

**UJI PERFORMA MESIN *PRESS CONVEYOR* DI
PT. PERKEBUNAN NUSANTARA IV REGIONAL
IV KEBUN DANAU KEMBAR**



**FAKULTAS TEKNOLOGI PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2025**

UJI PERFORMA MESIN PRESS CONVEYOR DI PT. PERKEBUNAN NUSANTARA IV REGIONAL IV KEBUN DANAU KEMBAR

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ABSTRAK

PT Perkebunan Nusantara IV (PTPN IV) adalah perusahaan BUMN yang bergerak di industri perkebunan dan terkenal sebagai produsen utama berbagai komoditas perkebunan di Indonesia, termasuk teh hitam. Penelitian ini bertujuan untuk menganalisis performa teknis dan efisiensi mesin press conveyor dalam proses produksi teh hitam di PT Perkebunan Nusantara IV (PTPN IV) Regional IV Kebun Danau Kembar. Metode yang digunakan dalam penelitian ini dengan melihat perbandingan rata-rata jenis bubuk teh terhadap 3 variabel. Hasil menunjukkan rata-rata kapasitas produksi sebesar 2.145,6 kg/jam. Analisis energi pada mesin ini memiliki hasil energi manusia rata-rata 21,1126 kJ, kemudian energi listrik mesin *press conveyor* didapatkan rata-rata 12189,6 kJ. Analisis ekonomi didapatkan biaya tetap Rp. 1.200.600/tahun, kemudian biaya tidak tetap Rp. 13.544/jam, biaya pokok Rp. 6,53/kg, dan BEP 2312 jam/tahun. Hasil penelitian ini diharapkan menjadi bahan evaluasi dan rekomendasi dalam pengambilan keputusan teknis serta pengoptimalan operasional di PTPN IV.

Kata Kunci: Analisis Energi, Analisis Ekonomi, Kapasitas Produksi Mesin Press Conveyor, Teh Hitam

PERFORMANCE EVALUATION OF THE PRESS CONVEYOR MACHINE IN BLACK TEA PRODUCTION AT PT PERKEBUNAN NUSANTARA IV REGIONAL IV DANAU KEMBAR ESTATE

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ABSTRACT

PT Perkebunan Nusantara IV (PTPN IV) is a state-owned enterprise engaged in the plantation industry and well-known as a leading producer of various plantation commodities in Indonesia, including black tea. This study aims to analyze the technical performance and efficiency of the press conveyor machine in the black tea production process at PT Perkebunan Nusantara IV (PTPN IV) Regional IV, Danau Kembar Estate. The method used in this research was by comparing the average types of tea powder against three variables. The results showed that the average production capacity was 2,145.6 kg/hour. The energy analysis indicated that the average human energy was 21.1126 kJ, while the electrical energy consumption of the press conveyor machine was 12,189.6 kJ. The economic analysis revealed fixed costs of IDR 1,200,600/year, variable costs of IDR 13,544/hour, basic production costs of IDR 6.53/kg, and a break-even point (BEP) of 2,312 hours/year. The results of this research are expected to serve as evaluation material and recommendations in technical decision-making as well as operational optimization at PTPN IV.

Keywords: Press Conveyor Machine, Black Tea, Production Capacity, Energy Analysis, Economic Analysis