



Spring 2017

newsletter



Fine Milling Success



Hosokawa beat stiff competition to win the order for a fine milling system for contract chemical processing company, Exwold Technology Ltd.

'The customer specialises in formulation and processing for the Crop Protection and Speciality Chemicals markets, providing toll processing services on a worldwide basis. They wanted a pesticide formulation milling system capable of 900kg/hr and a particle top size of 15 microns. Extensive product trials were carried out at the Hosokawa Alpine test centre to ensure correct mill selection and operating parameters to meet the customer's needs – securing the contract on our technical expertise, project management capability and most appropriate equipment supply to meet the target requirements,' explained John Buck, Area Sales Manager, Hosokawa Micron Ltd.

We supplied a 630 AFG Fluidised Bed Jet Mill with integral 315 ATP Classifier which is capable of producing the top size requirement with extremely tight particle size distribution.

As standard within an agrochemical plant the stainless steel construction milling system is fully ATEX compliant and built to 10 Bar pressure resistant design. The crevice free design of the mill and integral classifier helps ensure full product evacuation whilst the WIP nozzles allow easy cleaning between batches for contamination free production.

John confirms, *'When the system was installed a few months ago, Hosokawa Micron engineers provided installation assistance and full commissioning services. The system is now fully operational with expected throughput and particle distribution targets achieved.'*

'This new milling system is highly efficient and enables us to produce high volumes of powders to exacting particle size to meet the demands of new and existing customers. We have been extremely pleased with the service we have received from Hosokawa Micron and their sales and engineering teams. The ability to undertake pre-purchase tests ensured we were able to buy the right machine for the job.'

Kevin Martin, Managing Director, Exwold Technology Ltd.

Powder Characterisation: Chemical, Physical and Mechanical Properties

16-18th May 2017

Audience:

A Hosokawa recommended course for scientists, engineers and technologists wishing to gain a better understanding of powder characteristics to enable them to address powder handling, processing and manufacturing issues from a fundamental base.

Details:

https://engineering.leeds.ac.uk/short-course/20135/School_of_Chemical_and_Process_Engineering/29

Venue:

Faculty of Engineering
Leeds University

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Halal & Kosher Toll Processing



Hosokawa Micron's Halal and Kosher certified toll processing service is proving popular with producers seeking improved cleanliness, purity and quality in food production.

Key reasons for the rise in uptake of the Hosokawa service include the customer's capacity deficit, need for specific processing technology plus their lack of appropriate food safety certificate for the handling of certain ingredients or processes, cleaning regimes or product segregation.

Kathryn Hipkins, Technical Centre Manager, Hosokawa Micron Ltd comments, 'We have over 50 years' experience

and expertise in food processing and can meet one off or on-going requirements in critical and high purity, batch production applications within our FSSC 22000 accredited facility in Runcorn. We can work with you to ensure optimum production from choice and design of powder processing and ancillary equipment, product control specifications and cleaning regimes to full batch production documentation, product quality guarantees and validation certificates and secure packaging so you can be confident in outsourcing even critical production with Hosokawa Micron Ltd.'

<https://hml.to/toll-p>



Grow your own workforce

Our Apprenticeship Programme is now delivering practical and purposeful training to 10 young people and follows a proud company tradition of investment in training and education.

This opportunity to 'grow our own workforce' addresses skills shortages and strengthens our workforce – delivering a win-win for Hosokawa and apprentices. It has enabled us to attract new talent across engineering, sales, laboratory and test station and process services departments giving apprentices the best possible opportunity for a job offer from a company they know.

Combining distance learning, mentoring and hands-on vocational skills training, the programme is tailored to meet our future employment needs – to deliver a 'grow our own workforce' goal.

Workforce Interaction

Our established workforce have displayed impressive training and mentoring skills, instructing and demonstrating job specific tasks but also softer interpersonal skills such as how to interact with colleagues, time keeping and a strong work ethic.

Our Apprenticeship Experience

'Our investment in our 'own grown' young trainees, by giving them both the academic and relevant workplace training and experience, will ensure that the future of Hosokawa Micron will be in safe hands'. Hosokawa Commercial Manager, Stewart Bryan.

What our Apprentices Say

Ben Jackson – Technical Apprentice

'Taking an apprenticeship is a step in setting up your future career. To enable me to make the most of this opportunity, four years ago I moved to Runcorn. Living on my own and studying in the evening has been challenging but managers and co-workers at Hosokawa have supported me throughout.



Successful in my Higher National Diploma I am now starting a BA Hons in Business Management course. Without the support from Hosokawa I could not have completed my apprenticeship or embarked on this next step to further my education.'

Erin Holman – Chemistry Foundation Degree



'I started an apprenticeship at Hosokawa Micron 2 years ago, working in the Test Centre and Laboratory whilst studying at Wirral Metropolitan College. I now undertake all the powder and particle tests in the Test Centre using a range of analytical equipment.

