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OPTIMIZATION AND APPLICATION OF SOLAR ABSORPTION CHILLER BY USING GA

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ABSTRACT

This study employs genetic algorithm (GA) to solve optimal chiller loading (OCL) problem. GA overcomes the flaw that with the Lagrangian method the system may not converge at low demand. This study uses the part load ratios (PLR) of chiller units to binary code chromosomes, and executes reproduction, crossover and mutation operation. After analysis and comparison of the two cases studies, we are confident to say that this method not only solves the problem of convergence, but also produces results with high accuracy within a rapid timeframe. It can be perfectly applied to the operation of air-conditioning systems.

KEYWORDS: Optimization and Application of Solar Absorption