

Indian scientist's bullet-proof jacket will be ready in a year

By Navtan Kumar

A scientist from the Amrita University is designing a bullet-proof jacket for the Indian Army and paramilitary forces, using the ultramodern lightweight thermoplastic technology. Prof Shantanu Bhowmik is the head of Research and Projects at School of Engineering, and Professor at the Department of Aerospace Engineering at School of Engineering, Amrita University, in Tamil Nadu's Coimbatore.

A spokesperson of the Amrita University told The Sunday Guardian that the prototype jacket would be ready in the next one year and would be a "game-changer". He, however, refused to comment further about the technological part, as the matter is quite sensitive. Bhowmik could not be contacted as he is in Netherlands.

The official said that the jacket would be manufactured using indigenous technology, for which an empowered committee of the Ministry of Defence has given its go-ahead. "It will be developed in collaboration with the DRDO (Defence Research and Development Organisation)," he said.

The official said that this is for the first time that Indian Army will have a jacket made indigenously. At present, India spends Rs 1.5 lakh on a single jacket, which is imported from the United States. The Indian version will cost Rs 50,000 per jacket, which means India will save Rs 20,000 crore every year. The scientist has dedicated his invention to Netaji Subhas Chandra Bose.

Bhowmik received his PhD in Mechanical Engineering from Indian Institute of Technology (IIT), Roorkee. A part of his PhD thesis was done at Technical University of Berlin, Germany. At present, he is also the Adjunct Professor at the Department of Aerospace Engineering, Delft University of Technology, Netherlands.

Bhowmik has been honoured with a number of international research awards, including the Research Award of Swiss National Science Foundation of the Federal Government of Switzerland last year.

This programme provides outstanding academicians/researches visiting professorships in Swiss universities. He was also given the Marie Curie Research Award by the European Commission in 2014.

An outstanding scientist, Bhowmik has established the International Centre for Nano Technology and Applied Adhesion at Sikkim Manipal University, Sikkim. His research articles have been cited by a number of companies including Lockheed Martin (US), Israel Aerospace Limited, Leoni Studer AG (Switzerland), Dutch Space (The Netherlands) and Ventracor Limited (Australia).

Bhowmik has published over 135 research articles in polymeric composite, nano composite adhesive bonding and surface engineering related to aviation, space and nuclear applications in international journals and international conferences; three book chapters; he has filed five patents and seven invention disclosures.