

ANALISIS EFEKTIFITAS MESIN A1 LINE MENGGUNAKAN INTEGRASI OVERALL EQUIPMENT EFFECTIVENESS DAN FAILURE MODE AND EFFECT ANALYSIS DI PT INDONESIA THAI SUMMIT AUTO

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ABSTRAK

PT Indonesia Thai Summit Auto merupakan salah satu perusahaan industri otomotif roda empat yang memproduksi spare part mobil, yaitu stamping dan assembly. Dalam proses mesin yang tidak ada hentinya, ditemukan kendala seperti mesin yang mengalami kerusakan. Berdasarkan data sekunder terkait total waktu downtime yang ada pada mesin A1 Line selama periode Januari 2021 hingga Desember 2021 adalah 21.303 menit atau dengan persentase 20,53% dari jumlah total waktu produksi yang ada. Melihat tingginya total downtime dari mesin A1 line membuat proses produksi menjadi terhambat dan menyebabkan proses produksi itu sendiri menjadi terhenti. Oleh karena itu, maka untuk menganalisa keefektifitasan mesin A1 line, digunakan metode Overall Equipment Effectiveness (OEE). Setelah dilakukan pengolahan data, diperoleh nilai rata-rata Overall Equipment Effectiveness mesin A1 line selama periode tahun 2021 sebesar 56,28%, dimana hal tersebut belum memenuhi standar yang ditetapkan perusahaan, yaitu 80%. Berdasarkan hasil penelitian, pada PT Indonesia Thai Summit Auto terdapat beberapa penyebab rendahnya nilai OEE mesin A1 line tersebut, diantaranya yaitu breakdown time losses, setup and adjustment loading time, idling & minor stoppage, reduced speed, dan defects or rework losses. Selanjutnya penyebab permasalahan tersebut akan dilakukan analisis menggunakan metode Failure Mode and Effect Analysis (FMEA) dengan tujuan mengetahui urutan prioritas dari permasalahan yang terjadi dan yang nantinya dicaraii cara menanggulangi permasalahan tersebut (improvement).

Kata kunci: *Overall Equipment Effectiveness, Failure Mode and Effect Analysis, efektivitas mesin, stamping, breakdown, improvement.*

EFFECTIVENESS ANALYSIS OF A1 LINE MACHINE USING OVERALL EQUIPMENT EFFECTIVENESS AND FAILURE MODE AND EFFECT ANALYSIS INTEGRATION AT PT INDONESIA THAI SUMMIT AUTO

ABSTRACT

PT Indonesia Thai Summit Auto is one of the four-wheeled automotive industry companies that produce car spare parts, stamping and assembly. In the process of the machine that does not stop, found obstacles such as damaged machines. Based on secondary data related to the total downtime on the A1 Line machine from January 2021 to December 2021, it is 21,303 minutes or 20.53% of the total production time. Seeing the production process's high total downtime of the A1 line machine, the production process becomes hampered and caused the production process to stop. Therefore, to analyze the effectiveness of the A1 line machine, the Overall Equipment Effectiveness (OEE) method is used. After processing the data, the average value of the Overall Equipment Effectiveness of the A1 line machine during the 2021 period was 56.28%, which did not meet the standards set by the company, which was 80%. Based on the study's results, at PT Indonesia Thai Summit Auto, there were several causes for the low OEE value of the A1 line machine, including breakdown time losses, setup and adjustment loading times, idling & minor stoppage, and reduced speed, and defects or rework losses. Furthermore, the causes of these problems will be analyzed using the Failure Mode and Effects Analysis (FMEA) method to know the priority order of the problems that occur and which will later look for ways to overcome these problems (improvement).

Keywords: Overall Equipment Effectiveness, Failure Mode and Effect Analysis, machine effectiveness, stamping, breakdown, improvement.

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