

Application

Compressed Air Quality and Purity Monitoring in highly automated painting processes

Goal

Ensure paint process quality by monitoring the compressed air purity

Sector

Automotive Industry

Customer

Car Manufacturer / Automated Paint Shop Manufacturer

Ensure Painting Quality by Maintaining High Compressed Air Purity Standards

In highly automated painting processes

Overview

In a modern paint shop the quality of painting is highly impacted by the quality of the compressed air. In the painting process, paint is injected into the compressed air and as it exits the nozzle the paint atomizes into a fine, even mist. These tiny paint particles repel each other as they leave the nozzle and stick to the object being painted. Excess impurities in the compressed air will cause the paint particles to "clump" together resulting in uneven coverage and increased waste. To minimize this, painting equipment manufacturers define the incoming compressed air quality in terms of dew point, oil vapor content and particle concentration. Unfortunately in most installations the end customer is responsible to monitor and maintain the air quality leaving the paint equipment manufacturers not in control of the painting results. This results in increased tech support and tensions at the customer when trying to fix painting problems due to air quality.

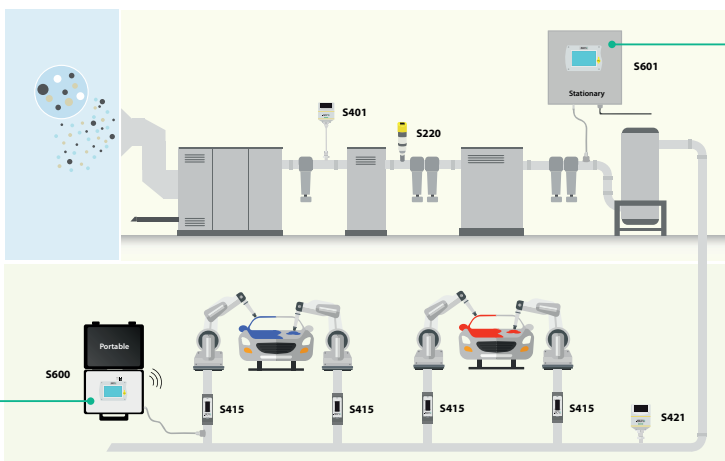
Approach

How SUTO Compressed Air Quality Measurement Solutions are used to Ensure the Quality of Painting Results?

The only way to ensure a consistent high-quality painting process is by monitoring the compressed air purity so painting equipment manufacturers are now starting to integrate air purity measurement tools directly into their machines to monitor the supplied air quality.

Two solutions are designed to be used in such applications:

Supply Side - A stationary compressed air purity analyzer (SUTO S601) is installed, providing a permanent monitoring of dew point, oil vapor content and particle concentration in the compressed air.



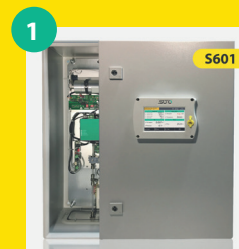
Demand Side - Equipped with a portable compressed air purity analyzer (SUTO S600), on-site process engineers are enabled to test the compressed air purity as an initial quality check after the installation and then perform ongoing regular checks whenever needed.

Conclusion

Paint shop process quality can only be ensured if the supplied compressed air meets certain purity standards. Contamination in the compressed air can lead to production failures and create damage on the product and the reputation.

Constant monitoring and regular purity checks help operators as well as paint shop manufacturers to prevent damages and ensure high quality production output.

Products in Use



S601 Stationary Compressed Air Purity Analyzer for 24/7 Quality Measurements



S600 Portable Compressed Air Purity Analyzer for On-site Spot Checks and Audits



Be smart. Measure it.