

## ABSTRACT

*The development of an industry that continues to move forward coupled with global competition and openness demands that the company continues to evolve and always make improvements in improving the performance of its production process. Pt. XYZ is an automotive company based in Germany that produces premium cars, the car assembly process groove at PT. XYZ is trimming line, mechanical line and finishing line, PT. XYZ produces C-Class, E-Class and GLC model cars. At this time PT. XYZ could not meet the production target with 8 unit/day, not achieving the production target due to the car assembly cycle time on the trimming Line 1 area exceeds the specified takt time. Assembly line balancing is required in the trimming area of line 1 using the Mixed-Model Assembly Line Balancing Problem (MALBP) approach, in the Trimming Line 1 area assembly line balancing study using the Ranked method Positional Weighted with Moving Target (RPW-MVM) to minimize the number of workstation. After the assembly line balancing, there was a decrease in the number of workstations to 14 workstations with a line efficiency of 86% and balancing efficiency of 97%.*

*Keywords: Assembly Line Balancing, Mixed-Model Assembly Line Balancing Problem, Ranked Positional Weighted with Moving Target.*