

Herding® protects personnel, equipment and the environment during the manufacturing of batteries

pure productivity

The complete de-dusting technology of the manufacturing of batteries



Complete Dust Collection Systems - Filtermedia - Service



pure
productivity

Herding
FILTERTECHNIK

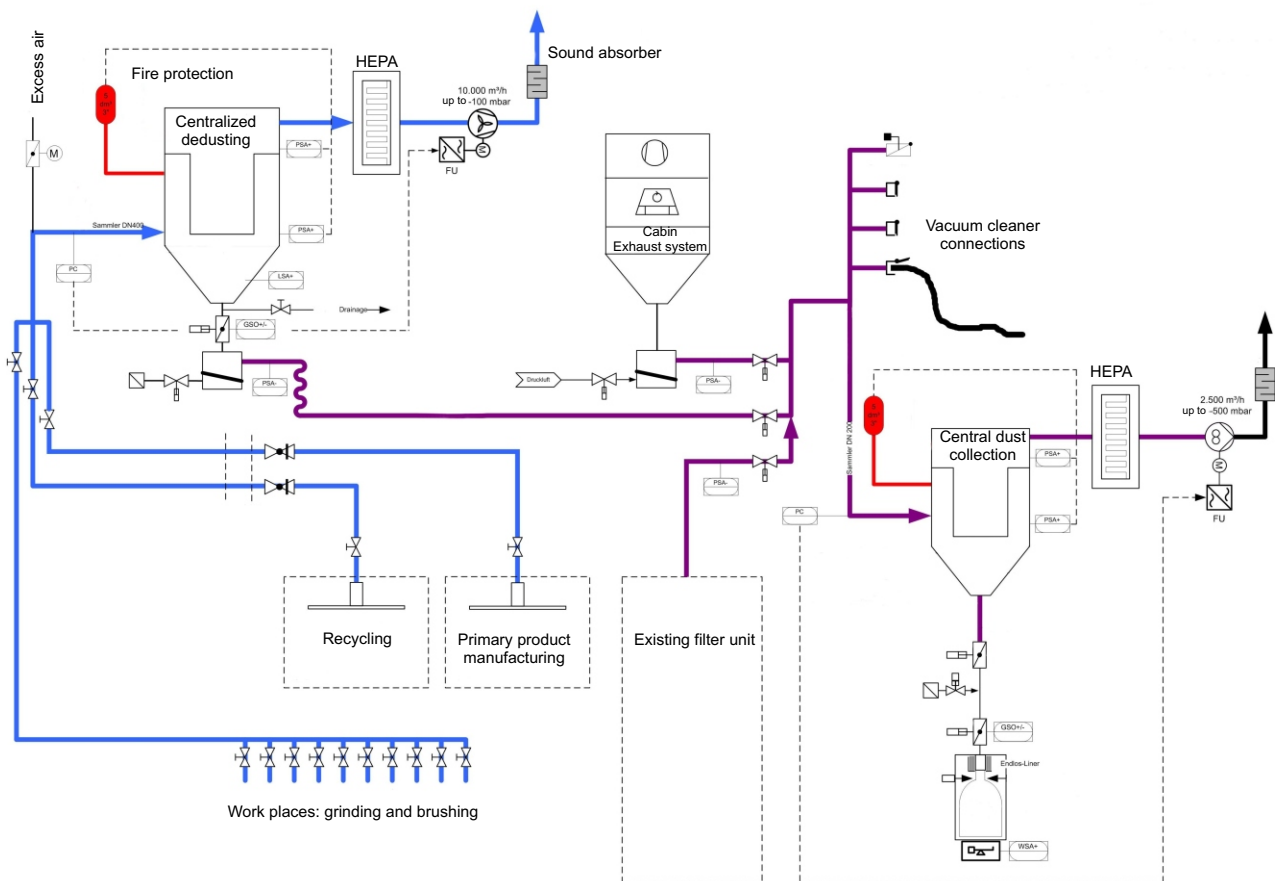
Dust collection in battery production

Herding has a variety of systems in use for the process of the manufacturing of batteries. Herding filters are versatile and can be used in the heart of the manufacturing process, material recovery, or normal air filtration. These filter units have been proved to be very effective with the protection of personnel, equipment and the environment. In particular, they are used in manufacturing batteries for example lead or lithium based.

Other examples of the single process include:

Lead recovery through recycling of old batteries - Metallurgical process Smelting of lead and sulfate in rotary kilns - Lead dust generation - Production of battery oxides - Production of active materials such as lead paste - Pasting of grid plates - Handling and machining of plates through stamping and brushing - Assembly of batteries - Pneumatic conveying - Repairing - Scrap Disposal - Personnel and workplace cleanliness

A process - chart with the Herding process filters for material recovery, dust collection for workplace, furnace, booths and central dust collection with fire protection, as seen below.



Requirements

- ▶ Guarantee workplace and product protection, also with toxic dust protection
- ▶ Material recovery
- ▶ Minimizing maintenance and replacement costs

■ Statement

Because Herding Filtration is not only a producer of filter elements, but also manufactures and designs complete systems (including: capitation, hoods, dust disposal), Herding could develop solutions specifically tailored for the battery industry. Through the understanding specific processes of the battery industry, the product line was developed. To meet increased demands, environmental requirements for the future, Herding provides engineered filters for pure productivity and efficiency.

■ Herding® sinter-plate filter

The Herding sinter - plate filter element with its different varieties, is everlasting and reliable. Due to its rigid base of the sintered body and the embedded surface coating, the surface is easily cleaned and efficient. The filter is tested to have a life durability of more than 10 years.

- ▶ Rigid body
- ▶ Very long lifetime
- ▶ High separation efficiency
- ▶ Washable



The superior benefits for the manufacturer of batteries:

- ▶ The extremely long life minimizes the cost and complexity of changing filter media, especially those that are contaminated with fine dusts such as lead.
- ▶ The integrated design and development of the complete system together with the filter media, allows for centralized units.
- ▶ The high degree of separation provides increased material recovery, which meets all the environmental requirements of today and the future.
- ▶ Optional disposal system guarantees a contamination - free dust disposal.

■ Fire protection

Herding offers different concepts with pre - coating which allows a layer to be built on the filter element surface. This reduces the risk of fire by changing the dust mixture and also prevents clogging of filter media. In certain manufacturing processes (for example: grinding) a spark arrestor can be provided. Alternatively there are also units with fire protection on the basis of inert gases or powder.



■ Dust disposal

The dust disposal can be done either in a single container, pneumatically conveyed to central units, or in contamination free disposal systems.

■ Examples of systems

For single suction, there are rectangular units with an exhaust air filtration system that reaches up to 10,000 m³/hr. For larger amounts of air modular systems can be used (shown on first page).



Extracting system at the melting furnace



Local dust collection

■ References

The prove of various products and process applications at companies is available.

■ Advantages

- ▶ Increased productivity through highest product separation
- ▶ High material recovery and reduced product losses at the pneumatic conveying line
- ▶ Reduced wear and tear on filter media and long tested life span
- ▶ The limits for lead dust according to clean air regulations can be guaranteed

We design and manufacture solutions that are specific to the desired industry, including the modernization of existing plants.

Consult us!

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