



Summer 2016

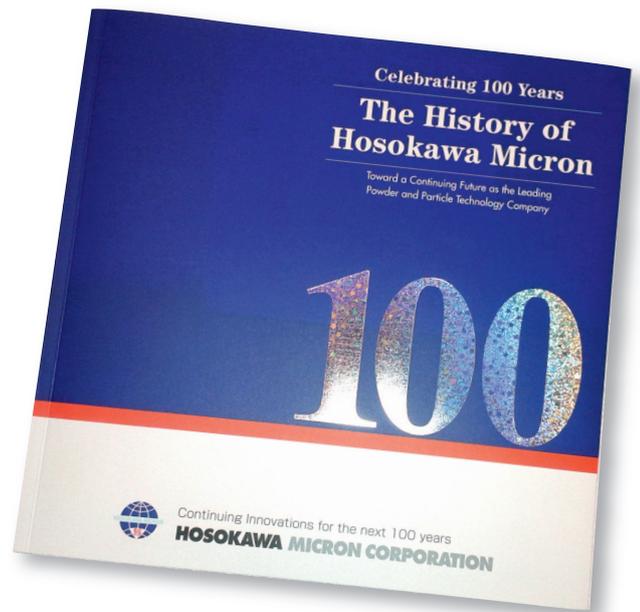
newsletter



Continuing Innovations for the next 100 years

On 18th April, Hosokawa Micron Corporation (HMC) commemorated their 100th anniversary, recognising their founder, Mr Eiichi Hosokawa's endeavours in establishing a small ironworks company in Osaka, which grew to be the global company of today. With a rich history of innovation, research and engineering excellence the company maintains its position as a leader in powder and particle processing and acts as an inspiration to the engineers of the future.

'The History of Hosokawa Micron' commemorates the 100th anniversary in print. Edited by our President, Mr Yoshio Hosokawa, the book charts key milestones in the company's development, the hardship of engineering pioneers and the superior technology and unique management style that is our valuable legacy.



The 1930's development of the Micron Mill grinding machine, which combined impact, shearing and friction to produce micron sized powders, was the starting point of the powder technology expertise that has brought us to where we are today. This was followed by a successor mill, the Super Micron Mill in 1952 – this remains one of Hosokawa's most renowned machines and is still used today. A revolutionary high performance air classifier, the Micron Separator, was invented a few years later. The technology of these machines opened the way for global company expansion.

The company continues to support education and innovation through its laboratories, R&D centres of excellence and the Hosokawa Powder Technology Foundation – all contributing to the promotion of powder technology worldwide.

In celebration of the 100th anniversary, all HMC's employees, spouses and children were invited to an amusement theme park for the day with a dinner to follow. Mr Hosokawa joined the party, thanking everyone for their hard work and dedication to the company.



Downflow Booth is a Real Beauty

Hosokawa Micron Ltd faced considerable challenges when designing two new downflow booths for the world's leading cosmetics' company due to space limitations in the existing facility and build restrictions caused by structural steelwork, at the Paris site.

It was crucial to the customer that all designs focused on the protection of operational personnel from harmful dusts and fumes and also that products were protected from risk of contamination. In response the booths are designed to offer high levels of operator protection from potentially hazardous dusts and fumes and potential product contamination.

Before commencement of the project a full risk analysis was undertaken which examined all potential risks from the toxicity and flammability of the materials handled and dust exposure limits to the compatibility of materials handled and the explosion risks. Standard operating procedures and the number of people operating within the booths and production areas were also considered in order to ensure the optimum booth design and configuration.

Powder Handling Booth

Hosokawa Micron supplied an 8m wide, recirculation downflow booth, which delivers a conditioned downflow of air from the booth's ceiling inlet plenum pushing any dust downwards and away from the operator's breathing zone. The air is extracted from the booth via low level exhaust grills and through a series of filters prior to recirculation into the booth's working area. Safe change filters accessed from the technical zone at the rear of the booth eliminate exposure of operatives to airborne particulates.



Hosokawa Micron Ltd engineers worked closely with the customer to establish the optimum system design to ensure the most ergonomic solution capable of delivering operator protection across both booths and the facility. Operations Manager, Mr. Raul, has expressed his satisfaction with both quality and performance of the Hosokawa products.

Hosokawa Micron's use of computational flow dynamic software allows design engineers to see, right at early design concept stage, how airflows can be affected by placement of objects or people and how they can conflict with other directional airflows.

Said Carl Emsley, Sales Manager, Hosokawa Micron Ltd, 'In order to future proof and deliver flexibility of operation the booths were designed to accommodate a range of dispensary and sampling tasks plus manual and automated materials handling. Our designs and the finished facility are sympathetic to these demands, offering easy access, well planned and flexible work zones and integrated equipment positioning. The ergonomic design of the booths is enhanced with cooling packages for workplace temperature management to create a more user friendly work environment, ECM filter monitoring, high efficiency fans and LED lighting plus recessed housing for ease of storage and accessibility of tools. The placement of the solvent handling booth also allows for a space saving mezzanine floor above.'



