

## ABSTRACT

*PT.Hino Motor Manufacturing Indonesia (PT.HMMI) is one company in Indonesia which is engaged in the manufacture of automotive spare parts of cars and also its size is quite large as cars buses, trucks, and so forth. Department Engine Unit has a production line named Engine Line. In the Engine Line The flurry of activity assembly of a machine that is small and medium engine search conducted there are done by 25 workers. Solid activity and leisure time is short to make the workload of both physical and mental that is felt by the workers increased. If these problems are not immediately solved, is feared to potentially decrease the productivity of workers. Therefore special handling to these problems.*

*In this study aims to measure the physical and mental workload experienced by the workers who are on the Engine Line along to find out the most dominant factor. So as to provide the proposed improvement of measurement results workload done. Measurement of the workload is done by using a heart rate based Cardiovasculair Load and Subjective Workload Assessment Technique (SWAT) to measure the workload of physical and mental workload of the workers who are in part the Engine Line. Measurements were made to the workers at the Engine Line.*

*The results showed that the physical and mental workload that has been experienced by the workers there were 8 workers who have the burden kardiovaskulair (Cardiovaskulair Load) and into the highest category in the classification of 25 other workers, are in the process of E-05 L2 amounted to 36.77% , the E-06 L1 amounted to 40.24%, the E-06 R amounted to 32.67%, the E-07 L amounted to 31.94%, the E-08 R amounted to 30.63%, the E-10 L amounting to 31.42%, the E-11 L amounted to 33.35% and the E-12 by 32.80%. The classification shows that the necessary repairs but not urgent. While the mental work load into the high category (over load). The most dominant factor in this is the mental workload of the load time (load time) with the proportion of 63.08%, followed by a factor of effort (effort) with the proportion of 23.48% and psychological factors (stress) of 13.43%.*

*Treatment can be given to the measurement of physical and mental workload is to provide adequate rest periods so that workers can fulfill their personal needs. Another recommendation is to do to reposition or change of position of the placement process workers to who had the workload lighter other than it can perform additional job activity for workers who memiliki workload lighter and for workers who have the burden of low work can be done by reducing job activity and increase the number of labor.*

**Keywords:** *Workload Physical, Mental Workload, Heartbeat, Cardiovasculair Load and SWAT*