

Curriculum Vitae



Dr. Saikat Deb Acharya did his Bachelor of Engineering, B.E. (Honours) in Mechanical Engineering and Doctor of Philosophy, (Ph.D.) in Metallurgical and Materials Engineering from NIT Durgapur. He did Post Graduate Diploma in Business Management (PGDBM) from Indian Institute of Social Welfare and Business Management (IISW&BM), Kolkata. From Campus selection, he joined TELCO, Jamshedpur as Graduate Engineer Trainee in July 1992. After successful completion of 2 years rigorous training, he was promoted to Senior Engineer since July 1994 in due time. He then changed his organisational goal and spent nearly 3 years till December 1999 in GCIL, Kolkata. For a short stint he joined Jaya Shree Insulators, Aditya Birla Group unit, till he acquired the present opportunity in February 2001 as a Scientist at CSIR-Central Glass & Ceramic Research Institute, Kolkata. Since then he has been pursuing research and teaching as profession for more than 20 years as of now in the field of fracture mechanics. Few experts are performing research in high speed experimental solid mechanics in a few premier Institutions in the country and the incumbent is one among them. International experts like Prof. K.T. Ramesh of Hopkins Extreme Materials Institute, USA and Harvard University had shown interest in his research on dynamic behavior of materials. They wanted the data to be available with their repository. This shows the demand of the results of his work in the international level playing field. He is an Associate Professor of Engineering Sciences in Academy of Scientific and Innovative Research (AcSIR). He has published more than 50 research articles in National and International peer reviewed Journals, and Conference Proceedings as principal author or co-author. His new revelations in the experiment of high strain rate characterization about stress induced 'Subgrain' formation in alumina, dynamic response of Al6061, SS304L/SS316LN alloys, proposed empirical relations in polymers etc., are worth mentioning. He has established his credential supplementing new scientific findings in brittle, ductile, and polymeric-composites which were peer reviewed and recognised Internationally. His applied research and product development is also appreciated. As a Project Co-PI/Member he contributed significantly to 3 important CSIR Network Projects of total value Rs. 83.135 Crore for National Defence and 1 Private Sponsored Project of Rs. 10 Lakh. He received best project award as Co-PI from CSIR-CGRI in 2014 for the Private Project. He is a life member of many professional bodies e.g., MRSI, EMSI, ICS, MIME etc. He is a Fellow of The Institution of Engineers (India), Kolkata.

Light armour by city experts

Jayanta Gupta | TNN

Kolkata: Efforts by scientists at the Central Glass and Ceramic Research Institute in Jadavpur, Kolkata, have resulted in the development of composite armour that could replace heavy metal plates that are normally used to protect vehicles from armed attacks.

According to sources, the innovation holds great promise and the Defence Research and Development Organisation (DRDO) is trying to commercialize it jointly with Ficci.

"It is a unique technology that can produce lightweight, maintenance free and easily repairable material known as Ceramic Composite Integral Armour (CCIA). The material is lighter and more efficient than metals. The technology

can be used to manufacture large and complex structures with integral ceramics. Conventional armour is made in flat rectangular pieces and can't be applied to complex curved structures whereas the CCIA can easily comply with complex shapes," a source revealed.

Armour plates are used for VIP vehicles as well as those used during low intensity conflict and urban warfare systems. The greatest challenge faced by designers of armour-plated vehicles is how to provide adequate protection while keeping the weight down. The CCIA promises to be more than 40% lighter than conventional armour plates. The ceramic armour can be adequately 'moulded' to cover bends and curves.

"Large structures such as armoured vehicles and as-

sault boat hulls which have complex shapes and curves can be made with few pieces and minimum joints. The material can be made watertight and amphibious. Fabrication time is lowered, bringing down costs. Easy repair of damaged armour is possible due to the modular structure. CCIA has a ceramic layer, rubber layer, composites structural layer, cover layer and other functional layers for specific purposes like fire-protection. The ceramic layer provides primary ballistic protection," added the source.

Sources in the DRDO said that the technology will also be used by Indian security agencies.

"This is a great innovation that may do away with the need to use metals as protective sheets," an official said.