

A Chamber Manufacturer's View of Automotive Corrosion Testing

Sean Fowler (sfowler@q-lab.com, (440) 835-8700),

Q-Lab Corporation

Automotive corrosion test methods contain a variety of requirements intended to produce repeatable and reproducible results. Over the last 20 years, there have been massive changes to these requirements and the chamber technology required to achieve them. Among these changes has been the merging of corrosion exposures with so-called environmental or climatic type cycles, which have their own test standards and chamber design commonalities. Environmental chambers typically perform temperature and controlled humidity exposures with precision and control of transitions. Given the close relationship between corrosion rates and relative humidity and how these vary between different materials, improving the precision and control of chamber conditions within corrosion testing is certainly justified. Unfortunately, methods of environmental and corrosion tests sometimes conflict, and this presentation will discuss some of these conflicts. Another important topic related to testing repeatability and reproducibility is to understand the chamber and operational issues that do affect results and some that do not but are often highly specified anyway. The presentation is from the perspective of a chamber manufacturer that serves all major global markets across many industry segments.