



PRESSEMITTEILUNG

How the sensXPERT solution is making Aviation safer

sensXPERT is revolutionizing safety in aviation with groundbreaking DEA analysis and unique sensor technology combined with machine learning.

- Real-time quality inspection during the production process
- Resource-efficient material usage and energy savings
- Data analysis for compliance reporting

Munich, February 26, 2024 – sensXPERT, a corporate venture of the Netzsch Group, possesses pioneering technology that elevates safety in the aviation industry to new heights. With a method called Dielectric Analysis (DEA) and sensor technology developed by sensXPERT, the company's solutions enable precise measurement of material behavior, surpassing conventional sensors and material analysis offered by traditional providers in the market. "What sets sensXPERT's solution apart is the real-time inline analysis of materials during the production process. By directly analyzing each piece, timely interventions in production can be made," explains Johannes Roth, Application Engineer and Aviation Expert at sensXPERT.

The data collected by sensXPERT from these analyses provides rapid root cause identification for the manufacturing company, allowing optimizations for specific quality improvements to be made during production.

Challenges for the Aviation Industry: Sustainable materials combined with quality assurance and cost efficiency

For all industries, "sustainability and quality assurance" have become crucial decision criteria in production processes, as companies must demonstrate, due to the EU Directive on corporate sustainability reporting (CSRD), that a component is environmentally friendly. However, this issue poses a significant challenge for the aviation industry. Through collaborations with renowned companies in the aviation industry such as the German Aerospace Center (DLR) or the National Institute for Aviation Research (NIAR), sensXPERT is well acquainted with the challenges of this sector and continuously works on solutions. Thus, sensXPERT analyses provide a solid database for the compliance department. By optimizing production processes, timely analysis is enabled. So, energy savings can be achieved through the use of sensXPERT sensors simultaneously. A possible reduction in cycle time affects the energy consumption of a production. With sensXPERT sensors, quality variations within the product can also be reduced.

The production process can be dynamically adjusted with sensXPERT, so that material variations do not affect the quality of production. Another advantage is the reduction of error cycles. With sensXPERT Digital Mold, the standard-prescribed material incoming inspection as well as the post-production inspection are integrated into the production cycle, thus preventing material scrap. "After each manufactured part or with each production cycle, the sensXPERT sensor triggers an alarm immediately if the produced piece shows defects.

This can prevent hundreds of rejects, whose material would otherwise have to be destroyed," emphasizes Johannes Roth.

Johannes Roth from sensXPERT summarizes the top 5 benefits for the aviation industry of using sensXPERT sensors:

1. sensXPERT is like a magnifying glass into the production process

The sensXPERT sensor solution acts like a magnifying glass into the production process, ensuring 100% traceability of production quality. This approach goes beyond conventional methods, allowing detailed documentation and data tracking for each individual part. This is particularly relevant in liability cases where precise evidence is required for court proceedings.

2. Gradual upgrading of machinery is possible

The implementation of sensXPERT sensors can be done successively, one machine at a time, or for the entire machinery. The advantage for companies is that they can start with a pilot system and retrofit additional machines at any time. However, a single sensXPERT sensor device can already monitor an entire system. This allows companies to integrate the solution into their production processes step by step as needed.

3. Easy implementation and compatibility

The implementation of the sensXPERT solution into existing production processes is uncomplicated due to the integration of industrial communication standards. In addition, individual monitoring of the company can be integrated. The sensXPERT solution can serve as both a complement and a replacement for existing solutions and machinery.

4. Cost-effective integration and very short payback period

The integration of the sensXPERT solution per machine amounts to approximately €30,000 per year for a Digital Mold installation. Setup fees are waived as companies can perform the setup themselves. sensXPERT's ROI calculator provides a precise indication of potential optimization and associated savings. In the aviation industry, some of sensXPERT's customers have achieved a payback in less than a month.

5. Quality assurance through early detection of quality defects

By using the sensXPERT solution, quality defects, as experienced in the past with various manufacturers in the aviation industry, could be detected and avoided early on. Timely intervention in production allows for precise quality analysis per piece and prevents potential defective parts.

The future of aviation might become safer with sensXPERT

The aviation industry could experience a significant improvement in quality with simultaneous long-term cost savings through the widespread use of the sensXPERT analysis. sensXPERT not only enables sustainable production but also an efficient use of energy and materials.

For more information about sensXPERT, please visit the website at www.sensxpert.com.

