

ABSTRACT

Personal protective equipment (PPE) is a tool that must be used when working according to work hazards and risks to maintain the safety of workers and those around them. PT. Stallion is a company engaged in producing components made of metal with most of the company's products being motorized vehicle components both two-wheeled and four-wheeled, one of which is the Guide Comp Level K81A with a function as an indicator when refueling, on a motorcycle. In the process of making Guide Comp Level K81A, there is a hazard RST-05 and RST-10 coming from the remaining grams of hot material from the trimming process which might occur in the turret engine production process. In addition, these hazards can interfere with the production process, then cause losses for operators and companies. Operators can experience work accidents due to the hazard, while the company must bear the costs due to the work risk. Therefore, it is necessary to design an PPE that can make the production process safer for operators. This study carried out a proposed risk treatment design at PT. Stallion using the Ergonomic Function Deployment (EFD) approach which applies ergonomic aspects, namely EASNE (Effective, Safe, Healthy, Comfortable, and Efficient) to create ergonomic PPE. From this research, an ergonomic PPE concept has been proposed with a face shield or a faceshield, a mechanism for adjusting neck straps and nape straps, as well as an adjustable ear protection device or earmuff. In addition, the use of this proposed PPE can also improve operator safety due to being exposed to heat grams from the production process resulting from the simulation process using software.

Keywords: *Personal Protective Equipment, HAZOP, Ergonomic Function Deployment, EASNE*