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[摘要]

傳統上台灣之超級市場設計，均未考慮賣場環境濕度控制，藉由冷凍冷藏系統的低蒸發溫度散溢之冷氣用以移除量方法應是藉由空調系統來達成。本研究結合熱管製造廠商，利用DOE-2動態能源模擬程式及實測，評估熱管應用在佳化設計策略。

以台灣之熱濕氣候而言，本研究由綜合模擬分析結果，在賣場溫度22℃的控制條件下，最佳相對溼度控制點為60~之全建築節能效果約為6.45%；配合冷凍系統最佳化後，再改善外氣滲入及照明問題之後，其節能效益最大可達25%，價約700,000元，回收年限約1.98年，本案之節能改善成果顯著。

[英文摘要]

Traditionally, the supermarkets of Taiwan designs, have not considered that the environmental humidity in the sales field is a method to consume energy by freezing the air that the low evaporation temperature of refrigeration in the sales field controls should be reached with the air conditioner system. In view of, this research combines h simulation programe and surveying, assess the heat-pipe apply to supermarkets power-saving technology ,energy the humidity is controllable.

The moisture of Taiwan, this research is by the comprehensive simulation analysis result, at 22℃ control condition humidity control is 60~70%, Utilize heat pipe to auxiliary environment humidity of sales field controled, its energy about 6.45%; Cooperate after freezing the systematic optimization, after improving the building infiltration and lighting most, its total saves electric rate of about 353,600 NTD every year, improve total fabrication cost of about 700,000 years, the energy-conservation of this case improves the achievement apparently.

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