

ABSTRACT

The background of this research is that there are still many iron collectors who do not understand the class classification according to the level needed by the factory that has an impact on prices. In terms of sorting the types of iron, there are several criteria to be accepted in the factory and profitable, including premium iron, super, scrub and cans according to the price determined by the factory in the future. In this study a system that was implemented using the Genetic Algorithm method is a search technique that is in computer science to find completion estimates for optimization and search problems. The results of this study have different results for each experiment. the first experiment got 5 best solutions and in the second experiment got 6 best solutions and in the third experiment got 10 best solutions but from each experiment the best solution among the best was taken so that the best solution was obtained. For the first experiment, the best solution is in iteration 14 with fitness value or gain value of 41350000 while for the second experiment, the best solution is iteration 183 with fitness value or gain value of 44050000 and for the third experiment, the best solution is in 123 iteration with fitness value or gain value of 44,600,000.

Keywords: Optimization System, Genetic Algorithm (GA), scrap metal, scrap metal price