Optimization of Assembly Process in the Production Line to Increase Productivity with the Line Balancing Method in Indonesian Automotive sector

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Abstract

Industry developments forced the performance of manufacturing companies to be managed according to high standards at all levels – cost, quality, speed, flexibility, reliability, delivery (Florin, 2019) and to the attention of many stakeholders, including owners, employees, suppliers, and investors. Strong performing companies will result in growth in various aspects of global competitiveness which ultimately affects performance in development, investment, trust from shareholders (Brigham and Houston, 2004), Economic globalization in the automotive industry makes boundaries between regions and countries seem to be free and this creates competition. can be seen with the business phenomenon where the industry expands its supply chain globally and sells products worldwide (Yang,2018) one them Indonesia, The biggest challenge today is a company not only competing with competitors who are different from but also with the same group in various countries and even make alliances to maintain competitiveness such as Renault-Nissan-Mitsubishi, To gain the trust of Top management so that they are given trust in this matter. new model or technology, for that usually MultiInternational Companies will do "Plant Ranking" on their production systems around the world including manufacturers in Indonesia, this is done so that companies are competitive, one of which is in terms of optimizing the number of workers. The purpose of this research is to improve performance in terms of the production line at the assembly line at an automotive factory in Indonesia by using several actual data collection methods by looking at existing conditions using Value Stream Mapping (VSM) and followed by Line Balancing using the Yamazumi chart. The results of this research contribute to the literature in the automotive sector. but in various other sectors.

Keywords
Automotive Industry, Assembly Lines, Line Balancing and Design Standart Time Ratio DSTR

Biography
Andy Kresna is M.Eng students of Industrial Engineering of the Universitas Indonesia. He holds a bachelor's degree in Mechanical Engineering. He has several experiences working in automotive sectors such as in Production Engineering, construction New Factory Plant, His research interests are in the areas of project management, supply chain management and Factory Optimization

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