

ABSTRACT

Productivity is very important for companies to achieve success in their business processes. The concept of Total productive Maintenance (TPM) has been used by various companies to increase operational productivity of production so that the production process becomes more efficient and generate sustainable profitability of the company. The steel processing industry is one capital intensive industry where 80% of production costs are raw materials and energy, so the success of eliminating Six Big Losses is a key factor in success in reducing production costs. This study proposes a methodology for evaluating the effectiveness of production operational systems using PLS SEM to determine the effect of elimination Six Big Losses which are the formers of the 3 main components of OEE (Overall Equipment Effectiveness), namely Availability, Performance and Quality on profitability of Steel Section Plant of PT. XYZ. Based on the results of production operations data processing during the period of 2015-2017 it was produced that the OEE variable had a significant effect on the profitability performance of the Steel Section Plant of PT. XYZ is Availability and Performance with indicators of Breakdown losses (L1), Setup and Adjustment losses (L2), Idling and Minor Stoppages (L3), and Reduced speed (L4). And improvements that must be made by considering the Benchmarking of competitor's production cost performance are implementing Equipment revitalization priority, namely Replacement of Straightener machines, Retrofite Furnace and Upgrade motor stand 1.

Keywords: Six Big Losses, TPM, OEE, SEM-PLS, Profitability.

ABSTRAK

Produktivitas sangat penting bagi perusahaan untuk mencapai keberhasilan dalam proses bisnis mereka. Konsep Total produktif Maintenance (TPM) telah digunakan oleh berbagai perusahaan untuk meningkatkan produktivitas operasional produksi sehingga proses produksi menjadi lebih efisien dan menghasilkan kinerja profitabilitas perusahaan yang berkelanjutan. Industri pengolahan baja adalah salah satu industri padat modal di mana 80% dari biaya produksi adalah bahan baku dan energi, sehingga keberhasilan menghilangkan Six Big Losses adalah faktor kunci dalam keberhasilan untuk menurunkan biaya produksi. Penelitian ini mengusulkan metodologi untuk mengevaluasi efektivitas sistem operasional produksi menggunakan SEM PLS untuk mengetahui pengaruh penurunan Six Big Losses yang merupakan pembentuk atas 3 komponen utama OEE (*Overall Equipment Effectiveness*) yaitu *Availability*, *Performance* dan *Quality* terhadap profitabilitas Pabrik Baja Profil PT. XYZ. Berdasarkan hasil pengolahan data operasi produksi selama periode tahun 2015 – 2017 dihasilkan bahwa variabel OEE yang signifikan berpengaruh terhadap kinerja profitabilitas Pabrik Baja Profil PT. XYZ adalah *Availability* dan *Performance* dengan indikator kerugian *Breakdown losses* (L1), *Setup and Adjustment losses* (L2), *Idling* dan *Minor Stoppages* (L3), dan *Reduced speed* (L4). Dan perbaikan yang harus dilakukan dengan mempertimbangkan *Benchmarking* kinerja biaya produksi pesaing adalah mengimplementasikan prioritas refitilasi mesin yaitu Penggantian mesin *Straightener*, *Retrofite Furnace* dan *Upgrade motor stand 1*.

Kata kunci: *Six Big Losses*, TPM, OEE, SEM-PLS, Profitabilitas.