Process Insights™
Premium Insights Into Process

REAL-TIME OPTICAL ABSORPTION ANALYZERS

APPLICATION NOTE

Customer Success Story: Nitrous Acid (HNO_2) Measurement in Fertilization Plant

Our GUIDED WAVE™ ClearView® db VIS-NIR dual-beam photometer was fully incorporated for plant-wide HNO_2 measurement and optimization.

The Customer

A global firm specializing in agricultural products and environmental protection agents needed a solution to improve employee safety during the manufacturing process. Its largest business area is the production of nitrogen fertilizer; however this process also encompasses the production of nitrates, ammonia, urea and other nitrogen-based chemicals.

The Problem

The company was taking liquid samples of the HNO_3 manually, several times every day for the determination of the HNO_2 level. This was costly and the manual handling of the samples was extremely dangerous and toxic for the employees.

In an effort to improve plant safety during this manufacturing process as well as to optimize the process, they decided to look for a way to minimize the employee handling of this substance.

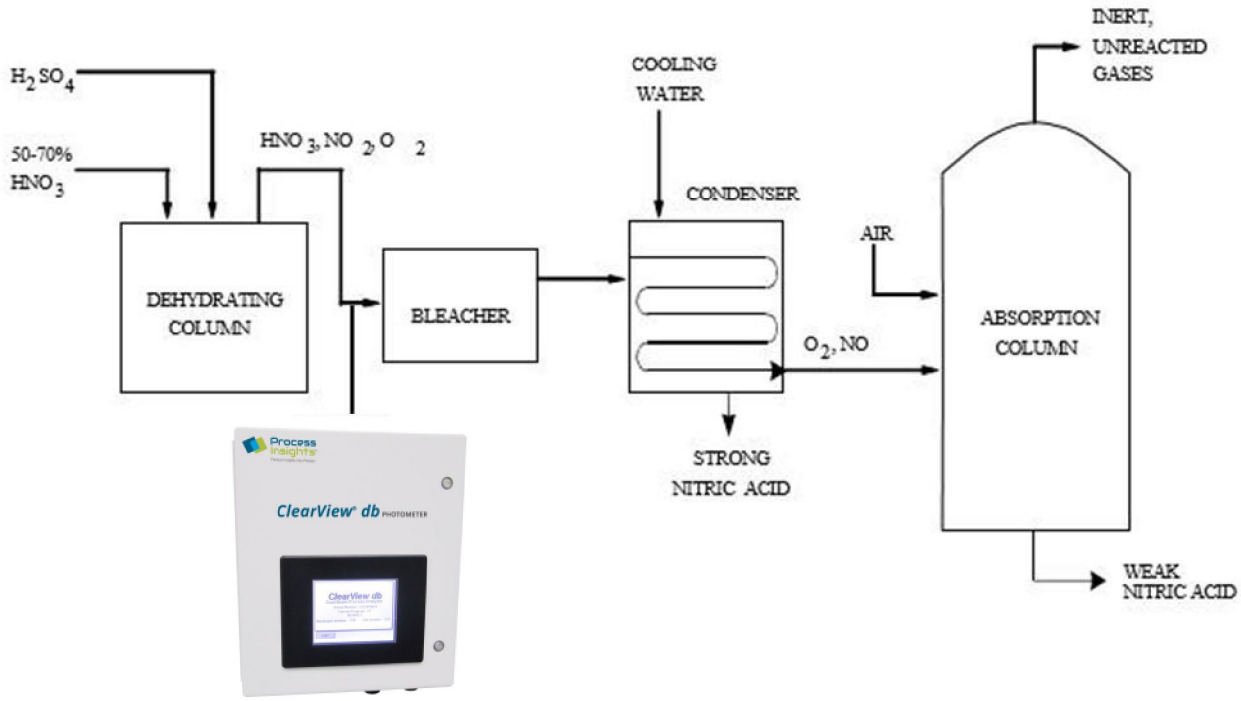
After researching several technologies to measure HNO_2 in the lab, they determined that our ClearView db dual-beam photometer was the best technical solution.

The measurement is based on specific wavelengths in the visible (VIS) range.

The Smart Choice

The customer came to us due to the reliability of GUIDED WAVE'S process analyzer systems. Not only does Guided Wave offer a dual-beam VIS-NIR system to ensure reading stability in process environments, our unique probe assemblies can accommodate even the most challenging sample streams.

Nitrous Acid ($HN0_2$) Measurment Process - ClearView db Sample Location



Conclusion

Once the GUIDED WAVE ClearView db system was successfully implemented, the customer achieved their original safety goal. They reduced the handling of dangerous nitric acid, and in addition they also realized that they could produce 40% more product than the original designed plant capacity. This was accomplished without the added cost of plant expansion, as now less O_2 is required for the complete reaction.

Our GUIDED WAVE analyzers have been online since 2015. The company is already implementing this solution worldwide using ClearView db analyzer systems.

Control You Can Measure

By partnering with Process Insights customers gain the advantage of over 30 decades of experience in online process monitoring and stream sample analysis. Our entire product line is designed and developed to meet the challenges of the most demanding production environments for control you can measure.

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GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

CENTERS OF EXCELLENCE | PROVIDING PROVEN SOLUTIONS

Process Insights is committed to solving our customers' most complex analytical, process, and measurement challenges everyday.

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