About sensXPERT

sensXPERT is an independent provider of innovative solutions for the aviation industry, specializing in real-time optimization of manufacturing processes in the plastic sector based on state-of-the-art Dielectric Analysis (DEA) and AI. The company strives to continuously improve safety, quality, and efficiency in the production of aviation components. sensXPERT's solutions also offer sustainable improvements in the production process for the following industries: Automotive, Aviation, Building & Construction, Renewable Energy, Electrical Applications, Military Defense, Consumer Goods, Electronics Encapsulation.

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Captions



Image 1: sensXPert material characterization equipment



Image 2: Johannes Roth (left side) and Dr. Nicholas Ecke (right side), sensXPERT

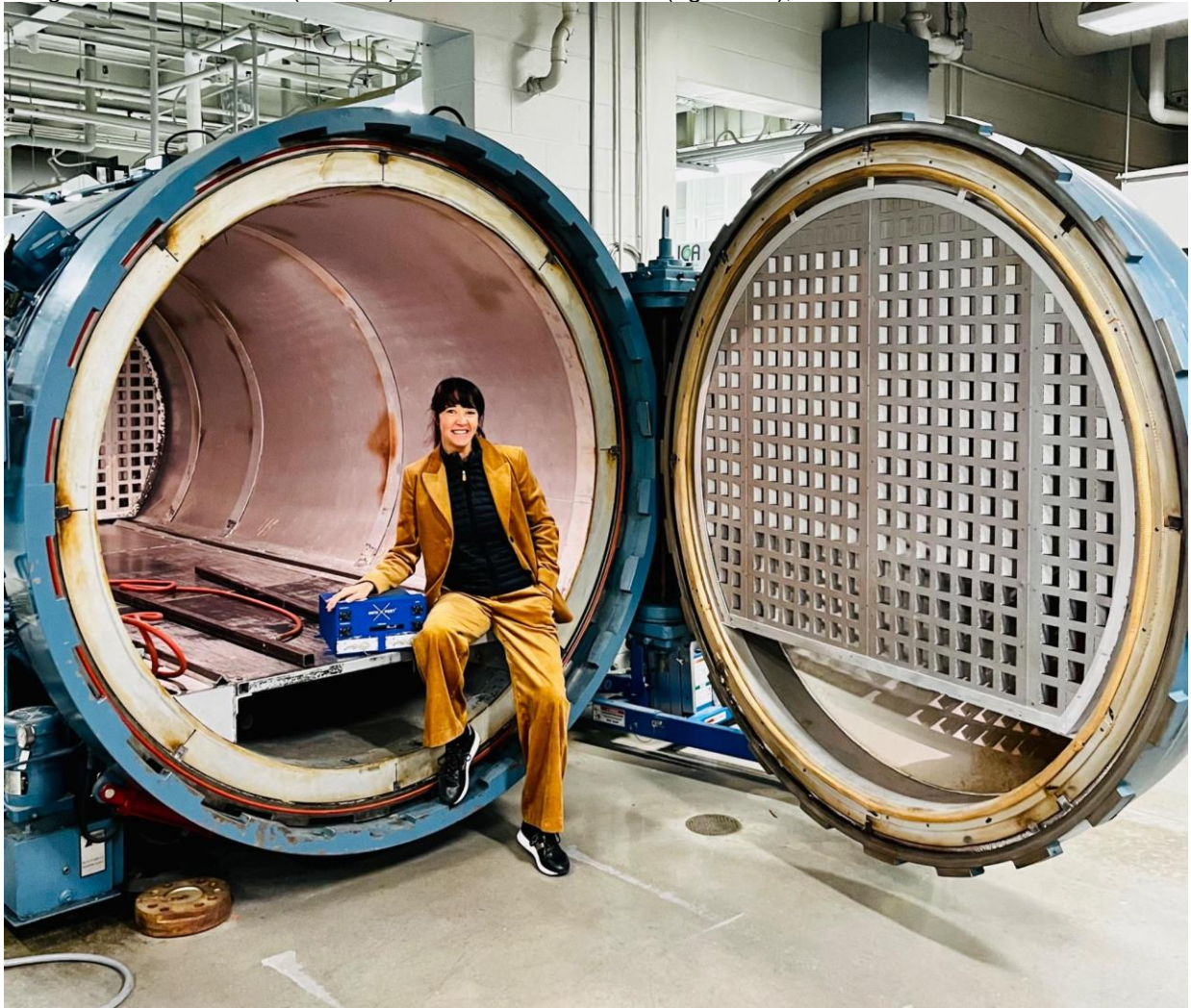


Image 3: Cornelia Beyer, CEO sensXPERT in an autoclave at NIAR