Department of Metallurgical and Materials Engineering
Indian Institute of Technology Madras
and
Indian Institute of Metals, Chennai Chapter

Third Lecture of the Prof. E.G. Ramachandran Distinguished Lecture Series

By

Prof. Dipankar Banerjee
Department of Materials Engineering,
Indian Institute of Science, Bangalore

On

Materials In Flight

Prof. Bhaskar Ramamurthi
Director, IIT Madras

will Preside over the function

Date & Time: May 8, 2015, 3.00 PM
Venue: IC&SR Auditorium, IIT Madras

Prof. E.G. Ramachandran

As the first Professor and the first Head, he has shaped the Department of Metallurgical Engineering, IIT Madras, over three decades, as a prominent place for teaching and research in Industrial Metallurgy. His multifaceted excellence is evident from his publications in NATURE and Acta Metallurgica in early 60's. A PhD from Sheffield at the age of 22. As a teacher, he is the "Numero Uno" and has inspired generations of metallurgists. He has been instrumental in establishing the industrial metallurgy division in the Indian Institute of Metals and he became the President of Indian Institute of Metals in 1980.

Abstract

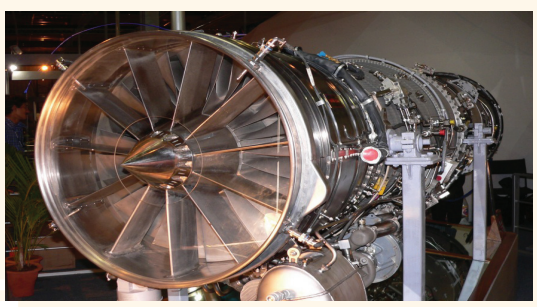
One of the defining events of the past century was humankind's first flight in 1903. The key technology factors that determine the performance, affordability and environmental impact of flying vehicles are the optimisation of the airframe and engine structural features to maximise the lift to drag ratio, the thrust to weight ratio of the engine and the overall aircraft system, and the specific fuel consumption of the propulsion system. The evolution of materials in flight significantly affects these metrics. The use of materials in aerospace from the first flight of the Wright Brothers to the present day will be presented with a focus on Indian efforts. The requirement of integrity and safety coupled with the extraordinarily demanding environment makes the materials development for aerospace applications a unique challenge.

Prof. Dipankar Banerjee

Prof. Dipankar Banerjee graduated from IIT Madras in 1974 and got his PhD from IISc Bangalore in 1979. He then joined the DMRL, Hyderabad and became its Director from 1996 to 2003. He was Chief Controller of R&D of DRDO during 2003-2010. Since 2010, he is a Professor at IISc.

Prof. Banerjee is well known for his work on titanium alloys and Ti-Al based intermetallics for high temperature applications.

Prof. Banerjee is a distinguished alumnus of IIT Madras and is currently on its Board of Governors. He served as President of the Indian Institute of Metals in 2010. He is a fellow of all Indian academies of sciences and engineering. He has received numerous honors including Padma Shri (2005), Shanti Swarup Bhatnagar Award (1993) and DRDO's Lifetime Achievement award (2014)



All are cordially invited to the lecture