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Experimental studies of a single-effect absorption refrigerator using aqueous lithium-bromide: Effect of operating condition to system performance

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Abstract: This paper describes an experimental investigation of a single-effect absorption using aqueous lithium-bromide as working fluid. A 2 kW cooling capacity experimental refrigerator was tested with various operating temperatures. It was found that the solution circulation ratio (SCR) has a strong effect on the system performance. The measured SCR was 2-5 times greater than the theoretical prediction. This was due to the low performance of the absorber. The use of solution heat exchanger could increase the COP by up to 60%. (C) 2007 Elsevier Inc. All rights reserved.

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