

## Case Study

Achieving Regulatory Compliance and Sustainability: Tecam's VOC Emissions Solution for Johnson Matthey.

Customer:

Fluor

End Customer:

Johnson Matthey

Location:

Royston, United Kingdom

Industry:

Chemical

Equipment:

1 RTO of 30,000 Nm<sup>3</sup>/h + auxiliary equipment



## THE CUSTOMER

Tecam's customer, Fluor, is a leading engineering and construction company, providing engineering, procurement, construction (EPC), maintenance and project management services. Fluor designs and builds the world's toughest projects. They provide professional and technical solutions to deliver safe, well-executed, capital-efficient engineering, procurement and construction (EPC) projects to clients globally.

This project's final customer, Johnson Matthey, is a global leader in sustainable technologies, catalysing the transition to net zero. Their ambition is to be a world leader in sustainable technology solutions, transforming energy and reducing carbon emissions, for a cleaner, brighter future.

## THE CHALLENGE

Johnson Matthey faced a major environmental issue at their Royston facility, where the production processes were generating significant quantities of Volatile Organic Compounds (VOCs)—harmful pollutants that could contribute to air pollution and pose serious health risks. The company opened a new production facility and needed to ensure that the new plant was regulatory compliance and maintained responsible operations – those were critical priorities for Johnson Matthey.

Determined to address the VOC emissions problem effectively, they sought a strong and reliable solution. After evaluating various options, Johnson Matthey decided to collaborate with Fluor, who at its turn chose Tecam as their leading provider of environmental technology for emissions abatement. The task for Tecam was to design and implement a state-of-the-art emissions abatement system that would align with the end customer's operational objectives and regulatory standards.

## THE TECHNICAL SOLUTION

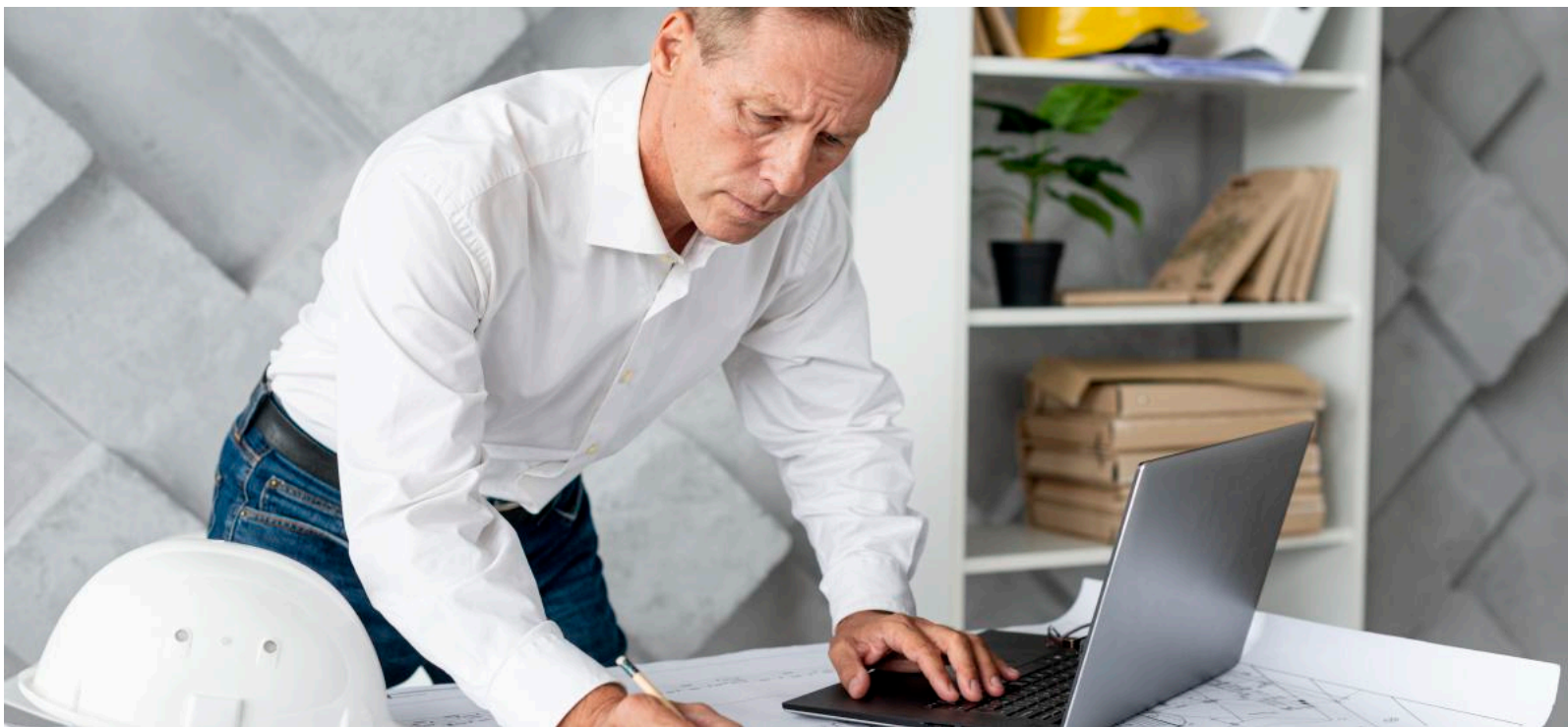
After analyzing the customer's technical requirements, Tecam proposed a bespoke technology solution consisting of a units of Regenerative Thermal Oxidation (RTO) equipment, with a capacity of 30,000 Nm<sup>3</sup>/h.

