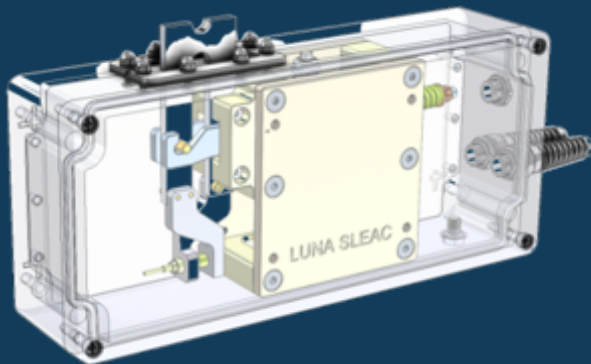


## Static Load Environment Assisted Cracking (SLEAC) Test System

Environment assisted cracking (EAC) of high-strength aluminum alloys in corrosive atmospheres presents significant maintenance and safety issues for aircraft. The integrity of an aircraft structure is affected by the deposition of corrosive contaminants, formation of corrosion damage, crack nucleation, and crack propagation. Aircraft structural health can be improved by alloy characterization in relevant environments and determining the capacity of coatings and finishes to protect against EAC.

The SLEAC test system is used to obtain in situ measurement of alloy cracking behavior using compliance techniques.

SLEAC has been designed for:



- Testing a broad range of alloys and metallographic orientations
- Evaluating protective properties of finishes and coatings
- Making continuous measurement of crack propagation throughout a test
- Operation in atmospheric test chambers and at outdoor exposure sites
- Autonomous operation and rapid access of data at remote locations
- Flexibility to include galvanic couples and crevice formers

The SLEAC system supports testing that meets AMPP TM21449-2021.

### Acuity Corrosion Technology



Acuity systems provide long-duration, autonomous monitoring of corrosivity and environment severity in service and test environments. The systems continuously collect and store measurements of single-alloy corrosion (free corrosion), dissimilar materials corrosion (galvanic corrosion), surface contaminants, air temperature, and relative humidity.

- ✓ On assets in service environments
- ✓ Qualified for flight safety
- ✓ Battery powered
- ✓ Option for integration into health management systems