

An Overview of Thermal Storage Techniques for Solar Thermal Applications

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Abstract : The traditional electricity operation in solar thermal plants is designed to operate on a single path initiating at power plant and executes at the consumer. Due to lack of energy storage facilities during this operation, a decrease in the efficiency is often observed with the power plant performance. This paper reviews the significance of energy storage in supply design and elaborates various methods that can be adopted in this regard which are equally cost effective and environmental friendly. Moreover, various parameters in thermal storage technique are also critically analyzed to clarify the pros and cons in this facility. Discussing the different thermal storage system, their technical and economical evaluation has also been reviewed.

Keywords : thermal energy storage, sensible heat storage, latent heat storage, thermochemical heat storage

Conference Title : ICEESD 2015 : International Conference on Energy, Environment and Sustainable Development

Conference Location : Paris, France

Conference Dates : January 23-24, 2015