

A chemical company with their headquarters based within the North East of England awarded ProAIM a contract to conduct an integrated advanced RAM (Reliability, Availability & Maintainability) study of their acetic acid processes throughout the world.



BENEFITS

- \$6,000,000 reduction in capital expenditure
- Availability targets maintained
- \$68,000 reduction in maintenance costs per annum per plant
- Quantify ROI of installing vibration monitoring
- Spare parts inventory reduced by 35%

OBJECTIVES

1. Develop a reliability database for use throughout all the Acetic Acid plants to improve safety (reliability) and reduce unplanned shutdowns
2. Optimize the availability vs capital costs of equipment for any new Acetic Acid projects and develop recommendations for future alterations to existing plants
3. Improve the maintenance strategy for their current sites
4. Quantify the benefits of investing in real time vibration monitoring
5. Optimize spare parts purchasing and inventory to reduce wastage

METHODOLOGY

The scope of work required a combination of process synthesis and RAM engineering to analyze and quantify the performance of the existing plants compared to the new conceptual design.

Analyzing and quantifying numerous design options, optimizing equipment redundancy and using the historical maintenance records from other plants to simulate reliability and optimize the full lifecycle costs elements, CAPEX, OPEX and REVEX (Production availability) for the new design.

ProAIM's consultants worked with the customer throughout the 7 steps of the project, screening data, analysis, simulation, FMECA, RCM review and joint workshops to ensure that the final recommendations were fully assessed and agreed upon in terms of risks.

ABOUT PROAIM

A reliability-engineering consultancy based in the U.K. with operations across the globe.

Providing specialist bespoke consultancy with integrated RAM technology and training solutions in the area of reliability and maintenance engineering.

We enable our clients in asset centric process industries, primarily upstream oil and gas and petrochemical sectors to achieve the safety, production output and cost targets for their business.

ProAIM is one of the leading companies able to quantify the true life cycle costs from design to decommissioning by combining RAM and Process Synthesis with ProAIM's patented RAM-int.



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