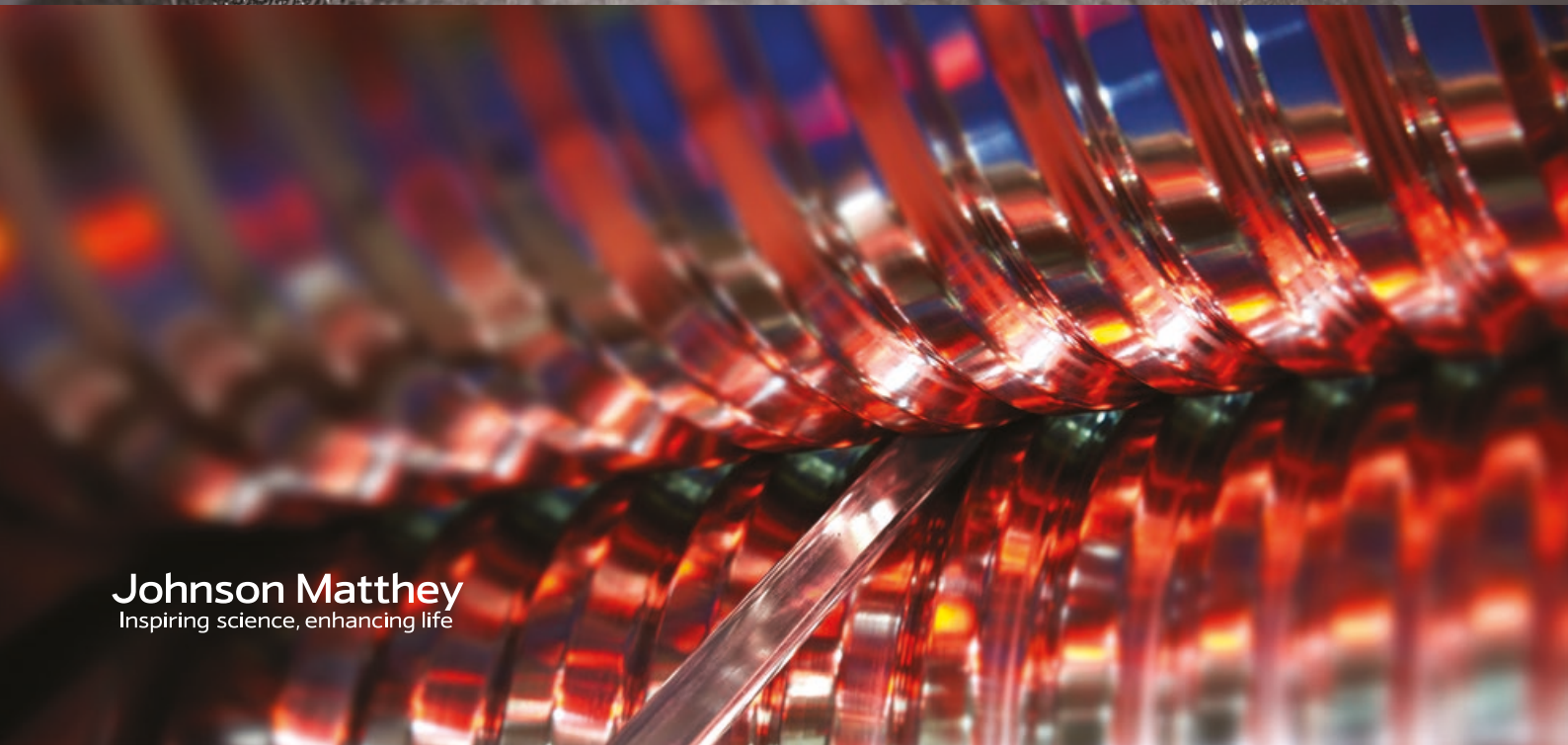


JM

Expertise and innovative technologies

Maximising your nitric acid plant efficiency



Johnson Matthey
Inspiring science, enhancing life

Expertise and innovative technologies

Maximising your nitric acid plant efficiency

Tailored Gauze

Each of our bespoke gauze packs is made to meet customers' specific requirements, providing excellent conversion efficiency and pack weight while minimising N₂O emissions and metal losses. We offer:

