ANALISIS *OVERALL EQUIPMENT EFFECTIVENESS (OEE)* UNTUK PENINGKATAN EFEKTIVITAS MESIN PRODUKSI *NUGGET* AYAM DI PT DAGSAP ENDURA EATORE YOGYAKARTA

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ABSTRAK

Aktivitas produksi dipandang sebagai suatu perbaikan terus-menerus yang akan membawa perusahaan ke arah yang lebih baik. PT. Dagsap Endura Eatore merupakan salah satu industri yang bergerak di bidang olahan makanan beku. Pemeliharaan terhadap mesin dan peralatan industri adalah tugas yang penting. Tujuan penelitian ini adalah ingin mengetahui permasalahan di lantai produksi khususnya penggunaan mesin dan peralatan produksi yang berkaitan dengan efektivitas proses produksi.

Salah satu konsep yang kompeten dalam mesin dan peralatan produksi adalah TPM *(Total Productive Maintenance)*. Sasaran TPM adalah memaksimumkan nilai *Overall Equipment Effectiveness* (OEE) untuk menurunkan waktu henti sehingga efektivitas mesin/peralatan meningkat. Perhitungan ini dilakukan terhadap lini kontinu mesin produksi *nugget* ayam dimulai dari proses pencetakan, pelapisan tepung *batter*, pelapisan tepung roti, penggorengan, pendinginan sementara dan pembekuan cepat. Setelah itu dilakukan analisis *six big losses* dan *failure mode effect and analysis* (FMEA) untuk mengetahui risiko kritis yang menyebabkan kerugian sehingga dapat dilakukan langkah-langkah perbaikan untuk mengurangi risiko tersebut.

Hasil penelitian pada periode 2015 menunjukkan nilai *availability rate* sebesar 88,86%, *performance rate* sebesar 84,93%, *quality rate* sebesar 98,53%, sehingga diperoleh hasil nilai (OEE) sebesar 74,33% yang masih dibawah *standard world class* (85%) (Hansen, 2001). Hasil analisis *six big losses* menunjukkan bahwa tiga faktor kerugian terbesar adalah *idle and stoppage losses* (34,32%), *breakdown losses* sebesar (30,15%) dan *rework losses* (16,99%). Kemudian, ketiga faktor tersebut dilakukan analisis FMEA untuk memperoleh risiko kritis. Dari hasil FMEA ini didapatkan rekomendasi perbaikan antara lain penambahan fasilitas berupa *Uninterruptible Power Supply* (UPS), *water chiller* dan *filter* pada mesin *fryer*; pembuatan sistem depot *frozen food* untuk mengurangi beban gudang *finished goods*; penerapan *reward and punishment* serta *autonomous maintenance* terhadap tenaga kerja.

Kata kunci: *Nugget* ayam, *Overall Equipment Effectiveness* (OEE), *six big losses*, *Failure Mode and Effect Analysis* (FMEA)

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OVERALL EQUIPMENT EFFECTIVENESS (OEE) ANALYSIS FOR IMPROVEMENT EFFECTIVENESS ON CHICKEN NUGGET MACHINE PRODUCTION AT PT DAGSAP ENDURA EATORE YOGYAKARTA

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ABSTRACT

Production activity viewed as a continuous improvement to bring the company up at better. PT Dagsap Endura Eatore represent one of industry which is active in processed frozen food. Maintenance of industrial machine and equipments is important duty. This research target to know problems in production floor especially use the industrial machine and equipments which related to production process effectiveness.

One of concept which competence in production machine and equipments is TPM (Total Productive Maintenance). Target TPM is maximize the value of Overall Equipment Effectiveness (OEE) to degrade the downtime and increase machine capacities. This calculation is performed on a continuous line of chicken nugget machine production starting from forming, battering, breading, frying, cooling and quick freezing. The next steps are six big losses analysis and failure mode and effects analysis (FMEA) to determine the critical risks which cause losses that can be carried out improvement steps to mitigate such risks.

In 2015, results show that availability rate of 88.86%, performance rate of 84.93%, and quality rate of 98.53%, so the result OEE value is 74.33 %. This result still below the world class standard (85%) (Hansen, 2001). The six big losses analysis show that three factors biggest losses are idle and stoppage losses (34.32%), breakdown losses (30.15%) and rework losses (16.99%). Then, these three factors do FMEA analysis to obtain a critical risk. From the results FMEA obtained recommendations for improvements include the addition of facilities such as Uninterruptible Power Supply (UPS), water chiller and filter on the machine fryer; creating frozen food depot system to reduce the burden of finished goods warehouse; implementation of autonomous maintenance, reward and punishment workforce.

Kata kunci: *Chicken nugget*, *Overall Equipment Effectiveness* (OEE), *six big losses*, *Failure Mode and Effect Analysis* (FMEA)

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