which originate from nuclear medicine. A topic, that concerns all of us. Who hasn't been for an X-ray survey yet and indirectly causes therefore radioactive residues? Another project is the dust removal of paraffin-containing chemicals. A challenging task, which had our engineers to think beyond their technician noses. Our products and solutions contribute for a decrease of environmental impact caused by industrial production processes and create a safe and clean working environment in which an increasing production efficiency is reached at the same time.

Infastaub attends three trade fairs this year. You meet our products and staff at the „Schüttgut“ in May, Dortmund, at the „Lounges“ in June, Stuttgart, and at the „Powtech“ in October, Nuremberg.

I wish you an inspiring reading of Infa-Aktuell news and a successful and active year 2014 with constructive dialogues on our fair booths and with our staff.

Cordially



Yours

Berthold Geppert

## Pleated element filter at Reagens commissioned

Reagens is a manufacturer of special chemicals for production of PVC and other thermoplastic plastics. In the production location Loxstedt organically based stabilizers are produced among other things. In our everyday life they are hardly perceived, but the special chemicals are essential for the processing of PVC. Only by their use the final products get their required durability.

The up to now used cyclone for the dust removal of the production processes could not any longer fulfil the realisation of lower dust emission values presecuted by Reagens. In lieu of the cyclone Infastaub delivered an aspiration filter of the type Infa-Lamellen-Jet. In spite of small floor space a filter surface of 72 m<sup>2</sup> could be realised because of the optimised filter geometry. The old fan was substituted with an energy-optimised fan type.

The requirements for the new filter unit were very special. The paraffin containing dust particles are adhesive, waxy and could clog the pleated elements within short time - then a cleaning would not be possible any more. Therefore pleated elements with a laminated PTFE membrane are used. The diaphragm allows a stable dust removal process. Furthermore with this dust kind a danger of explosion is possible. The pleated element filter was therefore designed for a pressure shock resistance of 0.4 bar g. Additional explosion decoupling systems on the raw gas and clean gas side were planned by the customer.



Applications with such edge conditions need a high degree of competence which our engineers have gained from many comparable projects. The outcome of this are filter systems, which guarantee safety and reliability.

Heiko Sievern, head of technical department at Reagens, declares after 4-months operating: „The new filter unit completely measured up with our expectations. After detailed preliminary planning and punctual delivery the high-quality workmanship of the stainless steel filter housing struck us immediately. After 4 months in operation the Infastaub filter unit has proved its efficiency. Dust emissions are far below the target value of 10 mg/m<sup>3</sup> and the granulating process sucked off by the filter runs steadily. We will count on the cooperation with Infastaub also for other projects.“

## De-dusting of hypoallergenic baby food

Strict hygienic and quality regulations - according to these the food industry is working. That way also for production of hypoallergenic baby food which is strictly supervised. And this is important; health of babies allows no room for mistakes.

The company Gericke is one of the leading plant manufacturers in this demanding production sector. For the realisation of a new production plant for baby food in Switzerland, the project managers of Gericke decided to count on filters of Infastaub for de-dusting the conveying systems. „It was decisive for us, that Infastaub guaranteed to supply pocket filters in this high quality“, explains Thomas Künzli, Manager Purchasing at Gericke.



Infastaub delivered several pocket filters of series INFA-JET AJN for this project. Taking into account the products to be de-dusted all parts in contact with the product and conveying air were made in stainless steel. Because of the high hygienic demand the filter pocket support frames in stainless steel are also made in a special design. The filter media are manufactured in food safe needle felt with laminated PTFE diaphragm. In view of the so-called hygienic design of „easy cleanable“ plants the filters have no sharp edges or hollow profiles and the filter housings are glass bead blasted at the outside.

Besides the sterile construction also the Atex regulations for explosion protection had to be considered for the filter design. For some filters a pressure shock resistance of 1.0 bar g was demanded. Thus the production surrounding area is protected against explosions in the interior. In case of an explosion the flame front is led into a secured area.

The pocket filters are designed for a volume flow of 25 m<sup>3</sup>/min each, with an air-to-cloth ratio of 1.25 m<sup>3</sup>/m<sup>2</sup>\*min. Cleaning of the filter pockets is started by the fully automatic control by differential pressure.

