

ABSTRAK

CV. XYZ adalah perusahaan yang bergerak dibidang manufaktur yang menghasilkan produk berbahan dasar karet, plastik, besi dan baja. Permasalahan pada perusahaan mengenai sistem perawatan pada mesin *molding injection* yang belum efektif. Maka permasalahan yang dibahas adalah mengetahui efektivitas mesin menggunakan metode OEE lalu mencari *losses* terbesarnya yang mempengaruhi besarnya nilai OEE. Kemudian dilakukan analisis hal yang menyebabkan kerugian terbesar itu bisa terjadi menggunakan metode FTA dan dilakukan pembobotan FMEA sehingga bisa dibuat usulan perbaikan dengan metode 5W-1H. Setelah dilakukan perhitungan, didapatkan nilai OEE sebesar 70,08% dimana nilai ini masih dibawah standar yang ditetapkan dunia. Kemudian didapatkan kerugian terbesarnya *idling and minor stoppages* sebesar 34,21% mempengaruhi nilai OEE. Setelah itu dilakukan analisa penyebab terjadinya *idling and minor stoppages* menggunakan metode FTA dan pembobotan menggunakan metode FMEA. Didapatkan beberapa penyebab yang nilai RPN nya melebihi rata – rata kemudian dilakukan usulan perbaikan menggunakan metode 5W-1H diantaranya mengadakan pelatihan berkala, membuat sip penggunaan mesin injeksi, membuat form pengecekan mesin, memperbaiki sistem pencatatan menjadi lebih lengkap dan jelas, memperhatikan kualitas dan umur setiap *sparepart*, membuat mesin rusak, menghitung ketersediaan material dengan baik, membeli *ezhaust* dan menyesuaikan daya listrik yang dibutuhkan.

Kata kunci: *5W-1H Method, Failure Mode and Effect Analysis, Fault Tree Analysis, Injection Molding, Overall Equipment Effectiveness, Six Big Losses*

ABSTRACT

CV. XYZ is a company engaged in manufacturing that produces products made from rubber, plastic, iron and steel. In this company there is a problem, one of which is regarding the maintenance of the machine, one of which is the injection molding machine which makes the machine run less effectively. So the problem to be discussed is knowing the effectiveness of the machine using the OEE method and then finding the biggest loss that affects the amount of OEE value. Then an analysis of the things that caused the greatest loss could occur using the FTA method and the FMEA weighting was carried out so that suggestions for improvements could be made using the 5W-1H method. After the calculation, the OEE value is 70.08% where this value is still below the standard set by the world. Then the biggest loss is idling and minor stoppages of 34.21% affecting the OEE value. After that, an analysis of the causes of idling and minor stoppages was carried out using the FTA method and the weighting using the FMEA method. Several reasons were found whose RPN value exceeded the average and then proposed improvements using the 5W-1H method including holding periodic training, making injection machine usage sips, making machine checking forms, improving the recording system to be more complete and clear, paying attention to the quality and age of each year. spare parts, making machines damaged, calculating the availability of materials properly, buying ezhaust and adjusting the electrical power needed.

Keywords: Overall Equipment Effectiveness, Six Big Losses, Fault Tree Analysis, Failure Mode and Effect Analysis, 5W-1H Method, Injection Molding