Abstract

Aly I Shehata

Concentration Measurement Technique for Aqueous Lithium Bromide Solution in Vapor Absorption Air Conditioning Systems

For the purpose of establishing the in plant measurement technique of the absorbent concentration in solar vapor absorption air conditioning system, the relation between concentration, conductivity and temperature were experimentally studied using aqueous solutions of LiBr. The measurements have been performed with the aid of a commercially available conductivity meter and electrode with built-in temperature probe (K=10).The measurements cover the vapor absorption cycle working temperature range (20 to 60°C) and concentration range (45 to 65%) for the lithium bromide aqueous solution. The test results of the experiment showed that, this technique can measure the lithium bromide solution concentration accurately, conveniently and quickly.