NGHIÊN CỨU ĐIỀU KHIỂN HỆ THỐNG GƯƠNG MẶT TRỜI BẰNG ĐẠI SỐ GIA TỬ

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TÓM TẮT:

This paper presents a new method in controlling a parabolic trough solar collector system to improve the efficiency of the solar-to-thermal energy. It established a new fuzzy control algorithm, called hedge-algebras-based controller (HAC), and applied it to solve some fuzzy control problems. The aim of the research project is to test the solar-to-thermal energy efficiency of a tracking line-focus parabolic trough solar collector (PTSC), this is determined by measuring the temperature rise of water as it flows through the receiver of the collector when it is properly focused. Accurate control of the collector is therefore crucial to the maximizing thermal efficiency of a PTSC system. Moreover, this paper introduces a new simple flexible calculation tool which enables to calculate with a higher accuracy based on quantifying linguistic domains.