

ABSTRACT

This study discusses the problems that exist in PT XYZ. The problem was found in the receiving division, which was the risk of Musculoskeletal Disorders in wood beam compiler operators caused by the operator's work posture when composing wood beam, especially on the base pile. This is reinforced by the results of the calculation of the RULA value of the operator's work posture produces a value of 7, means that repairs must be made immediately. In addition to the risk of Musculoskeletal Disorders, there is other problem of unloading process in the receiving division, there are two times the process of composing wood beam, and the method that requires operators to take wooden beams from one point to the others. We need a tools that make operator do not need to bend too long and often, also do not need to take wood beam from one point then arranged in another place, also does not need two times of composing wooden beam, because wooden beams arranged uniformly. By adjusting the needs of user, a wooden beam compiler was developed from a car lifter. The design of the wood beam composing tool uses reverse engineering and redesign methodology approach, because in this study redesign and development was carried out with reference to existing products, car lifters. From the development using this method will be obtained a concept of wood beam composing tools with the position of setting at hip level make the operator does not need to bend, and the composing process is done once. With the results in the form of improved work posture with a value of RULA of 3, it is 57% better than the existing work posture, and the wood composing time efficiency is 55.92%.

Keywords: Musculoskeletal Disorders, Car Lifter, RULA, reverse engineering and redesign methodology, Tools