

Aero Sekur filtration system offers near infinite life



Caption: An Aero Sekur regenerative NBC collective filtration system under development will benefit long duration missions or continuously contaminated environments.

A new regenerative Nuclear, Biological and Chemical (NBC) collective filtration system for military and dual use is under development by Aero Sekur. The initiative from Aero Sekur's ground defence division will provide a near infinite system life and therefore offers significant cost savings for both army and navy applications.

Drawing on its 40 year history of innovation in specialist safety systems and advanced flexible structures, Aero Sekur reports that the new solution, currently in development for the Italian Navy, adopts technology that will replace traditional NBC filtration systems. Typical applications will include ships, frigates, shelters and the protection of civil installations against terrorist attacks.

As part of Aero Sekur's ground defence portfolio, the new filtration solution will complement other products in the company's range that includes respirators, masks, CBRN protective suits, protected environmental structures, collective filtration systems and advanced combat clothing.

Commenting on the company's latest defence sector initiative, Marco Adami Aero Sekur's Ground Defence Business Unit Manager advises that existing filtration systems are predominantly based on activated carbon filters that require replacement of filtration cartridges and have a defined life. Detailing the company's development initiative that addresses these issues, Adami said:

"Drawing on our experience in CBRN collective protection, high air volume system capability is provided by HEPA filters to remove biological contamination and an innovative regeneration filtration system controls the chemical burden.

"HEPA filters, which are lightweight and low in power usage, prevent spread of airborne bacteria and viral organisms. Typically, the filters incorporate high energy UV light which kills trapped bacteria and viruses.

"Regenerative systems tend to be high in both weight and power demand. The breakthrough that Aero Sekur has made is producing a prototype chemical filtration system that has a near infinite life with low weight and power usage."

Defence applications set to benefit from Aero Sekur's filtration system include missions that are long duration or in continuously contaminated environments. The company reports that the solution will also be advantageous for large protected volume applications.

The ongoing development programme is co-financed by the Italian Ministry of Defence under Italy's National Military Research Plan.

Footnote: As part of the regeneration concept, once a filtration cell has become saturated by chemical contaminants, a second clean cell is activated. During this phase, the first cell can be cleaned and regenerated using a small percentage of clean air in reverse flux from the second cell.

Aero Sekur Ltd, Fowler Avenue, The Hub, Farnborough Business Park, Farnborough GU14 7JF,
United Kingdom Tel: +44 (0) 1252 302344 email sales@aerosekur.co.uk

Aero Sekur SpA, Via delle Valli 46, 04011 Aprilia (LT) Italy Tel: +39 06 92016 1 email commerciale@sekur.it
www.aerosekur.com