

Medium LHP state of the art

Wednesday, 9 October 2019 17:00 (30 minutes)

Loop Heat pipe is an efficient heat transfer system based on the liquid-vapor phase change phenomena. A LHP consists of an evaporator, a condenser, a compensation chamber (also called reservoir), and transport lines. For many years, EHP/Airbus have implemented several developments, in collaboration with product users, to simplify and robustify its application and improve its performances: start-up, inhibition, characterization of ground vs flight performances, subcooling improvement, spacecraft environment impact.

Nowadays, Airbus & EHP collaborates with Thales Alenia Space on new R&D projects, in order to become an European leader on LHP products.

The following presentation provides a concise overview of the last developments and tests realised on LHP² in order to have a product available on the shelves and easy to integrate from S/C system perspective:

- Start-up mastering
- Performance improvement and regulation at equipment level
- E/W radiator application using LHP for telecommunication satellite
- Deployable radiator with LHP
- LHP heritage : on ground, in orbit and future satellite mission

Primary author: Mrs COQUARD, Typhaine (airbus defence and space)

Presenter: Mrs COQUARD, Typhaine (airbus defence and space)

Session Classification: 2-Phase Heat Transport Technology

Track Classification: two-phase heat transport technology