

ABSTRACT

PT Berlian Jasa Terminal Indonesia (PT BJTI) is a domestic loading and unloading container enterprise in Berlian port, Tanjung Perak Harbour, Surabaya. It also provides services for loading and unloading of dry bulk to support all of industrial activities. PT BJTI uses Harbour Mobile Crane (HMC) Gottwald HMK 4406 as a device for loading and unloading container activities from ship to loading berth and vice versa. This device runs continuously hence should be appropriately took care and well maintenance. Thus, it ables to work well, on time, and fulfill the desired target. The effectiveness measurement of this device is rarely done and just focus on achieved target.

This study focus on Total Productive Maintenance (TPM) as one of proper management in measuring device effectiveness. The part of TPM components are Overall Equipment Effectiveness (OEE), Net Equipment Effectiveness (NEE) and Total Effective Equipment Productivity (TEEP). OEE variables are availability, performance efficiency and quality rate. NEE variables are uptime, performance efficiency dan quality rate. Where as TEEP variables include OEE variables and utility.

The study shows the averages of OEE, NEE and TEEP are 69,42%, 96,13% and 58,84%, respectively. The OEE was determined under the standard approximately 85% due to factors of breakdown losses dan reduced speed losses. The decrease of high value of downtime can use improvement document “Pengendalian Operasional Bongkar Muat“ against operational provision of loading and unloading.

Keywords — *maintenance, TPM, OEE, NEE, TEEP*

INTISARI

PT Berlian Jasa Terminal Indonesia (PT BJTI) adalah perusahaan yang bergerak dalam pelayanan bongkar muat peti kemas domestik di Terminal Berlian, Tanjung Perak, Surabaya dan juga menyediakan layanan bongkar muat curah kering yang mendukung kegiatan industri secara keseluruhan. PT BJTI menggunakan Harbour Mobile Crane (HMC) Gottwald HMK 4406 sebagai salah satu alat bongkar muat peti kemas dari kapal ke dermaga atau sebaliknya. Alat ini bekerja secara terus menerus sehingga harus diimbangi dengan perawatan yang baik agar alat dapat bekerja dengan lancar dan tepat waktu sesuai target yang diinginkan. Pengukuran keefektifan alat ini belum banyak dilakukan karena selama ini lebih fokus pada pencapaian target.

Penelitian ini fokus pada metode Total Productive Maintenance (TPM) sebagai salah satu manajemen yang tepat dalam mengukur keefektifan alat. Komponen-komponen dalam TPM meliputi Overall Equipment Effectiveness (OEE), Net Equipment Effectiveness (NEE) dan Total Effective Equipment Productivity (TEEP). Variabel pada OEE meliputi availability, performance efficiency dan quality rate. Variabel pada NEE meliputi uptime, performance efficiency dan quality rate. Sedangkan variable pada TEEP meliputi variable pada OEE dan utilitas.

Berdasarkan hasil penelitian, rata-rata nilai Total Effectiveness untuk OEE 69,42%, NEE 96,13% dan TEEP 58,84%. Nilai OEE dibawah OEE standar 85% karena faktor breakdown losses dan reduced speed losses. Pengurangan tingginya downtime dapat dilakukan dengan improvement dokumen Pengendalian Operasional Bongkar Muat terhadap ketentuan operasional bongkar muat.

Kata kunci — perawatan, TPM, OEE, NEE, TEEP