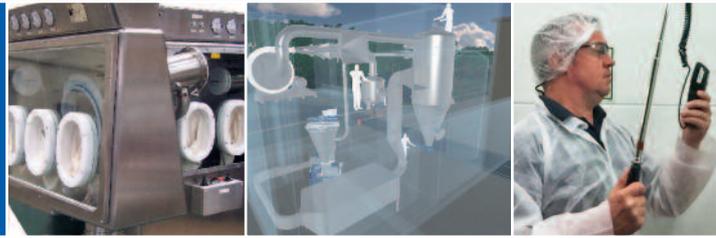




Autumn 2017

newsletter



Hosokawa Represents SMEs

Hosokawa Micron Ltd is among a group of businesses from across the UK participating in a review for the Government of 'Industrial Digitalisation' and how to unlock the opportunities it presents. The review, chaired by Juergen Maier, CEO of Siemens UK, was announced in the Government's Industrial Strategy Green Paper published in January 2016. Other participating companies include IBM, GSK, BAE Systems and Rolls Royce.

Hosokawa Gen4 was the subject of an SME case study presented to industry leaders at the Artificial Intelligence workshop held at the Advanced Manufacturing Research Centre's Factory 2050 in Rotherham. Hosokawa Gen4, offers a smart support service that converts field data from equipment and systems into practical plant operating solutions and a structured approach to smarter supply chains and manufacturing processes. Uniquely combining machine capability and controls expertise, it offers the potential for intelligent manufacturing to gain production improvements.

Says Managing Director, Iain Crosley, *'We are proud to be a part of this industry changing review evaluating how UK industry can best lead the global race to gain a competitive manufacturing edge from the accelerated adoption of digital technology. Identified by Juergen Maier as a 'cure for the British economy' the review is seen as the basis of a strong partnership deal between government and business and as an SME are reassured that we will play a recognised and valuable role in the debate and the future of the UK economic resurgence.'*

The 2017 review can be downloaded at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/655570/20171027_MadeSmarter_FINAL_DIGITAL.pdf

The Best of British

We are proud to announce that Hosokawa Micron has been shortlisted for The Manufacturer MX Awards 2017, celebrating the best of British manufacturing.

Being shortlisted in the Smart Factories category, alongside iconic companies and brands such as Brompton Bicycle and McLaren Automotive is a great honour and we know we are up against some of the very best in industry, within this category.

The awards are the culmination of a rigorous programme designed to provide valuable business improvement advice and feedback from an expert panel of judges, some of whom visited Hosokawa in order to get a better understanding of the impact of smart technologies on our business.

Iain Crosley, Hosokawa Micron Ltd, MD, says, *'This is a chance to benchmark our business against peers and competitors, gain business feedback from top experts and to highlight to customers and clients that they are associated with the best in class. It also offers a well-deserved thank you to all our staff.'*



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Safe Drum Handling in a Material World

When speciality fabric manufacturer Vlisco approached HML seeking a contained drum handling solution to provide a physical barrier between the operator and product to protect their workforce from contact with airborne, fabric dye particles, they were explicit in the challenges that needed to be met.

These including the safe handling of drums of various sizes and the de-lidding, opening and emptying of drums into a reactor vessel within a contained environment.

Hosokawa Micron engineers responded with a bespoke designed drum tipping glovebox, built around the dye reactor vessel, that met all the customer's requirements including an Operator Exposure Level of $<5 \mu\text{g}/\text{m}^3$ to protect operators from potentially harmful dusts.

Drums and kegs of different sizes and weights are presented to the glovebox on a roller track and manually moved into the glovebox before being connected to the drum tipper. Drums are de-lidded and bags opened before special container clamps suitable for handling a range of weights/sizes attach the drums to the lifting/tipping device. The drums are then automatically lifted, rotated and dropped onto the reactor where they are located into position to secure and reduce dust creation on discharge.

The system is operated under a nitrogen blanket to minimise dust explosion risk and is engineered for ATEX compliance with drum lifting and rotation operated by intrinsically safe air motors.

As the reactor vessel contains hydrochloric acid, special coatings are applied to the glovebox chamber and plastic



Ready for final checks before transportation

parts were used to make up the filter and extraction systems utilising plastic fans, pipework and plastic coated valves and filters.

