



## ARTE WINS AN AWARD AT THE ISS R&D CONFERENCE IN WASHINGTON

***ARTE, a project developed by Argotec and coordinated and sponsored by the Italian Space Agency, won the “2017 Innovation in Technology Development and Demonstration Award” promoted by the American Astronautical Society during the ISS Research and Development Conference in Washington DC.***

Washington, DC, July 20, 2017 – Today, July 20, 2017, the experiment ARTE (Advanced Research for passive Thermal Exchange) was the only European project honoured with the “2017 Innovation in Technology Development and Demonstration Award” by the American Astronautical Society during the annual ISS Research and Development Conference in Washington, DC.

ARTE, a project designed and developed entirely by Argotec with the coordination and the sponsorship of the Italian Space Agency (ASI), is a technology demonstrator containing four heat pipes with fluid of low toxicity. This experiment allows testing these passive systems in microgravity conditions. Politecnico di Torino, partner in the project, supported the development of the electronics for the ground model.

In a view of future missions in which human exploration will always lead further away, there is increasing interest in the research of technological solution in order to reduce the human monitoring and maintenance. In this context, heat pipes represent a good solution for the heat transfer because they are passive systems and their use doesn't need human operations so they allow time saving for maintenance. In fact, these devices exploit the phase change of the fluid contained inside the tubes to transfer heat from a hot area to a cold one without using pumps or instruments that involved moving parts. Onboard the International Space Station there are not heat pipes inside the astronauts inhabited modules because the fluids used inside them are toxic and their release would be catastrophic for the crew and the onboard tools. Therefore ARTE represents a turning point because the research was focused on fluids of low toxicity that can ensure the required performance.

The use of heat pipes is not only for space, but includes many possible terrestrial applications. Argotec research in the passive heat solutions field with fluids of low toxicity has developed patents in fields of industrial, domestic, aeronautic and renewable energy applications.

The ARTE project represents the result of ongoing research and development activity conducted over 5 years inside the Argotec thermal laboratory in Turin. The first test of ARTE was successfully conducted onboard the International Space Station in April 2016. A further run of the experiment will be conducted, by the Italian astronaut Paolo Nespoli during his VITA mission, to conclude the devices qualification.

“We are so honoured to receive this award from the American Astronaut Society – said **David Avino, Argotec Managing Director** who was at the award ceremony in which the Italian astronaut Samantha Cristoforetti also took part – This international recognition is an important result for the Argotec team proud of the commitment and the work done. Our engineers took care of all project phases, from the idea that was born inside the company to the assembly of the flight model and finally to the real-time support of the operations from the Argotec Mission Control Centre directly connected with NASA and the ISS. Research and innovation are key words for our company with the objective to obtain solutions in order to support and improve not only the future of the space exploration but they also interested in potential terrestrial applications.

“The future human exploration beyond the low orbit (Moon, Asteroids, Mars...) – said **Marino Crisconio,**



**Program Manager ASI of the experiment** - needs innovative technological solutions and ASI, by virtue of its scientific right use of the ISS, gives a contribution with the promotion and the sponsorship of technological experiment such as ARTE.

**Per ulteriori informazioni:**

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