This technical solution, Regenerative Thermal Oxidation, is recommended as BAT (Best Available Technique) for VOC emissions abatement for the chemical industry by the European Commission.

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Regenerative Thermal Oxidizer is equipment designed to eliminate Volatile Organic Compounds. Essentially, RTOs are formed of three towers with ceramic beds, where energy is recovered, and a combustion chamber in which the temperature is kept constant in order to enable oxidation. The organic compounds it eliminates consist primarily of carbon and hydrogen: consequently, when they react with oxygen they form acceptable amounts of carbon dioxide and water.

**99.9 %** elimination of  
polluting emissions



The oxidation chamber incorporates a burner that usually uses natural gas to raise the temperature inside the chamber, although other fuels or even electricity can be used as well.

## THE RESULT

Johnson Matthey is extremely pleased with the results of the project. Tecam's solution successfully adhered to the strict emissions standards while demonstrating technical expertise and outstanding support during both implementation and commissioning phases.

The newly installed emissions control system has greatly enhanced Johnson Matthey's environmental performance, guaranteeing regulatory compliance and strengthening their dedication to sustainable practices.

## THE CONCLUSION

The collaboration between Tecam, Fluor and Johnson Matthey exemplifies the power of innovation and partnership in overcoming complex environmental challenges. By leveraging Tecam's expertise in emissions abatement technology, Johnson Matthey successfully addressed their VOC emissions issue at the Royston facility in the UK. This project highlights Tecam's commitment to delivering tailored, high-performance solutions that align with both regulatory standards and sustainability goals.

The implementation of the Regenerative Thermal Oxidation system not only ensured compliance with stringent environmental regulations but also reinforced Johnson Matthey's position as a global leader in sustainable technologies. The advanced RTO technology employed in this project underscores Tecam's ability to provide solutions that are both efficient and environmentally responsible, enabling customers to achieve operational excellence while minimizing their environmental footprint.

This case study serves as a compelling testament to Tecam's technical capabilities and customer-centric approach. By collaborating closely with Fluor and Johnson Matthey, Tecam demonstrated its capacity to deliver cutting-edge solutions that meet the specific needs of its customers. The project's success sets a benchmark for future initiatives, reaffirming Tecam's role as a trusted partner in advancing sustainability across industries.

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## ABOUT TECAM

Tecam is an environmental technology company focused on the development of customised solutions for emissions and hazardous waste treatment for large companies.

Tecam designs and implements customised projects aimed at minimizing the ecological footprint generated during production processes, with proven expertise in the Petrochemical and Oil & Gas sectors.

The company's work philosophy is based on long-term collaboration. With Tecam, there will always be a team of experts in environmental technology available to you to provide the solutions your business needs, wherever and whenever you need them.



If you are interested in obtaining further technical details on this project or learning more about Tecam engineering solutions for emissions treatment and waste valorization, please contact us - we will be happy to help you:

**+ 34 93 428 11 54**

**[tecamgroup.com](http://tecamgroup.com)**