

Title The performance of an isothermal desiccant bed system for cooling stored grains.
Authors Thorpe, G. R. and Chen, L.
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Abstract

This paper describes a system that is based on an open-cycle desiccant bed cooling system that can reduce the wet-bulb temperature of ambient air. The energy consumption of the device is approximately 0.7 kWh of electrical energy per tonne of grain cooled and the thermal energy consumption is approximately 35 MJ per tonne. It is estimated that this thermal energy can be supplied by transpired solar collectors that have an area of 0.1 m² per tonne of grain cooled.