ABSTRAK

Pada penelitian yang dilakukan di PT Pandatex berfokus pada analisa usulan tindakan perbaikan guna meminimasi cacat pada kain grey CTD30 dengan menggunakan metode *six sigma*. Penelitian dilakukan karena adanya peningkatan jumlah cacat pada periode Desember 2016 – Februari 2017. Analisa dilakukan dengan mengambil data histori produksi kain *grey* CTD30 pada bulan Maret – April 2017, data frekuensi ketidaksesuaian kain *grey* CTD30 di Departemen *Weaving* pada tanggal 1 - 31 Maret 2017, dan data histori kerusakan komponen mesin rapier pada bulan Januari – Juni 2017. Data kemudian dianalisa sesuai tahapan DMAIC.

Analisis yang diperoleh dengan menggunakan metode *six sigma* menunjukkan bahwa proses produksi kain *grey* CTD30 memiliki nilai *sigma* sebesar 4,25 dengan DPMO sebesar 2948,37. Kemudian disusun rencana perbaikan dengan 5W+1H dan FMEA. Berdasarkan pengolahan data FMEA diperoleh nilai RPN sebesar 180, yang merupakan nilai terbesar sehingga dibutuhkan tindakan prioritas yaitu mesin di cek dan di *setting* ulang secara berkala khususnya pada komponen yang sering mengalami kerusakan. Sehingga dilakukan penentuan waktu interval perawatan dan pengecekan yang optimal dengan *preventive maintenance*.

Adapun jadwal perawatan komponen sekoci A7 setiap 5 hari, sabuk A7 setiap 7 hari, akumulator A7 setiap 6 hari, *wire up* A7 setiap 6 hari, sekoci A11 setiap 7 hari, sabuk A11 setiap 7 hari, akumulator A11 setiap 4 hari, *wire up* A11 setiap 7 hari, sekoci B10 setiap 7 hari, sabuk B10 setiap 6 hari, akumulator B10 setiap 5 hari, *wire up* B10 setiap 10 hari, sekoci C7 setiap 6 hari, sabuk C7 setiap 6 hari, akumulator C7 setiap 6 hari, *wire up* C7 setiap 9 hari, sekoci E8 setiap 7 hari, sabuk E8 setiap 6 hari, akumulator E8 setiap 6 hari, *wire up* E8 setiap 5 hari.

Kata kunci: *six sigma, preventive maintenance, kualitas, kain grey*

ABSTRACT

In research conducted at PT Pandatex focuses on the analysis of proposed remedial measures to minimize defects in the grey CTD30 fabric using six sigma method. The study was conducted due to an increase in the number of defects on December 2016 – February 2017 period. The analysis was performed by taking data of CTD30 grey fabric production history in March – April 2017, frequency data of CTD30 grey incompatibility at Weaving Department on March 1 -31, 2017, and damage history of rapier machine component in January-June 2017. Data are analyzed according to DMAIC stage.

The analysis obtained by using six sigma method shows that the production process of grey CTD 30 fabric has asigm a value of 4.25 with DPMO of 2948.37. Then 5W +1 H and FMEA improvement plan was prepared. Based on the data processing FMEA obtained RPN value of 180, which is the greatest values o that required priority action is the machine in check and in the periodically reset especially on components that often suffered damage. So that the timing of maintenance interval and optimal checking with preventive maintenance is done.

The schedule of maintenance of A7 lifeboat components every 5 days, A7 belt every 7 days, A7 accumulator every 6 days, A7 wire up every 6 days, A11 lifeboat every 7 days, A11 belt every 7 days, A11 accumulators every 4 days, A11 wire up every 7 days, B10 lifeboat every 7 days, B10 belt every 6 days, B10 accumulator every 5 days, B10 wire up every 10 days, C7 life boat every 6 days, C7 belt every 6 days, C7 accumulator every 6 days, C7 wire up every 9 days, E8 lifeboat every 7 days, E8 belt every 6 days, E8 accumulator every 6 days, E8 wire up every 5 days.

Keywords: six sigma, preventive maintenance, quality, grey fabric