Press Release

Amaravati, 17th Sep 2021

Patent granted to SRM University-AP for a novel processing of Magnesium alloy foams

Prof G S Vinod Kumar and the PhD scholar under his supervision Mr Dipak Nandkumar Bhosale from the Department of Mechanical Engineering has brought the first granted patent to SRM University-AP. The patent titled "A Process for Preparing Magnesium Foams" is on the novel processing of Magnesium alloy foams via molten metal route. Metal foams are the class of novel ultra-lightweight and high strength materials used for engineering structures. Under the light-alloy category, Magnesium alloys possess greater challenges to foam and the inventors Mr Dipak Bhosale and Prof Vinod Kumar have come up with a novel process to foam Magnesium alloy effectively. The patent was filed on January 14, 2020, and granted on August 16, 2021.

The patent relates to a process for the preparation of closed-cell Magnesium foams using dolomite [$CaMg(CO_3)_2$] as a blowing agent (gas source), through a liquid metal route. The inventors have demonstrated economical and naturally occurring mineral dolomite to be an effective blowing agent for preparing magnesium foams and *in-situ* formed $MgAl_2O_4$ (spinel) particles as the stabilizing agent during stabilization of foams.

Even though the Indian Patent Office, as well as patent attorneys and agents, can assist in navigating the legal procedures to see if innovation is patentable; filing and obtaining a patent is a time-consuming and complicated legal process. The Indian Patent Office take a long time to issue or deny a patent application after it is filed. "It indeed gives a great sense of contentment that the patent grant is obtained in just 16 months from the date of application", says Prof Vinod sharing his mirth on the achievement. Vice-Chancellor V S Rao and Pro-Vice-Chancellor Prof D Narayana Rao laurelled Prof Vinod and Mr Dipak for making the research prospects of the university soar higher.