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AstraZeneca Increases Efficiency in Pharmaceutical Manufacturing with Continuous Monitoring



AstraZeneca is a global, science-led biopharmaceutical business. They are one of a handful of companies to span the entire life cycle of a medicine – from research and development to manufacturing and supply – as well as the global commercialization of primary care and specialty care medicines. Operating in more than 100 countries, AstraZeneca employs around 57,500 people worldwide. The company has manufacturing operations in 17 countries, and their innovative medicines are used by millions of patients worldwide.

To ensure the products are protected during manufacturing, packaging, and storage, AstraZeneca maintains strict controls over environmental parameters. The company adheres to cGMP (Current Good Manufacturing Practices) and strives to meet or exceed all requirements that ensure purity, safety, and efficacy, from manufacture to final distribution. AstraZeneca's leading high-technology facility is located in Södertälje, Sweden and is one of the biggest tablet manufacturing facilities in the world. In 2015 it employed around 3,200 people.

In 2013, AstraZeneca Sweden Operations decided to acquire a new monitoring system for the Södertälje plant. They wanted to further improve their monitoring capabilities, for example, in regards to automating the checking of measurement points.

Project Manager Mats Andersson was responsible for the selection and installation project of the system for AstraZeneca: "We made a careful evaluation of various systems. Vaisala was one of the candidates as we had long experience with their monitoring instruments. We were



quite sure their system would fit our needs, and our thorough evaluation proved it was so."

AstraZeneca's key considerations for the new monitoring system were the reliability of the measurements, the monitoring options, and the possibility to extend the system according to their needs.

"Vaisala's Continuous Monitoring System is easily scalable without extra costs. increases our efficiency with its remote reading abilities and ease of use. and the measurements are very accurate. Having used Vaisala's measurement instruments for several years in the AstraZeneca facilities in Sweden, we trusted their quality. We look forward to continuing the good cooperation with them."

Mats Andersson, AstraZeneca

Challenge

- Historical Reporting
 To ensure compliance, all pharmaceutical companies must have reporting capabilities that prove adherence to the strict regulations within the industry and satisfy auditors.
- Guaranteed Product Quality AstraZeneca adheres to cGMP (Current Good Manufacturing Practices) and has its own strict quality standards. The production area consists of several environments, which are kept in precise, regulated conditions.
- Internal Efficiency
 AstraZeneca wanted to have a modern and reliable system with automated readings that would enable a more efficient way of working.

"With no need to check the monitoring points manually, we can further increase the efficiency of our operation," says Mikael Ruda, Associate Director for Maintenance at the Södertälje plant.



Solution

- High Performing System
 The Vaisala Continuous
 Monitoring System can
 use a wide array of highperformance sensors to
 measure temperature, humidity,
 differential pressure, and
 more. Flexible, user-selectable
 notification options allow
 alarms to be sent via email or
 text to PCs and mobile phones.
- Meet Quality Standards
 When monitoring the
 environment in real-time,
 AstraZeneca can ensure that
 they meet their own high
 quality standards and the strict
 regulations of the industry.
 An extensive humidity and
 temperature mapping carried
 out by Vaisala in a large part
 of AstraZeneca's production
 environment in Södertälje
 gives AstraZeneca detailed
 information to further improve
 their operations.
- The Vaisala Continuous
 Monitoring System provides
 secure, permission-based
 access from any PC on
 AstraZeneca's existing
 network. The license allows for
 easy expansion of the number
 of both data loggers and
 users to the system. The realtime, remotely readable data
 increases internal efficiency, as
 manual recording of the data
 loggers is no longer necessary.

The phased project was kicked off in 2014. In the first phase, Vaisala installed and validated their part of the project within one week. After that, AstraZeneca continued with their own validation and other preparations. In the next phases of the installation project, AstraZeneca added a lot of instruments to the system themselves. "In a vast

Benefits

Scalable Solution

The viewLinc software is fully scalable without extra cost, so AstraZeneca can add new data loggers to the system, and extend it to as many users as they consider necessary.

Efficiency

Reduction in manual labour through remote and automatic reporting and monitoring.

Regulatory Compliance
Quick, easy reporting allows
AstraZeneca to prove
compliance to multiple
governmental and regulatory
agencies. Reports are
compliant with FDA 21 CFR
Part 11 and Annex 11.

facility such as Södertälje, it's a big benefit that we can add, and especially validate, new instruments by ourselves and expand the system with new and even existing instruments. We have done many extensions since the start of the project." Andersson says.

After the initial installation for a group of super users at the end of 2014, AstraZeneca extended access to the system to other factory personnel who use it in their daily work.

With the Vaisala viewLinc Continuous Monitoring System, AstraZeneca collects information about temperature, humidity, and differential pressure in the production facility. This information is being used to safeguard product quality. Since Vaisala Continuous Monitoring System also fulfills regulatory requirements, AstraZeneca can easily demonstrate their compliance to regulators.



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