

ABSTRAK

Kegiatan bongkar muat petikemas merupakan salah satu aktivitas utama di terminal petikemas yang berpengaruh terhadap produktivitas pelayanan pelabuhan. Dalam proses bongkar muat petikemas, terdapat beberapa kapal domestik yang kinerja operasional dinilai belum mencapai target karena adanya pemborosan. Hasil observasi yang di dapat yaitu terdapatnya crane HMC yang cukup lama menunggu truck trailer, dan truck trailer cukup lama menunggu crane HMC memindahkan kontainer ke sisi lain kapal. Tujuan penelitian adalah mengidentifikasi terjadinya waste, menemukan penyebab waste, dan memberikan usulan perbaikan untuk meminimalkan waste pada proses bongkar muat petikemas. Teknik pengolahan data berupa value stream mapping, process activity mapping, identifikasi waste, value stream analysis tools (VALSAT), root cause analysis dengan tools 5 whys, serta wawancara dalam menentukan usulan perbaikan. Usulan perbaikan berupa standar operasional prosedur bongkar muat petikemas, jadwal maintenance alat, perbaikan layout lapangan penumpukan petikemas, penambahan alat crane Rubber Container Gantry (RTG), penambahan Harbour Mobile Crane (HMC), dan penambahan kapal pandu. Setelah dilakukan perbaikan dengan meminimasi pemborosan dapat diperoleh nilai lead time semula 1879,2 menit turun menjadi 1180,7 menit, aktivitas value added (VA) semula 56,5% meningkat sebesar 89,9%, aktivitas non value added (NVA) semula 36,1% berkurang menjadi 0%, aktivitas necessary non value added (NNVA) semula 7,4%, meningkat sebesar 10,1%.

Kata kunci: lean service, value stream mapping, *waste*, root cause analysis, loading-unloading container

ABSTRACT

Container loading and unloading is one of the main activities in container terminals that affects the productivity of port services. In the container loading and unloading process, there are several domestic vessels whose operational performance is considered not to have reached the target due to waste. The results of the observations obtained are that there are HMC cranes that wait for trailer trucks for a long time, and trailer trucks wait for HMC cranes to move containers to the other side of the ship for a long time. The purpose of this study is to identify the occurrence of waste, find the causes of waste, and provide improvement suggestions to minimize waste in the container loading and unloading process. Data processing techniques include value stream mapping, process activity mapping, waste identification, value stream analysis tools (VALSAT), root cause analysis with 5 whys tools, and interviews in determining improvement suggestions. Improvement suggestions include standard operating procedures for container loading and unloading, equipment maintenance schedules, improvements to the layout of the container stacking yard, the addition of Rubber Container Gantry (RTG) cranes, the addition of Harbor Mobile Cranes (HMC), and the addition of pilot boats. After improvements to minimize waste, the lead time decreased from 1,879.2 minutes to 1,180.7 minutes. Value-added (VA) activities increased from 56.5% to 89.9%, non-value-added (NVA) activities decreased from 36.1% to 0%, and necessary non-value-added (NNVA) activities increased from 7.4% to 10.1%.

Keywords: lean service, value stream mapping, waste, root cause analysis, container loading-unloading