

ABOUT US

Resonate Testing Limited offers a state-of-the-art test facility, between Dublin and Belfast.

Our primary focus lies within our three cornerstones of testing:

- **Vibration and Shock**
- **Fire and Flammability**
- **Environmental**

As part of The Nacelle Group we have a wealth of expertise in engineering test specification and component certification and validation.

FIRE AND FLAMMABILITY TESTING

Our custom-built fire and flammability testing facilities combined with our experienced technical staff means Resonate Testing can provide a high level service to meet your testing needs.

The extensive capabilities we offer in Aerospace fire and flammability testing range from certification of interior cabin, cargo compartment and insulation materials to fire testing of powerplant systems and fire walls.

Our fire testing facility is kerosene based, featuring a modified gun burner and a NexGen burner, both approved by the FAA.

Our capabilities can be extended to other industries including: rail, automotive, energy, marine, general engineering, etc. and we are open to diversification into other sectors.

Fire testing to any other industry standards or your bespoke requirements can be catered for. We also have access to Smoke and Toxicity testing, Rate of Heat Release (OSU) testing, and other bespoke standards.

Please do not hesitate to contact us with your specific requirements.

ACCREDITATION

Resonate Testing holds accreditation to internationally recognised test house standard ISO 17025. We are FAA listed for fire testing and have approved supplier status from a number of OEM clients. The Nacelle Group holds ISO 9001.

SYSTEMS FIRE PROTECTION TESTING

Powerplant Fire Penetration	FAA FIRE TEST HANDBOOK Chapter 12: Powerplant (FAR 25.867, 25.865, 25.1191, 25.1193 and 25.1181) AC20-135, CS-E130 (FAR33.17) ISO 2685:1998(E)
Powerplant Hose Assemblies	FAA FIRE TEST HANDBOOK Chapter 11: Hose Assemblies (TSO C142, TSO C42, C53A, C75, AC20-135) ISO 2685:1998(E), SAE AS1055

MATERIAL TESTING

Seat Cushion	FAA FIRE TEST HANDBOOK Chapter 7: Seat Cushion Flammability (CS/FAR 25.853 Appendix F)
Cargo Liners	FAA FIRE TEST HANDBOOK Chapter 8: Cargo Liner Burnthrough (CS/FAR 25.855 Appendix F)
Insulation	FAA FIRE TEST HANDBOOK Chapter 24: Insulation Burnthrough (CS/FAR 25.856 Appendix F)

FLAMMABILITY TESTING

Vertical	FAA FIRE TEST HANDBOOK Chapter 1: Vertical Bunsen Burner Test (FAR.25.853 Appendix F)
Horizontal	FAA FIRE TEST HANDBOOK Chapter 3: Horizontal Bunsen Burner Test (FAR.25.853 Appendix F)
45 deg	FAA FIRE TEST HANDBOOK Chapter 2: 45-Degree Bunsen Burner Test (FAR.25.853 Appendix F)



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EQUIPMENT AND CAPABILITIES

At Resonate Testing, we have over 150m2 of dedicated fire testing space and an in-depth knowledge and technical capability to understand your specific testing requirements.

Our key equipment includes:

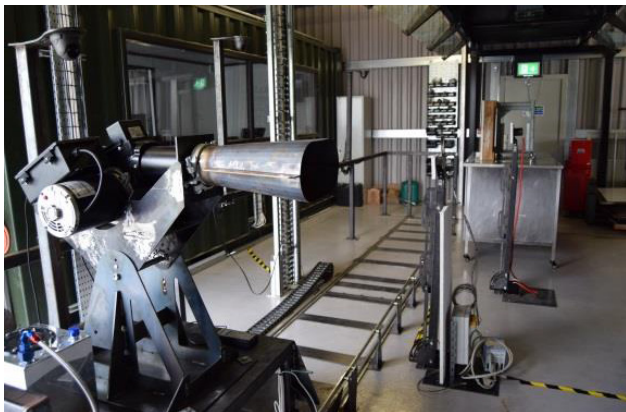
- Two kerosene oil burners - a standard modified gun oil burner and the new NexGen Sonic burner - both of which meet the FAA and EASA test requirements
- Multi-purpose flammability test cabinet

Our combined test set-up capabilities include:

- Applied vibration at 33Hz and 50Hz
- High airflows and pressures
- Fluid flows at pressure and temperature
- Fluids handled include Skydrol, Jet A1 and hydraulic oils
- Test Items under load



Flammability Chamber



Modified Carlin Burner



NexGen Sonic Burner

In addition to this standard equipment, our significant selling point is that we have the engineering and design know-how in-house to develop and build bespoke rigs which are capable of simulating the actual operational conditions to which components within designated fire zones can be exposed.

Fire resistance testing can be performed with load application, vibration conditions (33Hz and 50Hz) and internal fluids at temperature and pressure. It is also possible to reproduce varying airflows and pressure differentials across test pieces according to operating conditions required.

Resonate Testing has a range of measurement and monitoring equipment to provide customers with robust data capture and test reporting. Our fire test setup includes the ability to calibrate the burner flame in terms of both heat flux and temperature profile, and video monitoring from multiple angles.

Clients are welcome to witness tests on site or via a secure video link from other locations. We will also provide logistical support for travelling teams.