Last year Erin was awarded Apprentice of the Year at Wirral Met., where she had undertaken additional modules to gain a more advanced qualification. She now has the opportunity for further training at our sister company in Augsburg, Germany.

Jack Butler – Mechanical Engineering Apprentice

'After studying at college for a year gaining my NVQ Level 2, I now have a 3 year, engineering apprenticeship at Hosokawa. I attend college one day a week, I also receive special mentoring one day each month. Being able to apply what I learn at college to tasks at work enables me to demonstrate skill competencies and applications in my portfolio, which forms part of my assessment. I like working at Hosokawa, there are opportunities to travel, the people are friendly, helpful and keen to show me how to do things and they trust me to do lots of tasks on my own'.



Powder Tester Fixed Fee Funding

Hosokawa's new, immediate access funding now makes it easier and quicker for companies to improve their product quality, process design or optimisation using the Powder Characteristics Tester – PT-X, the process industry standard, analysis device.

The no deposit, fixed fee funding option means there's no need to wait for annual asset purchase approval; instead there's immediate access to a valuable tool designed to deliver QA benefits and process design advantages.

The Hosokawa Powder Tester measures ten individual powder characteristics and is used widely across pharmaceutical, chemical, food and other industries to evaluate flowability and floodability of dry powder solids.

For example: accurate determination of flowability which would affect mixing speeds and an understanding of the critical discharge flow to prevent product bridging on discharge from a vessel or the influence of moisture content on flowability.

- Clear visual displays
- Operator friendly software
- Fast, accurate, repeatable analysis

<https://hml.to/pt-x>



Contained Powder Transfer

Sound advice on options for bulk powder transfer into a charging vessel and best protection from powder exposure, helped secure an order for Hosokawa Micron at a customer's new manufacturing facility.

With the reactor vessel installed in a room with other vessels and limited space for local bulk powder charging, Hosokawa recommended: Installation of a powder handling isolator in a dedicated charging room and conveying the powder to the reactor using an integrated vacuum transfer system.

Hosokawa engineers designed the isolator so it is possible to pre-load 6 x 20kg bags of

powder before the powder transfer operation is started. This ensures that the transfer of the whole 10 bag batch takes place within 50 minutes, which is the time limit specified by the customer to achieve the correct process conditions inside the reactor.

The vacuum transfer unit is mounted directly onto the reactor vessel inlet and is connected to a vacuum pump installed in the nearby technical area. The vacuum transfer unit inlet is piped to the outlet of the isolator charge hopper. At the bottom of the charge hopper a

<https://hml.to/bhp7a>

bridge breaker is installed which helps to keep the powder in the hopper moving towards the outlet pipe. Equipment is in place to maintain the correct internal isolator pressure when the vacuum pump is running.

A dense phase powder transfer takes place. Powder is sucked into the vacuum transfer unit until it reaches a pre-set level, at this point the inlet valve is closed and the bottom outlet valve is opened to allow the powder to discharge, under gravity, into the reactor. The discharge is also aided by a pulse of high pressure nitrogen through the VTU filters. The discharge valves then close and the cycle is repeated until all of the powder has been transferred.

The isolator and transfer system is nitrogen inerted and designed to comply with ATEX regulations. The system is operated via a touch screen HMI and incorporates interlocks to ensure operator safety.



NEW Ultrafine Particle Coating

The new Hosokawa Nobilta Vercom, particle surface enhancement machine, offers a high capacity of 500ltr with superior dry particle composing capabilities – all within a smaller footprint than previous Nobilta models.

The Nobilta Vercom offers:

- Particles with a dense coating layer
- No solvents/chemical binders needed
- Short process time
- Cost effective alternative to traditional wet processes
- Degradation free production of difficult to handle/soft materials
- Optional parts for processing of abrasive materials

The new Nobilta Vercom (NOB-VC) is designed with a vertical structure for a smaller footprint and increased access for ease of maintenance.

Applications include:

- Batteries, capacitors, fuel cells
- Magnetic materials
- Pharmaceuticals
- Dental and electronic ceramics
- Composite polymers
- Toner

Information request: info@hmluk.hosokawa.com



Energy Saving Sub-Micron Mill



- 80% energy savings
- Finer particles than a jet mill
- Efficient alternative to impact mills

The energy efficient Micron Pulvis, agitated bead mill produces fine, dry particles which require no additional drying phase and do not re-agglomerate but remain in a dry, free flowing state, saving further energy costs and time.

The mill is located at the bottom of the machine and ground particles are conveyed by air, passing through the grinding chamber to the integrated classifier the operating speed of which determines the fineness of the end product. The classifier separates the required fine product from coarse particles. The coarse particles are returned to the grinding zone.

With the option of ceramic, wear protected grinding and classifying parts, the Micron Pulvis is suitable for milling ceramic materials, metal oxides, battery materials, minerals, glass, hydrogen absorbent alloys, magnetic materials, pigments and carbon etc.

Available in a range of sizes from 0.75 kW grinding motor (1.00 kW classifying motor) to 70.0 kW grinding motor (30.0 kW classifying motor)

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