Seebach GmbH
Quality, know-how, and flexibility: these skills characterize our design and manufacturing of stainless steel filter systems since the establishing of our company in 1970. With more than 45 years of experience, we not only gained competent technical expertise, but also developed a precise sense for the specific needs of our customers.

Quality
By using modern filtration technologies and extensive laboratory equipment, we realize made-to-measure solutions. Each system is optimized for the customers’ working processes. Our quality management system is accredited with the ISO 9001 standard and is implemented on all levels of our company in order to meet the highest demands.

Know-how
As a family owned company we consolidated our leadership and manufacturing. According to our flat organizational structures we ensure an ideal business communication. With our long-time expertise and our experiences with the diverse lines of business, we are able to act fast and reliable.

As a manufacturer we are nearly independent and merely buy crude steel and filter media. As a matter of choice, we set great standards on quality.

Flexibility
With our subsidiaries in North America, India, Netherlands, and China, as well as our distributing agencies on every continent, we achieve the kind of flexibility which allows us to apply our accustomed skills throughout the world! Hundreds of satisfied customers rely on us.

We offer specific solutions for the following domains:

- petrochemical / chemical industry
- polymer production und processing
- pharmaceutical industry
- food and beverage
- hydraulic
- mining
- power generation
Due to our premium manufacturing and excellent filtration efficiency, Seebach filter elements offer multiple possible fields of application and usage. Being completely welded and having their dead zones optimized, our filter elements provide the highest possible performance. Every element is delivered with a test certificate and guarantees the reliability your working processes need.

**Regeneration ability**
The number of practicable chemical or mechanical cleaning cycles of a filter element is an important indication of its quality of manufacturing. Seebach process filters are entirely made from stainless steel with every join patch welded. Regarding the configuration of the filter media as well as the component geometry of pleated filter candles, we turn our attention to high mechanical load rating and efficient cleaning. In addition the filter media is protected by an outer tube. Therefore every Seebach filter and filter element is suitable for repeated cleaning and provides a life above average.

**Process optimization**
In order to guarantee the highest possible performance of our filters in your process, every element is optimized for long life and/or throughput. Seebach thereby stands for the motto ‘It’s easy when you know how’ rather than the ‘more the better’. This motto is also applied to the production of our filter candles since we use only the amount of filter material needed to achieve the requested system parameters. Filter candles may be produced pleated or non-pleated. When filter ratings less than 20 micron occur, each element should be welded in order to guarantee its tightness.

Regarding our extensive know-how in the area of rheology and manufacturing technology, we offer an unrivalled price/performance ratio.

**Examples of application**
Seebach filter candles are applied to diverse fields and industries.

**Food and beverage:** filtration of beer and wine, soft drinks, foods, superheated steam sterilization

**Chemical industry:** process liquids, gases, acids, catalyst recycling, high temperature processes

**Pharmaceutical industry:** pharmaceutical liquids, emulsions, dispersants, catalyst recycling

**Polymer industry:** Polymerization, extrusion, finalizing, yarns and films
Seebach was able to achieve a quantum leap in the field of high-viscosity polymer melt filtration (e.g. polycarbonate).

**Optimized design**
Due to our optimized design and the considerably improved drainage, our filter discs exhibit a minimized pressure drop. This leads to an essential improvement of throughput, as an independent test by the Bayer Technology Services shows.

The advantages of our leaf discs in comparison to the products of our competitors are crucial to our customers.

**Maximized dirt-holding capacity**
The filtration area of a filter disc stretches from the very end of the outer diameter up to a few millimeters close to the hub’s inner diameter and thereby offers a maximized surface load.

**Saving of costs**
We use the approved semi-hard-hub design for our Seebach low dP disc. This allows replacement of filter media without changing the main body.

**Easy installation within a stack**
The installation of a stack of filter discs is very easy. The distance between each disc is realized by a star shaped spacer offering innovative design: a spacer is made from one piece of stainless steel avoiding an uneloquent welding seam. We are also happy to offer proper gaskets commonly used in industry.

These advantages in conjunction with the proven quality of the Seebach products allow very high throughputs for any kind of application. By easily replacing the filter media the leaf disc is given a much longer life.

For you as a customer and user this means reduction in costs regarding maintenance due to a shorter installation time.
Modification of screen changer systems

In times of continuous increase of production the raise of output (throughput) is aspired without entirely replacing existent equipment.

