

from this production floor layout, such as there was backtracking and cross-tracking process that will cause the total material flow become higher. And in Die Casting Department, there was bottleneck process happened because both machines cannot meet the expected quantity for one day. Based on this problem, this research aim is to design facility layout for PT. Aditec Cakrawiyasa Plant 2 using SA-CRAFT Algorithm to minimize the material handling moment. SA-CRAFT algorithm can provide a solution that is close to the optimal solution. The production floor and material flow will be the primary data. After that, these data will be processed to develop initial layout based on the routing sheet and the production floor area. Activity Relationship Chart (ARC) will help to define the relationship activity for each department to develop the initial layout that will be the input data to get the suggested layout. Developing From to Chart (FTC) will be used to calculate the material handling moment by multiplying the flow frequency and flow distance of the initial layout. After getting the suggested layout, it will be compared with the existing layout based on the total of material handling moment. The suggested layout gives the total moment reduction around 7.59% from 2299 become 2124.5.

Keywords : *Facility Layout, SA-CRAFT Algorithm, Material Handling Moment*