- Binary gauze catalysts available in Nitro-Lok™, Pro-Lok™ and Hi-Lok™ knitted structures.
- Traditional woven catalyst and catchment.
- HICON corrugated systems with proven performance of increasing ammonia conversion efficiency, reducing pressure drop and extending the campaign length.
- Eco-Cat™ technology, which combines binary and ternary alloys. Compared to traditional gauzes it increases campaign lengths by 50-100% with no loss of conversion efficiency, reduces installed metal weight by 40-50% and reduces overall metal losses by up to 50%.

With our R&D focus, we are continuously developing our gauzes to provide valuable solutions to customers.

NSCR Catalysts for NO_x Abatement

Our non-selective catalytic reduction (NSCR) technology has a long and proven track record for controlling NO_x emissions from nitric acid manufacturing plants. Johnson Matthey NO_x abatement catalyst consists of platinum group metals deposited onto ceramic honeycomb monoliths.

N₂O Abatement

Through our co-operation with Yara International ASA, we supply their high performance secondary nitrous oxide abatement catalyst, with abatement of over 90% being achieved. It can be easily installed into low, medium and high pressure plants with no impact on nitric acid production and we provide technical support throughout the whole process, including analysis. This stable catalyst gives a low pressure drop, has a long lifespan and is resistant to sintering.

With JM technology, our customers produce fertilisers that help cultivate millions of tonnes of produce every year.



Process Modelling

Through our exclusive partnership with ProSim we can enhance plant performance through diagnostics and optimisation of the entire nitric acid process. This involves:

- Simulating and optimising the catalyst performance in the burner using our proprietary kinetic model.
- Simulating and optimising the complete nitric acid process through ProSimPlus HNO₃ software.

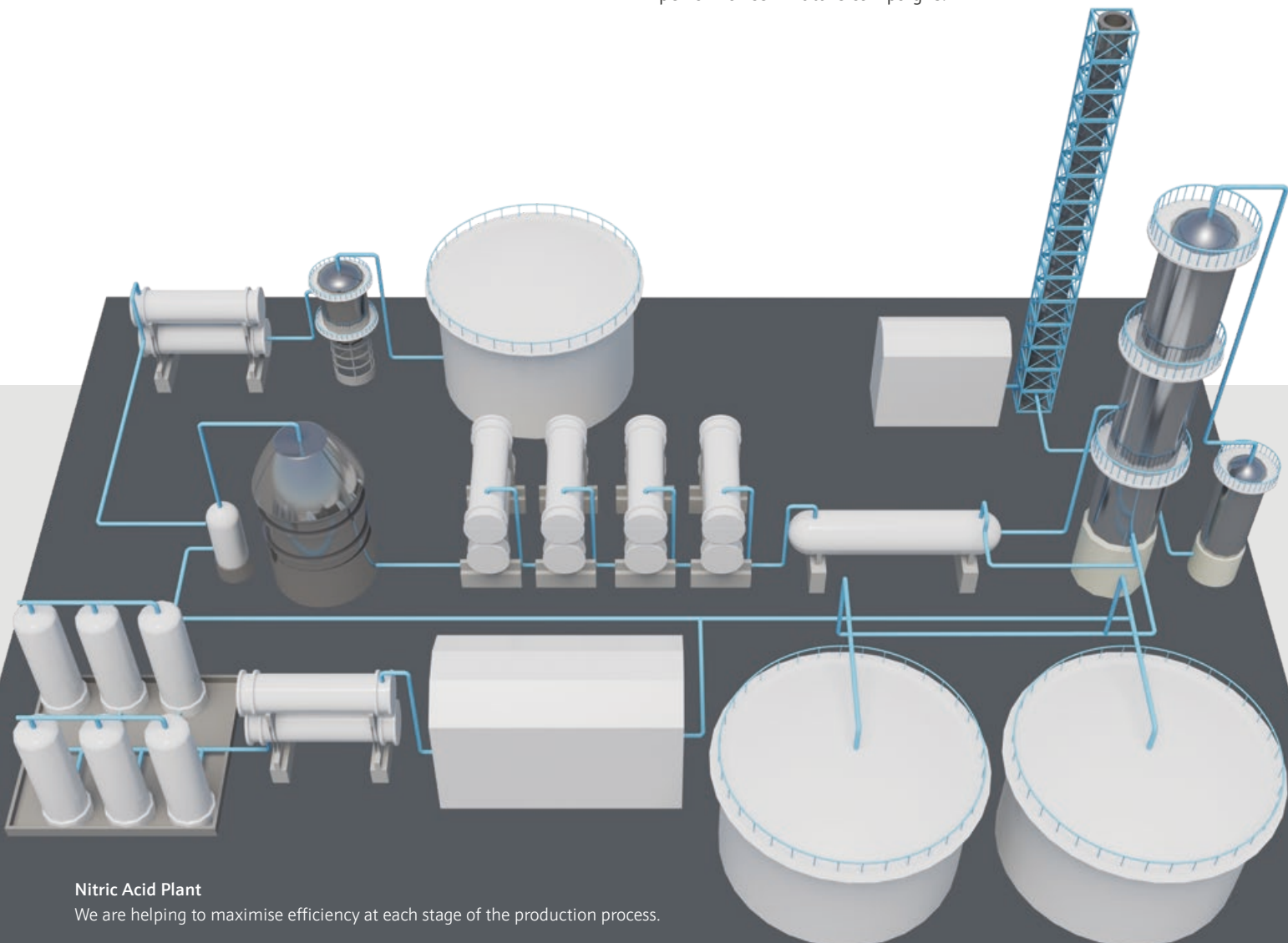
We offer a number of options to achieve maximum performance through process modelling, including software licences, preliminary reports and comprehensive studies.

