

INTISARI

PERANCANGAN ULANG TATA LETAK FASILITAS PRODUKSI CUMI OVEN DI PT ANUGRAH LAUT INDONESIA, TUBAN, JAWA TIMUR MENGGUNAKAN METODE CRAFT DAN BLOCPLAN

PT Anugrah Laut Indonesia merupakan salah satu perusahaan yang bergerak di bidang pembekuan produk hasil laut seperti jenis ikan demersal, ikan pelagis, jenis cumi-cumian, kerang serta cumi oven. Cumi oven merupakan salah satu produk unggulan di PT Anugrah Laut Indonesia. Cumi oven memiliki nilai jual lebih tinggi dibandingkan dengan diolah beku. Penelitian ini bertujuan untuk mengetahui jarak tempuh dan biaya *material handling* hasil perancangan ulang tata letak dengan metode CRAFT dan BLOCPLAN Serta mengetahui metode yang lebih efektif dalam mengurangi jarak tempuh dan biaya material handling pada tata letak fasilitas produksi. Proses perancangan ulang tata letak ini dilakukan dengan metode CRAFT dan BLOCPLAN. CRAFT merupakan contoh program tipe teknik Heuristic yang berdasarkan pada interpretasi *Quadratic Assignment* dari program proses *layout*, yaitu mempunyai kriteria dasar yang digunakan meminimumkan biaya perpindahan material, dimana biaya ini digambarkan sebagai fungsi linier dari jarak perpindahan. BLOCPLAN merupakan program yang dikembangkan untuk perancangan tata letak fasilitas menggunakan algoritma *hybrid* yang menggabungkan antara algoritma konstruktif dan algoritma perbaikan. Hasil penelitian menunjukan *layout* usulan metode CRAFT memiliki total panjang lintasan perpindahan sebesar 70.931,55 m dan ongkos *material handling* sebesar Rp 939.893,479. *Layout* usulan CRAFT mampu menurunkan ongkos *material handling* sebesar 5%. Sementara itu *layout* usulan metode BLOCPLAN memiliki total panjang lintasan perpindahan sebesar 55.613,8 m dan ongkos *material handling* sebesar Rp 736.922,40. *Layout* usulan BLOCPLAN mampu menurunkan ongkos *material handling* sebesar 25%.

Kata kunci: BLOCPLAN, CRAFT, ongkos *material handling*, tata letak

ABSTRACT

RELAYOUT OF OVEN SQUID PRODUCTION FACILITY AT PT ANUGRAH LAUT INDONESIA, TUBAN, EAST JAVA USING CRAFT AND BLOCPLAN METHODS

PT Anugrah Laut Indonesia is a company that operates in the field of freezing marine products such as demersal fish, pelagic fish, squid, shellfish and oven squid. Oven squid is one of the main products at PT Anugrah Laut Indonesia. Oven squid has a higher selling value compared to frozen. This research aims to determine the traveled distance and material handling costs from layout redesign result using the CRAFT and BLOCPLAN methods as well knowing which methods are more effective in reducing travel distance and material handling costs in the production facilities layout. This layout redesign process was carried out using the CRAFT and BLOCPLAN methods. CRAFT is an example of a Heuristic technique type program which is based on the Quadratic Assignment interpretation of the layout process program, which has basic criteria used to minimize material movement costs, where these costs are described as a linear function of the movement distance. BLOCPLAN is a program developed for designing facility layouts using a hybrid algorithm that combines constructive algorithms and improvement algorithms. The research results show that the proposed layout for the CRAFT method has a total path length of 70.931,55 m and material handling costs of Rp. 939,893,479. CRAFT's proposed layout is able to reduce material handling costs by 5%. Meanwhile, the proposed layout for the BLOCPLAN method has a total path length of 55.613,8 m and material handling costs of Rp. 736,922.40. The proposed BLOCPLAN layout is able to reduce material handling costs by 25%.

Keywords: BLOCPLAN, CRAFT, layout, material handling costs