## De-dusting of slight radioactive residues

Special preventive measures are necessary to prevent contamination spread of radioactive materials. This includes also firm housings to protect employees in their job against external and internal radiation exposition. The term „caisson“ is also used for such a housing. The exhaust of the housings is sucked through filter units, which prevent employees and environment from radiation exposition by particles in the exhaust air.

At „Nuclear Engineering Seibersdorf“ (NES) in Austria two identical cassette filters of type INFA-MICRON MKR were installed by a German plant contractor for nuclear technology. The filters made of stainless steel are used for the de-dusting of two stainless steel caissons in which radioactive waste is disaggregated, sorted and reconditioned. The dust particles which mainly originate from medical area, e.g. from radiation therapy and nuclear medicine, are led through the pre-filter into a central filter unit.

The cassette filters were planned with two filter stages in order to achieve a higher cleaning efficiency of the slightly nuclear dust. The dust-laden air enters the raw gas chamber of the filter housing via the raw gas channel. Afterwards the raw gas flows upwards through the 1st filter stage, separating the fine dust in the foldings of the filter cassette. The air of the 1st filter stage passes the 2nd filter stage (optional), which is used as safety filter, in the same direction.



Another preventive measure against the radioactive dust is the SAFE CHANGE system for a change of the filter cassettes free of contamination. A plastic bag is fixed at the access opening to the filter cassette. This plastic bag is fixed firmly on the so-called change collar with an elastic rubber ring. The filter element is pulled into the plastic bag when changing it. The plastic bag is securely closed and cut off from the change collar. A new filter cassette is connected via a new plastic bag to the change collar and is pushed into the filter housing. Therefore no dust can escape from the open filter units during the entire process. The gas tight design of the filter units additionally prevents from possible dust contamination.

**The cassette filters shortly before assembly and commissioning.**

# What is actually doing ...?

## Ulrich Fechner Sales office area West



Ulrich Fechner puts his heart and soul in sales, since 2010 for Infastaub. From his home based office in Cologne he is in charge of the area West, which corresponds mostly with the NRW (North Rhine-Westphalia) boundaries.

**I: What do you appreciate about working in the field?**

**F:** I am an outgoing person and appreciate the contact with people, my customers. This is an essential requirement when you want to work in the field, I think. I also like the flexibility of my job. These are for example the different branches where our filter units are needed. Every application and procedural solution has its own task.

**I: How does your typical working day look like?**

**F:** I am out for business for three to four days a week. This means I take care of my customers, I make acquisitions of new projects, advise in de-dusting matters. Also office work is part of daily business, for example preparation of offers and normal reporting.

**I: How do you manage to persuade our customers again and again of our products?**

Since 1989 I am engaged in ventilation and de-dusting technology and plant engineering. I can consult capably also concerning non-core parts of our

filter units, for example ductwork. Customers and potential buyers appreciate that I am able to look beyond the own back yard as well as my procedural knowledge.

**I: And your life without Infastaub?**

**F:** The fifth season and the „Kölsche Karneval“ (carnival in Cologne) just were in full swing, which is one of my passions. As a club member of the „Kölsche Schwaad-lappe“ I organise together with my wife the participation of the „Schull- und Veedelszöch“ (carnival parade) through Cologne. More than 50 schools from Cologne and 40 carnival clubs perform at the parade with carts and marching troops. The route is almost identical with the Carnival Monday parade. As local patriot I am also an enthusiastic and active fan of the soccer club 1. FC Köln. Next season they will play again first league. And when I need some tranquility I grab my camera equipment and seek for nice motives for the lens.

## Klaus Feisel Head of small-parts- warehouse + spare parts dis- tribution



Klaus Feisel is originally a heating mechanic. A coincidence took him to Infastaub. During his voluntary service as youth coach at the „Spielvereinigung 05 Bad Homburg“ he got to know the warehouse keeper of Infastaub. He should soon retire and inspired Klaus Feisel for the job.

He applied on the spot and followed in his footsteps.