Solvent Handling Booth

The single pass booth operates a vertical airflow, pushing dusts and vapours downwards and away from the operator's breathing zone with air discharged through a fume scrubber to atmosphere ensuring that solvent fume laden air will not be recirculated back into the booth and minimising the risk of explosion associated with solvent fumes.

'Our engineers have worked closely with the customer, listening and responding to the customers' wishes to create an integrated, ergonomic design solution that improves the working environment for personnel and meets the demand for an integrated facility.' comments Carl Emsley, Hosokawa Micron Ltd.

NEW Buggy Fill/Weigh Booth

For safe, easy and accurate FIBC filling the new twin, buggy filling and weighing, containment system is uniquely configured for automated filling of FIBCs located on a wheeled buggy frame.

Designed in co-operation with a leading detergent manufacturer, to meet the demands of the high volume product transfer of potentially sensitising powders.

The booth is connected to the customer's HVAC system to generate a horizontal laminar airflow which captures airborne particulates generated in the filling operations. The contaminated air is extracted through the combined booth plenum to a remote filtration system.

Double opening doors allow easy access for the manual loading of the FIBC buggy. As the buggy is pushed into position the FIBC lid is automatically lifted, eliminating the need for an operative to undertake this procedure by standing on a step ladder. Guide rails ensure accurate positioning beneath the downward sealing filling head. Once the buggy is in position (defined by a sensor) a mechanic clamp device holds the wheeled buggy in place.

Doors are interlocked to prevent unauthorised entry whilst filling operation takes place.

On disengagement and removal of the buggy from the filling and weighing system, the FIBC lid is closed. Accurate filling and weighing is controlled from outside the booth.

The booth is equipped with rear maintenance access door, integrated weigh scale, internal lighting and integral dust monitoring system.



NEW Cool Performance Mill

For ultra fine grinding of low-melting point, heat-sensitive materials

The new, Micron Glacis GC, high performance cooling type, fine grinding mill is designed for milling heat sensitive products – with successes already in the high volume grinding of green tea which is popular both as a beverage and for use in confectioneries.

- Particle grinding size accuracy of a jet mill (10 - 20 μ m)
- Higher volume capacity and 50% lower energy consumption

The Glacis achieves a high cooling efficiency (7.5 times more than the conventional mechanical mill) by running coolants through the outer liner and grinding rotor. The cool milling prevents product oxidation and therefore deterioration of the milled product.

A low air volume requirement relative to grinding power means auxiliary equipment such as the blower and bag filler can be scaled down, allowing for a compact installation.



The Rising Tide of Super Seaweed

S seaweed is packed with minerals, vitamins, fibre, omega 3 and protein, it may prevent colon cancer, control blood glucose level and aid digestion. Sustainably farmed, seaweed is now recognised as a superfood and a 'future food'.

But fibrous, wet and often sandy or gritty, seaweed is difficult to process with costly and time consuming drying times. To



reduce the drying process seaweed is often chopped to facilitate more rapid, less nutrient destructive drying processes.

To meet the demands for milled, freshly harvested seaweed Hosokawa Micron Ltd has developed a two stage system comprising of a Prebreaker and Vertical Disintegrator..

- Low energy, low noise processing
- Uniform particle size reduction of wet or moist seaweeds
- Higher levels of availability compared to conventional hammer mills
- Capable of operating at 12- 20 t/h
- Narrow particle size distribution, higher yields, less effluent

Once the friable materials have passed through the initial size reduction Prebreaker stage, they are transferred directly to the Hosokawa Micron Vertical Disintegrator to be further reduced to a uniform particle size.

Designed for the reduction of fine to coarse, wet, moist or dry materials, the Hosokawa Micron Vertical Disintegrator provides automatic and continuous separation of disintegration resistant materials with redirection through the system from the exclusive secondary discharge.

The Disintegrator is designed to withstand corrosion caused by the low pH often involved in the process and erosion caused by the natural inclusions which determines a predominant use of higher abrasion resistant materials of manufacture.

The Importance of Hygienic & Accurate Filling & Weighing Systems

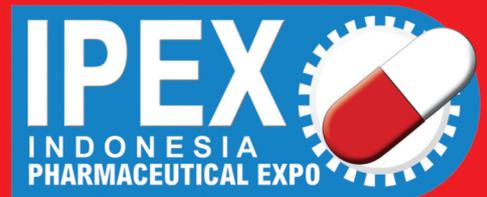
Webinar available now on 

If you're involved in the handling of hazardous or potentially dusty powder materials and missed our webinar and seeking solutions on how you can:

- protect the operator from the product
- protect the product from contamination
- maintain the area classification

Simply click on the link above which will take you to the presentation.

Exhibitions



**IPEX – Indonesia
Pharmaceutical
Expo 2016**

**Stand No. AS110
5-8th October
Jakarta.**

For further information on anything within this newsletter please visit
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