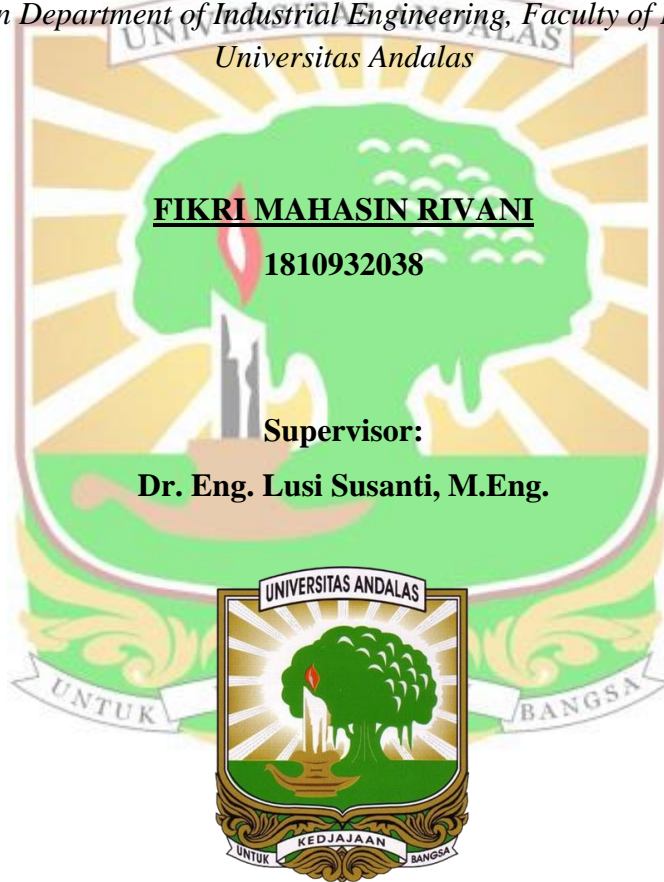


**TROLLEY REDESIGN AT YANNA BAKERY IN KOTO
TANGAH DISTRICT PADANG TO IMPROVE
PRODUCTIVITY**

FINAL PROJECT REPORT

*A report submitted in fulfilment of the requirement for the award of the degree of
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ABSTRACT

Work facilities are any facilities or infrastructure used to support the implementation of employee work in order to facilitate task completion. Throughout companies and MSMEs, there are numerous work facilities. Yanna Bakery is one of the MSMEs that frequently use work facilities. In this bakery, the work facility which will be analyzed is a trolley that transports a baking sheet containing the formed dough to the loaf steamer. The trolley's problems include the relatively low distance of 7.5 cm between the base and the floor surface, the trolley wheels being made of iron, which can erode the surface of the cement-based floor if used continuously, and the lack of a stopper to lock the trolley's position. This is also supported by the results of the Manual Task Risk Assessment (ManTRA) calculation and the Rapid Entire Body Assessment (REBA) calculation, indicating that the trolley requires immediate repair. The trolley will be repaired based on the voice of the worker using the Design Analysis (DA) method. The voice of the worker that has been obtained is interpreted into product specifications that will be redesigned. After that, selecting the suitable materials and components uses the concept screening. Meanwhile, product design alternatives are obtained using the Morphological Chart. Then, the optimum performance of each criterion is determined, namely stress, strain, displacement, and factor of safety. Then, modeling is an analytical prototype that displays three alternative product designs and the concept. Finally, each criterion's optimum performance is compared against the three product design alternatives.

Keyword: Work Facility, ManTRA, REBA, Design Analysis, Morphological Chart.

ABSTRAK

Fasilitas kerja adalah segala sarana atau infrastruktur yang digunakan untuk mendukung implementasi pekerjaan pekerja guna mempermudah penyelesaian tugas. Pada seluruh perusahaan dan UMKM, terdapat beberapa fasilitas kerja. Yanna Bakery merupakan salah satu UMKM yang sering menggunakan fasilitas kerja. Pada toko roti ini, fasilitas kerja yang akan dianalisa adalah troli yang mengangkut loyang berisi adonan yang sudah dibentuk ke tempat penguapan. Kendala yang dihadapi troli antara lain jarak antara alas dan permukaan lantai yang relatif rendah yaitu 7,5 cm, roda troli yang terbuat dari besi dapat mengikis permukaan lantai berbahan dasar semen jika digunakan terus menerus, dan tidak adanya stopper untuk mengunci posisi troli. Hal ini juga didukung dengan hasil perhitungan Manual Task Risk Assessment (ManTRA) dan perhitungan Rapid Entire Body Assessment (REBA) yang menunjukkan troli tersebut perlu segera diperbaiki. Troli akan diperbaiki berdasarkan voice of the worker menggunakan metode Design Analysis (DA). Voice of the worker yang telah didapatkan diinterpretasikan ke dalam spesifikasi produk yang akan didesain ulang. Setelah itu, dilakukan pemilihan material dan komponen yang sesuai menggunakan konsep screening. Sedangkan, alternatif desain produk diperoleh dengan menggunakan Morphological Chart. Kemudian ditentukan kinerja optimum dari masing-masing kriteria, yaitu tegangan, regangan, perubahan bentuk, dan faktor keamanan. Kemudian, pemodelan merupakan prototipe analitik yang menampilkan tiga alternatif desain produk beserta konsepnya. Terakhir, kinerja optimal setiap kriteria dilakukan perbandingan terhadap tiga alternatif desain produk.

Kata Kunci: Fasilitas Kerja, ManTRA, REBA, Design Analysis, Morphological Chart.