

Maximizing the energy storage performance of phase change thermal storage systems

Abstract

Phase Change Material (PCM) is considered as a good Thermal Energy Storage (TES) material as it can provide much higher energy storage densities compared to conventional sensible thermal storage materials. An extensive literature review has been carried out on the use of PCM in thermal storage systems. This paper discusses the main problems of using PCM for energy storage as well as proposed future research work to address the issues.

Keywords — Heat transfer, phase change materials, renewable energy, thermal energy storage