

INNOVATION IN COMPOSITE DESIGN AWARD

SHORTLISTED: National Composites Centre

The National Composites Centre (NCC) has developed a linerless composite cryogenic tank for storage of liquid hydrogen fuel on future zero-carbon emission aircraft.

This is considered one of the first linerless composite cryogenic tanks to be designed, manufactured, and tested with liquid hydrogen in the UK.

Overcoming known challenges associated with hydrogen are related to overall design – permeability, microcracking, thermal and mechanical stress.

NCC has developed specialist expertise to understand the behaviour of composite materials in cryogenic environments. The results and novel methods developed will enable rapid advancement within the UK, accelerating the process of composite hydrogen cryogenic tank design, concept sizing and optimisation.

A cryogenic tank design space exploration and optimisation tool, has also been developed as part of the ATI FlyZero programme.

Website: www.nccuk.com



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