

Cooling India

India's foremost Monthly dedicated to the growth of HVACR Industry

Visit us at



Hall 9-12
Stall B24

27 - 29 February 2020
IEML, Greater Noida, Delhi NCR



SUNRAJ INDUSTRIES

www.sunraj.com



216-218, Veena Ind. Estate, L.B.S. Marg, Vikhroli (W), Mumbai - 400 083. INDIA.
Tel.: +91-22 4038 7575 / 2577 0075 Fax : +91-22 2578 3127 E-mail : mail@sunraj.com



Pluss Advanced Technologies leveraging RE & storage

Vishnu Sasidharan,
Vice President-New
product Initiatives,
Pluss Advanced Technologies

Pluss Advanced Technologies is a materials research and manufacturing company involved in the field of Speciality Polymeric Additives for enhancing polymer properties and Phase Change Materials (PCMs) for thermal energy storage.

Pluss making strides with advanced technology

Pluss is focused on providing temperature control sustainably and innovatively for both heating and cooling application across industries. We have created the market and baseline for application of advanced PCMs technology. For instance, we developed and commercialised one the first positive temperature latent heat storage systems in the world for building air-conditioning. A positive temperature latent storage system results in a 25 per cent higher operating cost saving than the conventional ice based thermal energy storage.

In the cold-chain logistics space, PCM technology has gained adoption for the first and the last mile distribution of perishables using portable shipping containers. The transportation of part load shipments currently is done using dry ice or ice packs which are inefficient and puts the temperature integrity at risk. Another challenge in cold-chain is the inadequate volume reefer vehicles in the country and the reason for this is predominantly the unaffordable cost of operation. In this area, Pluss has enabled partially electric reefer trucks which leads to reduction of diesel consumption by 50 per cent with a range of 16 hours of runtime. These trucks are not only economically efficient but also silent in operation and environment friendly.

In the commercial refrigeration space, Pluss has enabled over 60,000 chest freezers and coolers integrated with PCMs since 2013. The integration of PCMs not only provides a temperature backup but also reduces the energy consumption by over 30 per cent which can lead to a massive impact on the OPEX for stores, Hypermarts and other retailers who use chest freezers and coolers. Pluss is working closely with United Nations Industrial Organisation and Bureau of Energy Efficiency to incorporate standards and publish validation reports that the industry could benefit from.

Business plans for 2020

In 2020, we seek to focus on thermal management systems for electric vehicles, Building HVAC, reefer vehicles and commercial refrigeration systems as these are four areas wherein a lot of potential still remains to improve. Conventional refrigeration will not be enough to sustain and feed the growing energy demand. Additionally, there is a pipeline of hybrid products that we are looking at which would grid independent, the focus will be to leverage renewable energy and storage. ■