

**KAJIAN PENGELUARAN DAN PEMUATAN KAYU
DENGAN ALAT EXP-2000 YANG DISEMPURNAKAN**

Study of Extraction and Loading Logs Using Exp-2000 Accomplished

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ABSTRACT

As an attempt to overcome the difficulty in collecting wood logs that results from manual felling of particular forest stands located on steep or inclined area, it is necessary to find out a significant breakthrough by providing the wood extraction equipment which should be inexpensive, easily operable, productive, and low in operation as well as maintenance cost. As the relevance, trial on collecting and loading/unloading of wood logs using the improved Expo-2000 equipment was carried out at Sub Forestry District of Ciguha, administratively under Forest District of Sukabumi (west Java) The Expo-2000, following its improvement that incorporated the use of endless cables, afforded the satisfactory productivity in wood gathering at 5 m³.hm/hour with loading/unloading (extracting) performance of about 50m³/hour. As such the investment cost was Rp 100 million, so the total ownership and operation cost amounted to Rp 60,175 per hour. Therefore, the expenses of wood collecting was Rp12,305 per m³, and wood loading cost was Rp 1,135 per m³. These expenses were quite effective and efficient compared to those implementing the conventional system, which incurred the corresponding cost i.e. Rp 35,000 and Rp 15,000 respectively.

Keywords: Logs extraction, effective, efficient, Expo-2000

ABSTRAK

Dalam upaya mengatasi kesulitan mengumpulkan kayu-kayu hasil tebangan di daerah curam dengan cara manual, diperlukan terobosan berupa penyediaan alat ekstraksi kayu yang tidak mahal, mudah dioperasikan, produktif dengan biaya operasi dan perawatan rendah. Sesuai dengan harapan itu dilakukan kegiatan penelitian uji coba pengumpulan kayu dan muat bongkar dengan menggunakan hasil rekayasa alat Expo-2000 di daerah hutan Resort Polisi Hutan (RPH) Ciguha, Kesatuan Pemangkuan Hutan (KPH) Sukabumi, Jawa Barat. Produktivitas yang dicapai dengan dilakukannya penyempurnaan berupa penambahan endless drum diperoleh hasil sebesar 5 m³.hm/jam dan untuk muat/bongkar 50m³/jam. Dengan biaya investasi sebesar Rp 100 juta, maka dengan biaya pemilikan dan pengoperasian alat berdasarkan perhitungan adalah sebesar Rp 60.175 per jam, sehingga biaya pengumpulan dan pemuatan kayu secara berurutan masing-masing adalah Rp 12.305 dan Rp 1.135 per m³. Biaya ini jelas lebih efektif dan efisien dibanding cara konvensional yang besarnya mencapai masing-masing secara berurutan Rp 35.000 dan Rp 15.000 per m³.

Kata kunci: Pengeluaran kayu, efektif, efisien, alat Expo-2000