



Project MARTE

Anti-bacterial materials for textile covering

Coordinator

Thales Alenia Space SpA

Partners

Aerosekur Srl
Iniziative Industriali Sas
Politecnico di Torino
Università degli Studi di Torino

Project objectives

Development of technical fabrics having new anti-bacterial properties (which can be patented). These fabrics will be used for structural parts in space and/or civil applications which require a long lasting anti-bacterial protection.

Abstract

The main activities are:

- development of nano-structured coatings
 - identification and creation of textiles to be used in the space environment and for civil applications
 - characterization of the selected materials (mechanical, morphological, antibacterial and toxicity tests)
 - design and manufacturing of two technological prototypes for both space and civil applications.
- These prototypes are used as test benches to improve the nano-structured anti-bacterial coatings performances on technical textiles, to test them in operative conditions (including mechanical and thermal strength) and evolve the coating deposition process on full-scale items

The foreseen impacts are economic (e.g. reduction of maintenance costs in manned space structures where technical fabrics are applied and to enhance their life cycle) but above all aimed at increasing the crew's health conditions or to protect workers who operate in civil services where the bacterial proliferation must be strictly controlled.



Project for the development of cooperative innovation

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