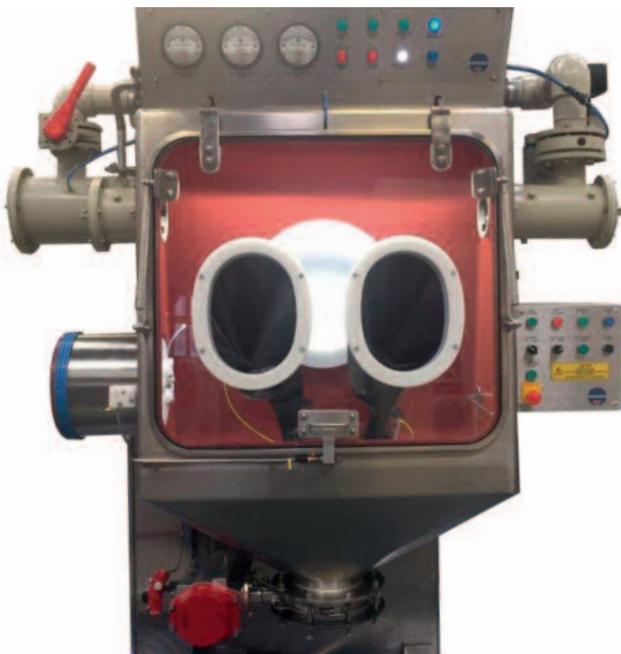
As an original and heritage textile design company, Vlisco welcomed Hosokawa's bespoke approach to providing a purpose designed containment solution that reduced both manual handling of drums and operator risk.

Michiel Soolsma, Process & Quality Engineer, Vlisco says, *'From the first contact, Hosokawa made a great impression by understanding our problems and coming up with possible solutions. Although we needed more time before starting the project, Hosokawa showed patience and assisted us when asked.'*

'From the start to the end of the project Hosokawa showed their experience and engineered a glovebox that is operator friendly and could be integrated in our new installation.'

'I personally enjoyed working together with their engineers on this project with Hosokawa.'

For over 170 years, Vlisco has created more than 350,000 original textile designs. Many of these designs have become cultural treasures, bestowed with special names and meanings by the merchants of Central and West Africa.



Internal surfaces are PFA lined

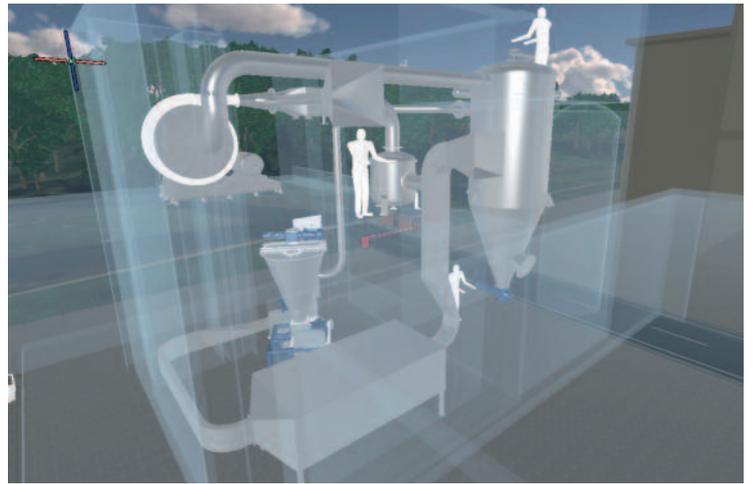
Glimpse the Future with our Digital Twin Technology

Hosokawa launched their digital twin, processing plant at Powtech, recently. The duplicate display of a fully operational, commercial processing system mirrors accurate data and control screen information. It works with our Remote Monitoring Mobile App, allowing customers to simulate processing in full and to manage a process off-site; including data capture, analysis and interrogation, remote monitoring, performance improvement and increased plant control.

