

## **ABSTRACT**

*This research aims to analyze the appropriate maintenance time interval in the roller conveyor furnace machine based on the lowest cost maintenance method at PT Aisin Indonesia. The objectives of this study are (1) to determine the appropriate length of maintenance for the roller conveyor furnace machine to support the performance of the roller conveyor furnace; (2) to calculate total cost of the lowest suitable roller conveyor furnace maintenance is used by PT Aisin Indonesia.*

*This research was conducted by observing the maintenance of the roller conveyor furnace machine at PT Aisin Indonesia Automotive. This analysis was referred to conditions in PT Aisin Indonesia which did not count the machine lifetime and frequency of machine breakdown when conducting maintenance process. As a result, machines had relatively frequent breakdown rates. There was a machine that should get more preventive maintenance actions such as furnace machines at PT Aisin Indonesia. This was due to frequent delay machine in a production which caused an additional maintenance costs and reduced company's profit.*

*Based on calculations using the Weibull distribution method, it can be concluded that the appropriate maintenance time interval for each roller conveyor furnace machine is 18 days with an availability value of 0.920 and a total maintenance cost for that machine is Rp. 4,405,933,00 per day.*

**Keywords: Maintenance Hose, Weibull Distribution**

## INTISARI

PT Aisin Indonesia dalam melakukan perawatan mesin, tidak memperhitungkan umur maupun frekuensi kerusakan mesin, akibatnya mesin yang memiliki tingkat yang seharusnya mendapatkan perawatan *preventif* lebih seperti mesin furnace di PT Aisin Indonesia malah sering terjadi kemacetan dalam produksi dan menyebabkan penambahan biaya perawatan dan mengurangi keuntungan perusahaan. Tujuan penelitian ini adalah (1) Menentukan lama selang waktu perawatan mesin *roller conveyor furnace* yang sesuai untuk menunjang performa *roller conveyor furnace* (2) Menghitung besar total ongkos perawatan roller conveyor furnace terendah yang tepat digunakan oleh PT Aisin Indonesia.

Penelitian ini dilakukan di “PT Aisin Indonesia Automotive dengan obyek yaitu perawatan mesin *roller conveyor furnace*. Metode analisis data yang dilakukan adalah dengan menggunakan distribusi *Weibull*.

Berdasarkan hasil perhitungan dengan distribusi *Weibull* dapat dikemukakan kesimpulan yaitu bahwa selang waktu perawatan yang tepat untuk masing-masing *roller conveyor* mesin *furnace* yaitu: untuk *roller conveyor* mesin *furnace* adalah pada selang waktu 18 hari dengan nilai *avaibilitas* 0,920 dan biaya total perawatan sebesar Rp. 4.405.933. per hari.