

RINGKASAN

Ratih Purwaningsih, Program Studi Teknik Industri, Jurusan Teknik Mesin, Fakultas Teknik Universitas Brawijaya, Oktober 2010, Analisis *Overall Line Effectiveness* (OLE) Pada Sistem Produksi Kontinyu Dalam Rangka Meningkatkan Efektivitas Lini Produksi, Dosen Pembimbing : Bambang Indrayadi dan Mochamad Choiri.

PT. Coca-Cola *Bottling* Indonesia (CCBI) *Plant* Jawa Timur merupakan perusahaan produsen minuman. PT. CCBI menggunakan sistem produksi kontinyu. Pada saat proses produksi sedang berlangsung, mengalami *downtime* yang menyebabkan produksi tidak berjalan lancar dan masih sering dijumpai cacat produk selama proses produksi sedang berjalan.

Pada penelitian ini menerapkan perhitungan *Overall Line Effectiveness* (OLE) untuk mengetahui tingkat efektivitas lini produksi. OLE digunakan pada produksi yang bersifat sistem produksi kontinyu. Metode perhitungan OLE dapat menganalisis *downtime* yang terjadi pada mesin dan peralatan serta dapat mengetahui cacat produk yang dihasilkan selama proses produksi. Lini produksi yang diteliti adalah *Line 2* yang memproduksi minuman CSD (*Carbonated Soft Drink*) dalam kemasan *Returnable Glass Bottle* (RGB) selama periode Januari – Juni 2009. Sedangkan untuk mengetahui besar pengaruh enam kerugian utama terhadap OLE dilakukan analisis regresi data kuisisioner karyawan.

Hasil analisis dari perhitungan OLE menunjukkan nilai OLE masih belum baik yaitu rata-rata 67% (nilai ideal $OLE \geq 85\%$). Nilai OLE yang belum baik dikarenakan sering terjadi *minor stoppage* dan cacat produk. Sedangkan dari hasil analisis regresi data kuisisioner karyawan didapatkan bahwa keenam variabel dari enam kerugian utama berpengaruh signifikan terhadap variabel OLE dengan variabel *minor stoppage* yang paling berpengaruh. Saran bagi perusahaan untuk meningkatkan lagi efektifitas dari penggunaan peralatan mesin secara keseluruhan agar dapat beroperasi lebih optimal, terutama penanganan *minor stoppage* dan peningkatan keahlian dan kedisiplinan operator dalam melakukan kontrol kualitas.

Kata kunci : *Overall Line Effectiveness*, sistem produksi kontinyu, *downtime*, cacat produk

SUMMARY

Ratih Purwaningsih, Industrial Engineering, Department of Mechanical engineering, Faculty of Engineering, University of Brawijaya, October 2010, *Overall Line Effectiveness (Ole) Analysis In Continuous Product Line Manufacturing System To Improving Product Line Effectiveness*, Academic Supervisor : Bambang Indrayadi and Mochamad Choiri.

PT. Coca-Cola Bottling Indonesia (CCBI) Jawa Timur Plant, a company manufacturing beverages. PT.CCBI used continuous product line manufacturing system. In the process of production, facing downtime that caused production not run smoothly and was encountered the product defect while the process of the production.

This research aims applied calculation of Overall Line Effectiveness (OLE) method in order to analysis product line effectiveness. The OLE calculation method was used to continuous product line manufacturing system. The OLE calculation method could analysis machineries downtime and product defect that was produced in process of production. The line of the production that was researched were Line 2 that produced CSD (Carbonated Soft Drink) in the Returnable Glass Bottle (RGB) for the period in Januari until Juni 2009. Whereas to know big the influence of Six Big Losses against OLE was carried out by the analysis of data regression questioners the employee.

Results of the analysis of the OLE calculation showed the OLE value was still being not yet good that is in average in rate 67% (the ideal OLE value is $\geq 85\%$). The OLE value that not yet good was caused by minor stoppage and product defect. Whereas results of the analysis of data regression questioners the employee was obtained that the six big losses variables were influential significant against the OLE and minor stoppage variable that was most influential. Suggestion for the company is to improve effectiveness from the use of machine equipment on the whole in order to be able to operate more optimal, especially the handling of minor stoppage and the increase in the expertise and the operator's skill in doing the quality inspection.

Keyword : Overall Line Effectiveness, Continuous Product Line Manufacturing System, downtime, defect product