

Seminar

Institute for Plasma Research

- Title:** Metallurgical Characteristics, Porosity, Compressive Strength, Wear, and Chemical Degradation Behaviour of Aluminium-Cenosphere Composite Foam
- Speaker:** Dr. Amarish Kumar Shukla
Indian Institute of Technology, Kharagpur
- Date:** 26th August 2022 (Friday)
- Time:** 03:30 PM
- Venue:** Join the talk online
https://lobby.ipr.res.in/Dr.AmarishKumarShukla_PDFTalk

Abstract

In the present scenario, there has been an increasing interest in to develop light weight, low cost and high strength material. The reinforcements of different kind of ceramic materials enhanced the mechanical and tribological properties; however, these reinforcement particles enhanced the density and cost of composite. The cenosphere has empty space in their core, and porous hard cell wall. The combinations of porosity, higher cell wall strength and easy availability, overcome the cost barrier for wide spread applications in automotive, aerospace, naval, small engine and for other industrial applications. The present talk aims to enlighten the effect of cenosphere reinforcement and foaming agent to development of composite foam by different processing routes such as stir casting, powder metallurgy and spray forming routes, and the effect of reinforcement and process parameters on the mechanical, wear and corrosion behaviour of composite foam.

Keywords: Aluminium-alloys; cenosphere; porosity; fabrication process; mechanical; wear; corrosion.