Abatement Basket Engineering

We are experienced in designing robust, stable containment baskets specifically customised for the burner in conjunction with the N₂O catalyst. This avoids preferential flow, which improves the performance of the abatement catalyst, helping to increase the conversion efficiency and minimise operational costs.

Analysis of Catalysts

Our highly trained technicians and scientists investigate weight loss, gas flow distribution and contamination sources of gauzes. Using world class analytical techniques with a sampling depth down to 5nm, we then refine new gauze designs to reduce metal losses and enhance performance in future campaigns.



Nitric Acid Plant

We are helping to maximise efficiency at each stage of the production process.

Absorption Tower Scanning

We provide actionable information while the system is online and operating in normal, test or upset conditions. A Tru-Scan™ diagnosis will provide you better insight into tray flooding, weeping and internal damage.

Our patented FrothView™ technology offers another level of detail, measuring the actual froth height on individual trays, detecting bottlenecks and optimising performance.

Secure Transportation

We use reliable, insured and discreet services internationally to ensure your cargoes are delivered safely.

Precious Metal Management

As a global 24 hour platinum group metal (pgm) trader and a member of the London Platinum and Palladium Market (LPPM), we can buy and sell metal for you at a competitive price with guaranteed quality. We can set up customer accounts and provide secure storage of precious metal.

Full Precious Metal Refining

As a leading precious metal refiner, we are able to refine the full suite of precious metals and clean down residues, whether high or low grade, including support in obtaining authorisation for shipments.



Supplying exceptional
quality products and
services for nitric
acid production



Contact us for further information on our products and services for nitric acid production

Europe

Tel: +44 1763 253000
Fax: +44 1763 253313
Email: nobleuk@matthey.com

USA

Tel: +1 610 648 8066
Fax: +1 610 648 8105
Email: nobleww@jmus.com

Asia

Tel: +852 2738 0380
Fax: +852 2736 2222
Email: jmhk@mattheyasia.com

www.matthey.com