

Vapour absorption refrigeration system for rural cold storage: a comparative study

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Abstract

Value addition of agro products improves the livelihood opportunities for rural farmers. Cold Storage is one of the techniques to improve the shelf life of agro product. With the increase in the utilization of refrigeration and air cooling using vapour compression refrigeration technology, global warming and ozone depletion due to the refrigerants have also been increased. So, to overcome this problem, several restrictions were placed on the refrigerant by the United Nations Framework Convention on Climate Change (UNFCCC). There is no way to slow down the growth of this technology, so the focus should be shown on finding an alternative. Various studies have been carried out on an alternate refrigeration system. This paper attempts to study the power quality challenges in the conventional vapour compression system. A comparative analysis of vapour compression refrigeration (VCR) and vapour absorption refrigeration (VAR), power factor analysis and temperature measurement on both technologies has also been carried out and reported.