

ANALISIS DAN MINIMASI WASTE DENGAN PENDEKATAN *LEAN MANUFACTURING* PADA PROSES PRODUKSI LABEL DI PT KAHAR DUTA SARANA DENGAN METODE 5 WHYS

Syihan Karami

ABSTRAK

PT Kahar Duta Sarana merupakan perusahaan manufaktur label yang sudah berdiri selama puluhan tahun. Namun dalam proses produksinya masih ditemukan beberapa pemborosan yang dapat menghambat Tingkat produktifitasnya, berdasarkan hasil kuisisioner 7 waste ditemukan 2 waste dominan yaitu *waste of waiting* dan *waste of inappropriate processing*. Untuk *waste of waiting* terjadi pada proses *printing* dimana operator harus menunggu unit mesin untuk dibersihkan sehingga proses tersebut menghambat berjalannya proses *set up*, dan untuk *waste inappropriate processing* terjadi pada proses *printing* dan *cutting*, didalam proses tersebut terdapat aktifitas *color setting* dan *die setting* yang dimana masing-masing operator terkait masih sering melakukan kesalahan yang disebabkan kurangnya pemahaman secara menyeluruh tentang mesin yang dioperasikan, dan hal ini berpengaruh kepada *lead time*. Berdasarkan perhitungan SMED dan *root cause analysis 5 whys* didapatkan usulan perbaikan yang dapat mengurangi *lead time* sebesar 910,35 detik atau sekitar 15,2 menit, dari kondisi awal dengan *lead time* sebesar 9105,41 detik atau sekitar 152 menit menjadi 8195,08 detik atau skitar 136 menit, dan terdapat pengurangan aktifitas NVA dan NNVA sebesar 373,35 detik dari waktu aktifitas pada CVSM.

Kata Kunci: VSM, SMED, 5 whys, *Lean Manufacturing*, 7 waste

**WASTE ANALYSIS AND MINIMIZATION USING LEAN
MANUFACTURING APPROACH IN LABEL PRODUCTION
PROCESS AT PT KAHAR DUTA SARANA WITH 5 WHYS METHOD**

Syihan Karami

ABSTRACT

PT Kahar Duta Sarana is a label manufacturing company that has been established for decades. However, in its production process, several wasteful practices have been identified which can hinder its productivity level. Based on the results of a 7 waste questionnaire, two dominant wastes were identified: waste of waiting and waste of inappropriate processing. Waste of waiting occurs in the printing process where operators have to wait for the machine unit to be cleaned, thus hindering the setup process. Waste of inappropriate processing occurs in both printing and cutting processes, involving color setting and die setting activities, where operators often make mistakes due to a lack of comprehensive understanding of the operated machines, affecting the lead time. Through SMED calculations and root cause analysis using the 5 Whys method, proposed improvements were obtained to reduce lead time by 910.35 seconds or approximately 15.2 minutes from the initial condition with a lead time of 9105.41 seconds or about 152 minutes to 8195.08 seconds or about 136 minutes. Additionally, there was a reduction in NVA and NNVA activities by 373.35 seconds from the activity time on the CVSM.

Keywords: VSM, SMED, 5 Whys, Lean Manufacturing, 7 waste