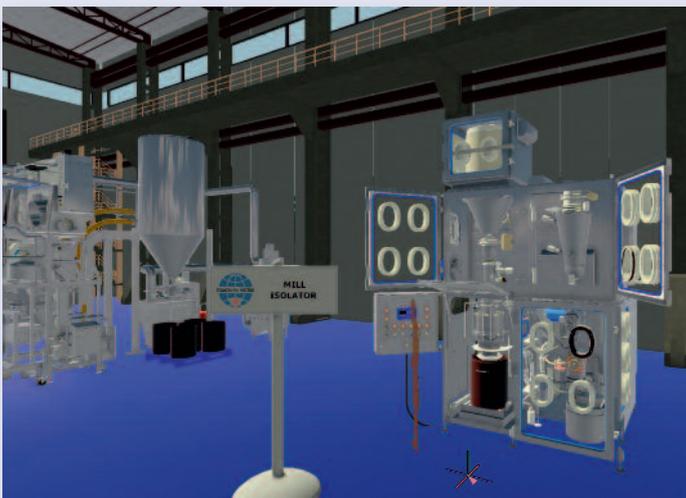
Digital Twin is the first of its kind, helping to make your data valuable, taking a step into the future of manufacturing, designing, processing and cloud based interconnectivity, to make manufacturing more streamlined, accurate and cost-effective than ever before. Digital twins offer the potential to achieve better insights and propel better decisions in machine design, optimisation and consistent operation.

Customers can visualise full processes remotely and accurately analyse every aspect of machinery and product in real time. The system can be used to diagnose, troubleshoot and identify root cause operational issues. Users can troubleshoot plant failure, production throughput drops and see for themselves how their actions might positively or adversely affect outcomes and is a user friendly human orientated support tool, ideal for use in chemical, food, pharmaceutical, mineral and other process sector applications.

We are proud to have our technology in partnership with Siemens' Mindsphere open source cloud storage system. This provides users with the most powerful tools for analytics, storage and sharing, offering unparalleled security and adaptability for every business.



Engineering Game Changer



Once the gamers' tool for slaying dragons and fantasy football, Virtual Reality technology is now proving a game changer for Hosokawa engineers and customers. From a walk through Hosokawa's virtual showroom, where customers can experience equipment and systems before they purchase to the opportunity to inspect, manipulate and disassemble life sized components and appreciate the unit or system's capability – virtual reality will help streamline equipment manufacture, which is a win-win all round.

Adam Harper, Hosokawa Product Manager says, *'VR allows us to demonstrate detailed equipment design options, construction and functionality with a heightened sense of reality and all without the time, cost and material waste implications of making the equipment. Our customers will benefit from this technology at planning, prototyping, building and project realisation stages with further potential benefits offered in operator training and maintenance operations.'*

Check out the Hosokawa Virtual Reality Cave at: <https://hml.to/vrcave>



Building for the Future

Hosokawa Micron Corporation announce a Factory Renewal Project that will see their Osaka Factory rebuilt at a cost of approximately £25 million and cover a total floor space of 10,030m³.

This new 2020 factory of the future will be earthquake resistant, create a better working environment for personnel and deliver a streamlined layout to factory operations in-line with today's modern manufacturing practices to improve productivity for high-value added products for the future.

The current, 50 year old factory will be rebuilt with phased demolition and construction to ensure current production work continues throughout the 2 year project. The project demonstrates Hosokawa Micron's confidence in continued investment in the future of their dedicated and expert workforce, sustained plans for innovative development in powder processing and materials science technologies and a long term commitment to their global customer base.

Construction will commence in 2018 and is expected to be completed in 2020.



OEL Testing By Hosokawa

With the capability of on-site OEL testing services Hosokawa Micron can offer an improved, single source supply of containment solutions to drug manufacturers seeking solutions for the safe handling of potentially harmful or high toxicity materials and for processors in other industries keen to meet the increasing obligations regarding personnel safety and product security.

The Hosokawa OEL testing and certification service for containment equipment and systems covers downflow booths, filling and weighing systems, laminar flow cabinets and isolator/gloveboxes with the purpose of assessing levels of operator exposure (OEL) and validation of the performance of

containment systems and equipment. The limit of detection (LOD) for a typical surrogate material is 2ng.

Testing is performed by Hosokawa's air monitoring trained and IOSH certified industrial chemist according to the ISPE Good Practice Guide: Assessing the Particulate Containment Performance of Pharmaceutical Equipment.

The availability of in-house OEL testing means Hosokawa customers benefit from Hosokawa Micron's specialist containment expertise and understanding of the customer's containment requirements at all stages of construction and operation – including prior to installation in factory acceptance tests (FAT) and site acceptance tests (SAT) following installation.

Sample analysis is completed by a third party analytical laboratory to ensure independent evaluation. Sample results are reported over the task duration.



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