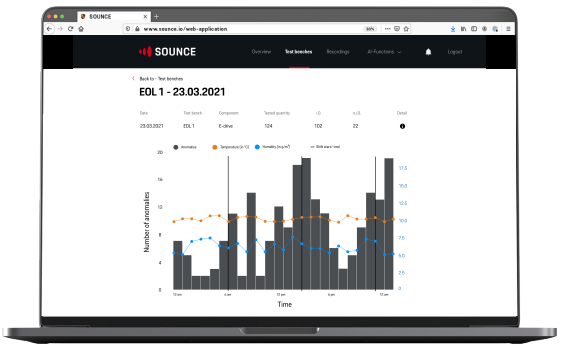

Developed for and with Porsche departments

SOUNCE

Porsche Digital

Increase quality and reduce costs with AI-based acoustic testing

Sounce enables automatic detection of unwanted noise in real time, for example for fault detection during the assembly process or at end-of-line stations. The seamless monitoring and immediate testing detects faults that would otherwise go undetected. In this way, the software helps to ensure that components sound as they should, in a cost- and resource-efficient manner: fine.



Efficiency potentials and cost effects

for the application "Porsche component qualification door development"

› Enhanced process stability

-10% **Reduced working time in FTE (compared to current process)**

Through simplified derivation of measures

>96% **Accuracy of noise detection**

In the pilot application on the door test bench at Porsche

› Reduced project costs

5-10% **Cost potentials per project**

- Avoidance of modification costs of series tools
- Avoidance of warranty and goodwill costs

Enables more efficient component development & cost-effective quality control

- Objective noise evaluation
- 24/7 monitoring even in single shift operation
- Evaluation of different input variables
- Seamless documentation
- Flexible software as a service solution

- Creates consistent test criteria
- Enables complete failure detection
- Simplifies the derivation of measures
- Increases process stability
- Little implementation effort

sounce@porsche.digital

› Request Demo & Feasibility

Conventional noise analysis: Subjective and laborious

Whether in quality assurance or component qualification - noise provides information about product and process quality.

However, the analysis and detection of noises is complex, often linked to working hours and based on the subjective perception of the engineer.

Failures detected too late or not at all must be corrected at great expense and effort.

Noise analysis with Sounce: Unambiguous and efficient

Based on a deep-learning approach, Sounce detects noise reliably and continuously.
Continuous testing speeds up the defect elimination process and facilitates root cause analysis.

With reduced inspection costs and faster results, Sounce helps the engineer to ensure product quality earlier and to be able to devote his time to other activities.
Station monitoring and fault detection is visualised in a web application. This ensures that the tested quality features are sustainable and cost-efficient.

Five steps to AI based noise detection

PREPARATION

1 - Listen & record

The test bench or station is equipped with minimally invasive sensor technology.
The data acquisition is started.

2 - Evaluate

The engineer uses the software to document quality criteria of the noise detection and thus creates the basis for the AI model training.

3 - Train

Based on the available data a deep learning algorithm is trained and provided in the cloud.

4 - Monitor & detect

The test bench is continuously monitored and noise anomalies are detected automatically in real time.The sounds can be visualised, evaluated and compared.

5 - Verify

The engineer provides feedback on the accuracy of the noise detection and optimizes the algorithm in the long term.

USE

Where can Sounce be applied?

→ Testing of functionality
→ Material testing
→ Acoustic evaluation

Get in Touch

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