ABSTRACT

The pressing plant is one of the existing factories in PT. Wijaya Karya Industry & Contruction. The pressing factory produces different types of tubes with different sizes. Besides producing, the pressing factory can repair the tube. The process of reparation on the tube is usually to remove rust on the body of the tube using sand fired wind compressor with magnitude of 5.5 hp. Sandblasting machine that designed by the previous researcher is to operate automatically at the time of shooting, but in the process of filling the sand is still done manually. The size of the tube makes up a large sandblasting machine has a height of 200 cm above the average height of the operator that is 172 cm, this problem was analyzed with tools called OWAS (Ovako Working Analysis System) that provide value categories for sand replenishment operator without the tools that the process must be repaired as soon as possible, because it would make operator hard to works well.

Future studies will design ergonomic tools in the process of filling sand into the sandblasting machine that will facilitate the operator's job by using rational product development. On the rational method, product development carried out in six stages. First one is Clarifying Objectives, Establishing Functions, Setting Requirements, Determining Charateristics, Generating Alternatives, and Evaluating Alternatives. The results of this study using the rational method is the specification and design of the sand replenishment ergonomics tools that can be implemented on PT.WIK and value categories from analysis OWAS tools on the sand filling tools are proving to be more easy for operator activity.

Keywords: Ergonomics Design Tools Sand Replenishment, *Sandblasting Machine, Rational Method*