

In this paper, an ant colony optimization (ACO) algorithm is proposed for operations of steady flow gas pipeline. The system is composed of compressing stations linked by pipelegs. The decisions variables are chosen to be the operating turbocompressor number and the discharge pressure for each compressing station. The objective function is the power consumed in the system by these stations. Until now, essentially gradient-based procedures and dynamic programming have been applied for solving this no convex problem. The main original contribution proposed, in this paper, is that we use an ACO algorithm for this problem. This method was applied to real life situation. The results are compared with those obtained by employing dynamic programming method. We obtain that the ACO is an interesting way for the gas pipeline operation optimization