WORK STUDY ON INDUSTRIAL PRODUCTION IN X- MEMBER ASSEMBLY SRM 24 (WELDING) AT TRACOMA SDN. BHD.

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"I declare that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree."

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ABSTRACT

Presently, there are many manufacturing companies seeking improvement to their assembly operation in order to reduce the cycle time and increase productivity. To achieve the desired target, all the inefficient elements must be identified and eliminated in order to reduce cycle time.

This thesis analyses a work study in X-member assembly SRM 24 (welding) production line at Tracoma Sdn. Bhd. To achieve the objective of improving productivity and reduce the cycle time by eliminated inefficient work element, work study analysis was applied, incorporating Method Study and Work Measurement to determine the critical path, work optimization on the assembly line and elimination of the un-productive activities. Method study used for eliminated the unnecessary movement while work measurement used to eliminate the ineffective time.

The study began by selecting one of their specified process lines, video of the entire manufacturing process was recorded and data were analyzed in Computer Model for Operation Management (CMOM) software. The layout, placement and handling of production part were also captured in video. Through replay of the video, the duration of every operation step in every work station can be measured.

Factors that contribute toward inefficiencies of the manufacturing process were itemized and an improved procedure for the manufacturing was proposed. Based on the improved version, a new flow chart was developed. The hardware aspect of the improvement will incorporate the installation of simple conveyor system, holding of work-piece by clamping tools and repositioning of the process machines and working personnel. The reduction of the inefficiency in material handling factors has contributed significantly to overall improvement. These changes will result in saving in production cycle time, better productivity and reduction in cost.

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