

عنوان مقاله:

Performance Comparison and Analysis of the Genetic Algorithms and Particle Swarm Optimization Methods to Optimize the Pressure-Flow Equations in Gas Transmission and Distribution Networks

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نویسندگان:

Reza Mosayebi Behbahani - *Department of Gas Engineering, Petroleum University of Technology, Ahwaz, Iran*

Naser Haji Ali Akbari - *Department of Gas Engineering, Petroleum University of Technology, Ahwaz, Iran*

خلاصه مقاله:

One of the most important goals of gas engineering is to optimally distribute gas in gas transmission and distribution networks; however, this process often suffers from some inevitable distribution network problems such as errors caused by inaccurate estimates of pressure at various points in the network. Recently, statistical optimization methods have been proposed to solve this problem. Particle Swarm Optimization (PSO) and Genetic Algorithm (GA) are common methods for this purpose. The purpose of this study is to compare the performances of these two procedures. If similar constraints and computational loads are applied to both methods, PSO can provide more accuracy and speed compared to GA, although repeatability of GA was found to be better.

کلمات کلیدی:

Gas Network, Optimization, Particle Swarm Optimization, genetic algorithm

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