ANALISIS MINIMALISASI PEMBOROSAN DENGAN PENDEKATAN *LEAN MANUFACTURING* PADA PRODUK KULKAS (STUDI KASUS PT. PMI)

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ABSTRAK

PT. PMI ini sudah berdiri sejak 1970 berkat kerjasama antara pengusaha asal Jepang dengan pengusaha asal Indonesia. di PT. PMI ini memproduksi berbagai macam produk rumah tangga salah satunya kulkas. Berdasarkan data pengamatan di lapangan dan wawancara dengan beberapa operator dan penanggung jawab produksi ditemukan indikasi *waste* akibat adanya *defect* pada produk kulkas sehingga harus diperbaiki terlebih dahulu dan mengakibatkan *process time* pada produk kulkas tersebut bertambah. Untuk meminimasi *waste* atau *defect* pada produk tersebut diperlukan metode dalam menguranginya, yaitu metode *Lean manufacturing.* Tools yang digunakan yaitu kuesioner 7 *waste*, VSM, VALSAT, 5why's, dan simulasi menggunakan *software promodel*. Setelah dilakukan Pengumpulan dan pengolahan data, diperoleh bahwa terdapat 3 *waste* teratas yaitu *defect, excessive transportation*, dan *waiting*. Perbaikan yang dilakukan untuk mengurangi ketiga waste tersebut diantaranya dilakukan pengecekan pada jig kabinet kulkas, menggunakan mesin *vacuum lifter* yang dimana diperoleh pengurangan waktu selama 39,71 detik, dan pengoptimalan jumlah tenaga kerja berupa penggabungan beberapa aktivitas kerja yang membuat jumlah operator pada *docking line* yang awalnya 21 operator menjadi 16 operator serta pada *cooling unit line* yang awalnya 17 operator menjadi 14 operator. Selain itu, terdapat pengurangan 6 aktivitas *value added* dan 2 aktivitas *necessary non-value added* dikarenakan penggabungan beberapa aktivitas kerja tersebut.

Kata Kunci : *waste, Lean manufacturing*, VSM, VALSAT, 5 *Why's*, simulasi, *defect*

ANALYSIS OF WASTE MINIMIZATION WITH A LEAN MANUFACTURING APPROACH ON REFRIGERATOR PRODUCTS (CASE STUDY PT. PMI)

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ABSTRACT

PT. PMI has been established since 1970 as a result of cooperation between Japanese entrepreneurs and Indonesian entrepreneurs. PT. PMI produces various kinds of household products, one of which is a refrigerator. Based on observation data in the field and interviews with several operators and the person in charge of production, there are indications of waste due to defects in refrigerator products so that they must be repaired first and result in increased process time on the refrigerator product. To minimize waste or defects in these products, a method is needed to reduce it, namely the Lean manufacturing method. The tools used are the 7 waste questionnaire, VSM, VALSAT, 5why's, and simulation using promodel software. After collecting and processing data, it is found that there are 3 top wastes, namely defects, excessive transportation, and waiting. Improvements made to reduce the three wastes include checking the refrigerator cabinet jig, using a vacuum lifter machine where a time reduction of 39.71 seconds is obtained, and optimizing the number of workers in the form of combining several work activities which makes the number of operators in the docking line which was originally 21 operators to 16 operators and in the cooling unit line which was originally 17 operators to 14 operators. In addition, there is a reduction of 6 value-added activities and 2 non-value-added necessary activities due to the merging of several work activities.

***Keywords**: waste, Lean manufacturing, VSM, VALSAT, 5 Why's, simulation, defect*