

**PENGUKURAN EFEKTIVITAS MESIN REPARASI TABUNG GAS
MENGUNAKAN METODE *OVERALL EQUIPMENT EFFECTIVENESS* (OEE)
DAN *OVERALL RESOURCE EFFECTIVENESS* (ORE)**

Studi Kasus PT Petrogas Prima Service

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ABSTRAK

PT Petrogas Prima Service merupakan perusahaan yang bergerak dalam bidang perbaikan dan perawatan tabung gas LPG 3kg. Permasalahan yang terjadi pada perusahaan adalah terjadinya penurunan kinerja mesin dikarenakan telah berumur 12 tahun, selain itu umur mesin yang sudah tua mengakibatkan *time losses* (waktu kerja efektif yang hilang akibat kerusakan dan perawatan mesin), dimana *line 2* merupakan *line* yang memiliki *time losses* tertinggi selama 6 bulan terakhir, yaitu sebesar 435 menit. Berdasarkan masalah tersebut maka perlu dilakukan pengukuran efektivitas mesin guna mengetahui seberapa efektif mesin yang ada pada *line 2*. Adapun metode yang dipakai untuk melakukan pengukuran efektivitas mesin yaitu metode *Overall Equipment Effectiveness* (OEE) dan *Overall Resource Effectiveness* (ORE). Adapun hasil dari metode *Overall Equipment Effectiveness* (OEE) yaitu menunjukkan tingkat efektivitas mesin *open valve* sebesar 99,34%, *press hand* 99,29%, *hidrostatik* 88,31%, *numbering* 99,11%, *shot blasting* 84,95%, *painting* 80,22% dan *close valve* 91,28%. Adapun hasil pengukuran efektivitas mesin menggunakan metode *Overall Resource Effectiveness* (ORE) untuk mesin *open valve* sebesar 99,32%, *press hand* 99,23%, *hidrostatik* 87,35%, *numbering* 98,97%, *shot blasting* 84,83%, *painting* 80,16% dan *close valve* 91,23%. Berdasarkan dua metode yang digunakan diketahui bahwa pada *line 2* mesin *shot blasting* dan *painting* belum memenuhi standar OEE dan ORE sebesar 85%, adapun faktor yang mempengaruhi yaitu *idling and minor stoppage losses*, dimana waktu *setup* merupakan kegiatan yang mempengaruhi tingginya nilai *idling and minor stoppage losses*.

Kata Kunci: *Efektivitas Mesin, Overall Equipment Effectiveness, Overall Resource Effectiveness, Time Losses*

**MEASUREMENT OF THE EFFECTIVENESS OF GAS TUBE REPAIR MACHINE USING OVERALL
EQUIPMENT EFFECTIVENESS (OEE) AND OVERALL RESOURCE EFFECTIVENESS (ORE) METHODS
Case Study of PT Petrogas Prima Service**

ABSTRACT

PT Petrogas Prima Service is a company engaged in repairing and maintaining 3kg LPG gas cylinders. The problem that occurs in the company is a decrease in engine performance because it is 12 years old. Besides that, the age of the old engine results in time losses (adequate working time lost due to engine damage and maintenance), where line 2 is the line that has the highest time losses during the last six months, which is 435 minutes. Based on this problem, it is necessary to measure the effectiveness of the machine in order to find out how effective the machine is on line 2. The methods used to measure the effectiveness of the machine are the Overall Equipment Effectiveness (OEE) and Overall Resource Effectiveness (ORE) methods. The Overall Equipment Effectiveness (OEE) method results show the effectiveness of the open valve machine at 99.34%, hand press at 99.29%, hydrostatic at 88.31%, numbering 99.11%, shot blasting at 84.95%, painting at 80.22%, and close valve 91.28%. The results of measuring the effectiveness of the machine using the Overall Resource Effectiveness (ORE) method for open valve machines are 99.32%, hand press 99.23%, hydrostatic 87.35%, numbering 98.97%, shot blasting 84.83%, painting 80.16%, and close valve 91.23%. Based on the two methods used, it is known that on line 2, the shot blasting and painting machines do not meet the OEE and ORE standards of 85%, while the influencing factors are idling and minor stoppage losses, where setup time is an activity that affects the high value of idling and minor stoppage losses.

Keywords: Machine effectivity, *Overall Equipment Effectiveness, Overall Resource Effectiveness, Time Loss*

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