



Radar Chamber

Secondary surface testing

Performing tests with Continental Radar Sensors in a chamber with an optimized environment provides state of the art analysis at an early stage of development to identify potential root causes of secondary surface design issues.

Goal of radar chamber measurements

The radar chamber is equipped with a single highly radar reflective target in a very low radar reflective environment that is covered by absorber material. The goal of radar chamber measurements in such a "radar-optimized" environment is to significantly reduce test complexity in order to easily identify and root cause potential secondary surface design issues that may have impacts on functions that are based on radar detection. This type of analysis is recommended for any type of radar application where a secondary surface is used as the radar chamber measurement significantly reduces the chance of late and expensive design changes .

3D printed accessories

Customer specific 3D parts, such as radar spacers or brackets, are additively manufactured in Continentals Competence Center for Additive Design & Manufacturing (ADaM). It fills the gap between radar and secondary surface and is used for an accurate placement of the secondary surface.

Measurement description

A robotic arm holds and rotates a Continental Radar Sensor and the secondary surface in azimuth and elevation in the radar chamber. The relative distance and relative angle between radar and secondary surface are constant during a measurement. It is possible to test different angles between radar and secondary surface (e.g. for tolerance impact testing) At a specified distance a highly radar reflective part is placed that is used as a measurement "target".

Benefits

- › Early findings of secondary surface design issues can significantly reduce the amount of late changes caused by radar performance impacts. Fixing design issues early usually means a lot of cost savings as well as significantly less timing impacts e.g. in case of revalidation.
- › Product tests can be started with a much higher confidence as the risk of finding secondary surface related issues in regard to radar performance impacts is significantly lower. So, chances are lower that your testing time is reduced due to unexpected design issues that need to be fixed first before you can continue your testing.
- › Potential impacts on functional performance can be detected that otherwise might not be detected in the final product tests, because it might only occur in very specific situations / scenarios. Reducing these issues results in improved customer satisfaction.

