

ABSTRACT

PT ABC is one of the state-owned companies that produces electronic equipments such as electronic equipment for military, ICT (Information Communication Technology &), electronic equipment for navigation systems, electronic equipment for the train, etc.). Based on the observation in the field, the mainboard inspection process is still done manually and the operator works in a standing position with neck bend over to 17.08° of extension and the trunk is bending up to 45.18° of extension for 7 hours per day. All operators of mainboard inspection experience pain and discomfort in all parts of the body with different percentages. But the parts of the body that have the highest percentage of MSD risks about 10% are neck and legs. In this case, the operators feel neck pain and feet pain. Based on Rapid Upper Limb Assessment (RULA) method, the RULA score obtained is 5 which means that the work posture requires analysis and improvement immediately. The RULA score is directly proportional to the risk of MSD, the higher the RULA score the higher also risk of Musculoskeletal Disorders (MSDs) is going. In mainboard inspection, operators only served to evaluate the soldering result by using a tool that is in the form of a magnifier which is equipped with a light that does not fit the operator's need, instead it makes operators doing the inspection in such work posture. The initial stage to solve the problem is gathering some data such as anthropometry data and the recommended work method which is doing the inspection in sitting position and accommodated by the ergonomic tool. Those data are used to design the specification of the ergonomic tool. After designing, there will be the dimension specification of the workbench and the chair and also the specification of the magnifier. At last, the output of this research is RULA score of new work posture which is 3.

Keywords : rapid upper limb assesment, specification, work posture, ergonomic tool, musculoskeletal disorders