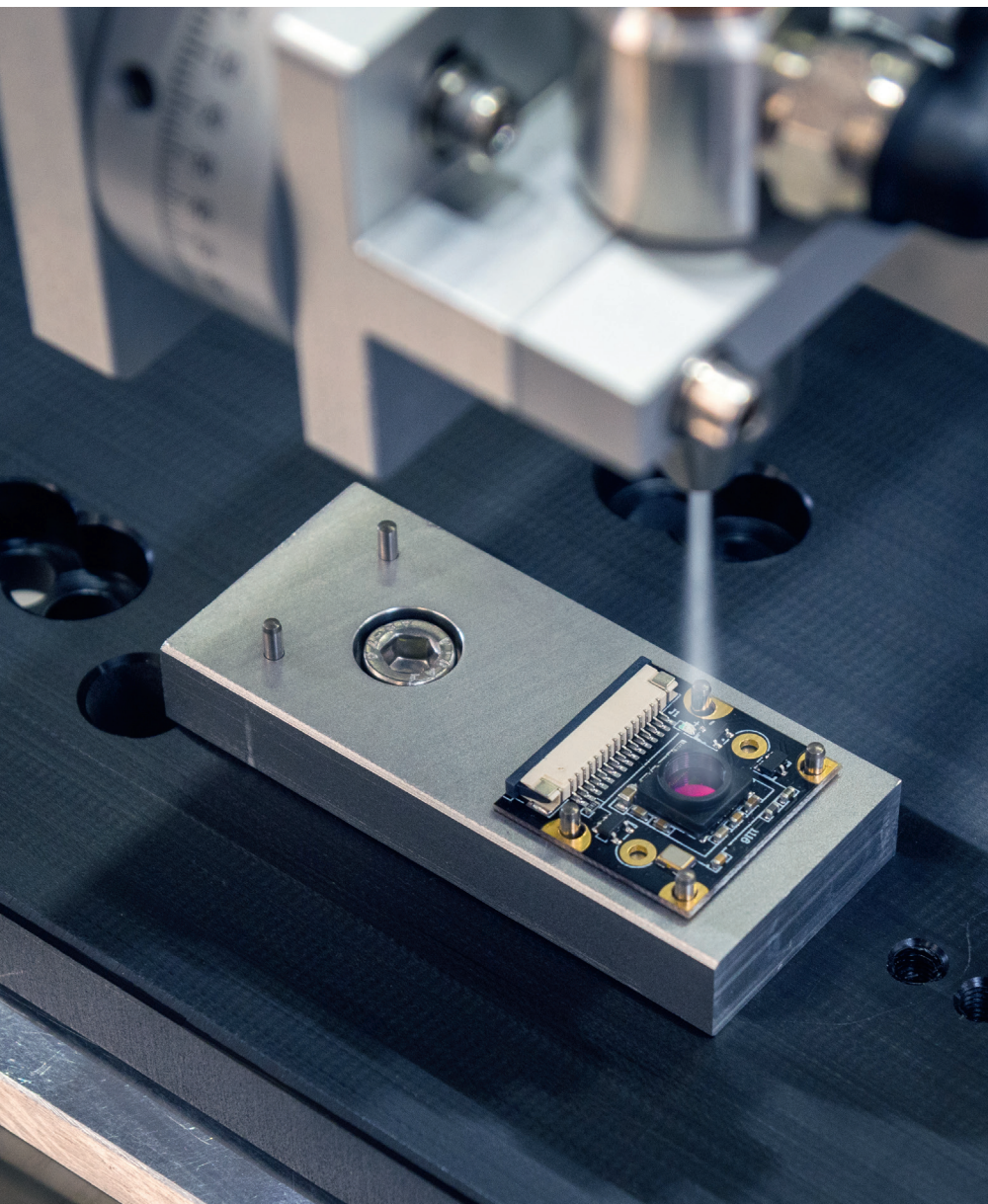


Case study

CO₂ snow-jet cleaning of camera imaging sensors

acp systems AG -
technology leader for advanced clean production



Subject of the case study

Self-driving cars, also known as autonomous vehicles, or automated, or fully automated vehicles have undergone rapid development in recent years, and the pace is accelerating. Vision camera systems are an essential element of this development, and their safe and reliable function depends crucially on the cleanliness of the components.

CO₂ snow-jet cleaning technology has established itself as an efficient and reliable solution for cleaning sensitive imaging sensors and packaging.

Requirement

More than one leading producer of imaging sensors approached acp systems AG with the requirement to ensure that imaging sensors are particle free to ensure the highest quality of the final product.

Wet-chemical cleaning of these components is not possible and dry cleaning with compressed air alone is not efficient enough to remove particles and filmy residues. Critically, the active sensor, contacts, and printed circuit board must not be damaged by the cleaning process.





CO₂ snow-jet cleaning

Objectives in Manufacturing

Dry, particle and film free products



Features & benefits

- Dry, chemical-free cleaning
- Fast & efficient (no drying cycle required)
- Residue free
- Selective
- No chemicals or wastewater
- Kind on the environment (recaptured CO₂)
- Manual or automated



Why acp?

acp systems AG was already known as the world leader in CO₂ snow-jet cleaning of sensitive devices with existing proven experience in the application of cleaning of imaging sensors.

The Solution - Removal of micron particles and filmy residues

CO₂ snow-jet cleaning technology from acp systems AG offers a dry, non-aggressive and residue-free option for the cleaning of image sensors, such as CCD or CMOS. Residues from production including flux, adhesive particles, fibers, and dust are removed without risk of damage to the sensor or its packaging.

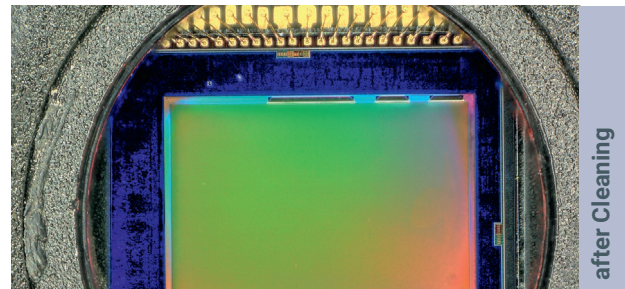
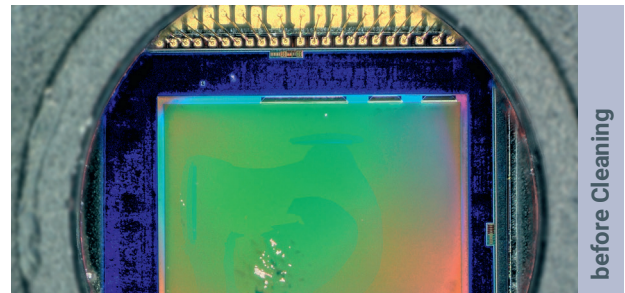
Due to the very high cleanliness requirements in this sector, the dry process is also increasingly being used for cleaning camera system housings, in metal or plastic.

Fully automated

Integrated

Cleanroom compatible

The compact cleaning systems can easily be integrated into fully automated production lines. Modular systems for the parallel cleaning of sensors and housing parts can also be implemented.



Summary

Fully automated CO₂ snow-jet cleaning is a safe, dry, and reliable method of cleaning imaging sensors and housings. This is an important contribution towards making driver assistant systems more reliable and safer.

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