**I: Since when are you employed at Infastaub and what are your tasks?**

**F:** I joined the company in 1986. Since then I have worked in the warehouse department. Among this are the divisions small parts stock, spare parts distribution, preparatory work. I never get bored. Quite the contrary: My job is very varied.

**I: How can we picture your work?**

**F:** My team and I fulfill many tasks. Besides shipping of our spare parts we make sure that the goods we receive comply with our quality standards. This is very important, because we also need appropriate components for explosion protected filters, for example special fans. If purchase and supply don't match, it can become dangerous. What we notice as incorrect, is later no foul surprise. Of course we also take care that our goods shelves are always filled sufficiently. A stopped production because of missing spare parts is expensive and we want to ship our spare parts orders in time. The preparatory work for different components and assembly groups is also part of our work. Also I am security administrator at Infastaub.

**I: How do you find a balance to your working life?**

**F:** The older I get the more I enjoy tranquility, for example a walk in the snow or an evening in a thermal bath. I also like to travel to other cities with my mate. We then just stroll through the foreign allies, watch the ado with a glass of wine and enjoy the impressions.

# Infa-Inside

## Hot exhibition year for InfaStaub

Three important trade fairs take place in this year. Starting shot is the „Schüttgut“ in Dortmund from May 21st to 22nd, 2014. For the first time we are represented at the „Lounges“ from June 3rd to 5th, 2014 in Stuttgart, where we exhibit our products for de-dusting chemical and pharmaceutical processes. Highlight of the exhibition calendar is the „Powtech“ in Nuremberg from September 30th to October 2nd, 2014, the major trade show for bulk solids industry and therefore compulsory attendance for InfaStaub.



## Facelift for [www.infaStaub.de](http://www.infaStaub.de)



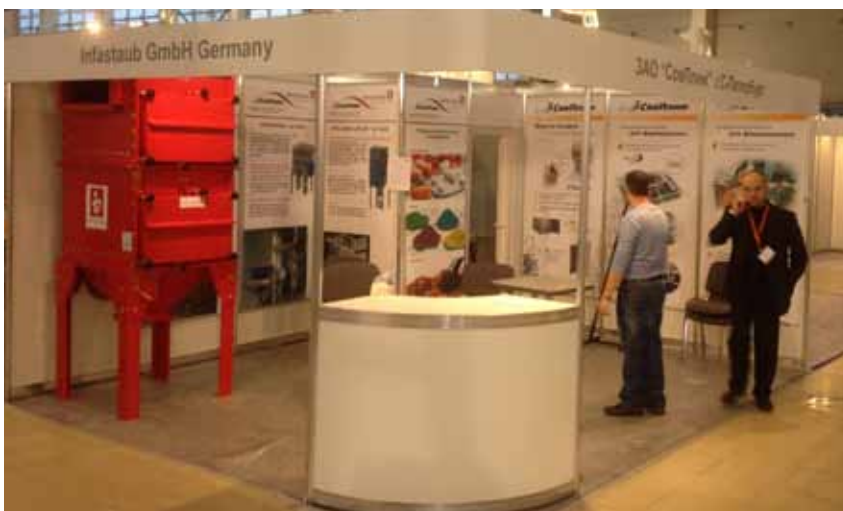
We have given our download section a facelift. The new design is now determined by clear arrangement. Dimension sheets and information about every filter type can be downloaded with few clicks.

Also a new design has the lexicon of de-dusting. Here you will find (almost) everything about the principles of dust separation, typical features of filtration, frequent applications and much more. Just visit our sites and assure yourself.

## De-dusting knowledge Capture velocity at dust sources

The basis for the layout of filter systems is knowledge of the flow rate being cleaned. A starting point for determining air flow rates is the capture velocity at open surfaces, inlets, hoods and machine coverings. The following table shows the required capture velocities for dust emissions.

Emission	Capture velocity $v$ [m/s]
static e.g. bunker	0.25 - 0.5
slow e.g. manual bag emptying	0.5 - 1.0
fast e.g. crusher	1.5 - 2.5
turbulent e.g. grading	up to 10.0



InfaStaub booth at the Pharmtech 2013 in Moscow



Assembly of a pocket filter  
AJN 2/603 SL