With the possibility of modification of your screen changer systems, Seebach offers a profitable solution.

In association with leading manufacturers of screen changer systems such as Coperion Werner & Pfleiderer, Kreyen-borg and Maag Pump Systems, we developed specific filter elements in order to increase the surface load and thereby being able to increase the total throughput.

Seebach offers a wide range of filter systems for the chemical and polymer industry. Quality, know-how, and flexibility enabled our system components to become high-grade and successful products.

The JANUS filter system

With Janus we offer a modular filter system which allows keeping pace with the customer’s business development – at minimal plowback. Janus is available in two diameters: 7” and 12” inner diameter.

Our Janus filter system is able to operate at a system temperature obtaining up to 575°F and withstands system pressures through 3,625 psi. Heating can be electric, with steam or via coolant oil.

In case of a constant filtration area, Janus can be operated with filter discs as well as with filter candles and grows with throughput. Its modular design allows accordingly high throughputs by exchanging the respective component. This filter system was especially designed for throughputs (calculated for polycarbonate 300 Pa s) from 450 lbs/hr up to 9,000 lbs/hr.

Any proper flange connection commonly used in the industry is suitable. Downtimes are decreased quickly and easily by using the Janus maintenance tools.
While our passive filter components are entirely made from stainless steel, we use diverse filter media such as metal fiber fleece, multilayered laminated mesh, metal wire mesh and sintered metal as active components.

**Metal fiber fleece (pic. 1)**
Due to its sintered and condensed bedding of metal fibers, metal fiber fleece is mainly used for deep filtration. The most prominent features are high temperature-resistance, easy cleaning, high dirt-holding capacity, absolute filter rating and low pressure drop. These features make metal fiber fleece a very efficient filter media which is outstandingly suitable for the filtration of polymer melts and other fluids.

**Wire mesh (pic. 2)**
Wire mesh is basically distinguished into two kinds: woven wire mesh (square) and Dutch weave. Whereas wire mesh (square) is generally made of warp and weft wires of the same thickness, Dutch weave uses warp and weft wires of different diameters. The choice of the most suitable wire mesh depends on the required process parameters, for example: rating, pressure, surface load or kind of contamination.

**Laminated wire mesh (pic. 3)**
This kind of filter media consists of two to five layers of wire mesh which are sintered together by diffusion. Laminated wire mesh can be easily cleaned and is very versatile – especially for filtrations in which the filter is exposed to heavy-duty applications.

**Wedge wire tube**
Wedge wire tube elements are made by assembling axially arranged support bars with a spirally wound wedge wire profile. The distance between the wedge wire determines the filter rating. Filter ratings as low as 50 micron are possible. In many cases the throughput determines the suitability of a wedge wire element for the specific application. The wedge wire element can be easily cleaned and has a long life time.

**Materials**
In order to assure the high quality of our filters Seebach exclusively uses high-grade stainless steel and special alloys:

- 304 • 316L • 316Ti • hastelloy • monel • inconel

**Vertical range of manufacture**
Our long-time expertise enables us to realize almost any of the customers’ desires. Each development process starts with the attempt to make use of the existent equipment provided by the customer, for example the vessel. On top of this we also use specific materials such as acid-resistant or heat-resistant steel in order to offer a satisfactory solution.
It is our aim to deliver filter systems which are individually adjusted to the customer’s working process in order to guarantee the highest possible performance.

In doing so, we not only offer a developmental period of new products, which is rather short, but we also remain flexible regarding specific solutions. In addition, we provide reliable delivery times and permanent quality improvements. Furthermore, our service means an integrated support including preliminary tests and acceptance during the customer’s working process.

- conceptual design and realization
- definition of filter surface load
- optimization for long life and/or
- optimization for throughput
- preliminary tests and acceptance according to pressure equipment directive (PED)
- design according to AD-2000 or ASME
- equipment for maintenance and installation

Seebach filters are used in numerous fields of application throughout the world regarding particle separation in liquids and gases. This means water and paint, polymer melt and pharmaceutical products, as well as natural gas and oil.

Projects:

- filter system for the filtration of raw products in polymer production
- filter system developed for the melt filtration of polycarbonate
- filter system for the production of optical foils
- CIP filter system developed or the drying of medication
- specific lining for a centrifuge
- entire filter made from hastelloy in order to work with strong acids
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