



A subsidiary of Luna Aircraft

Contact: lunaaircraft@aol.com

Funding:

Seeking £6m

Proof of concept:

Duration: 36 months

Project manager: Satellite Propulsion Research

Competitive Advantage:

- + cut oil consumption to zero or to 1/3
- + cut SOx emission to zero or to 1/3
- + save thousands of lives a year on coast lines.
- + save money due to no propellant

Benirall Industries, France:

Representative: Pascal Biannic-Léger

Satellite Propulsion Research Ltd. UK:

Representative: Roger Shawyer

Elevator Pitch:

Benirall Industries develops the EmDrive technology to propel sea carriers and help them cut to zero or 1/3 their Sulphur Oxide (SOx) emission which is 260 times more than all cars combined, worldwide (data 2009).

Problem:

The 90,000 registered carriers consume 7.29 million barrels of waste oil a day, or more than 84% of oil production of Saudi Arabia, the world largest exporter. The 15 biggest carriers accounts for as much SOx pollution than the worldwide car fleet of 760 million vehicles (2009 data). From this results 60,000 deaths per year on the world coast lines (data 2009).

Solution:

Benirall Technologies develops EmDrive engines which allow to bring SOx emission to zero or 1/3. An EmDrive engine does not require propellant to operate, has no moving parts, and therefore results in clean energy and important savings. With the implementation of new regulations to lower SOx emission by the UN International Maritime Organization, the EmDrive technology is a solution.

Technology:

The EmDrive is a high frequency electrical energy directly converted to thrust. It is a resonant microwave cavity, shaped to obtain different group velocities at each end, and thus achieve a force difference as the EM wave reflects off each end plate. Benirall Technologies' partner, SPR Ltd. , has been granted the Patent GB 2493361 entitled "High Q microwave radiation thruster" by the UK Intellectual Property Office.

Market Opportunity:

Sea carriers builders, owners and operators are the potential clients for propulsion with EmDrive technology. Shipyards are to be approached and partnered with to study the integration of EmDrive engines in a nautical environment.

Status:

The EmDrive technology has been subject to peer reviews from both NASA and the Chinese Space Agency, yet, studies prove that it produces more thrust in water than in space.