

ABSTRACT

Welding work is one of the informal industry jobs that many people in Indonesia engage in. Therefore, welders greatly need safety goggles as eye protection equipment. According to data from the Bureau of Labor Statistics, there are more than 20,000 cases of eye health issues in the workplace each year. This eye health disorder varies from mild to severe, ranging from vision impairment to blindness. BLS data shows that the disruption of eye complaints experienced by workers amounts to 1,790 cases, with welders accounting for about 1,390 cases of eye complaints caused by exposure to welding sparks. When welding, many welders still use regular glasses that are not safe for their eyes during the welding process. The purpose of this research is to develop safety goggles to enhance the safety and comfort of using safety goggles during the welding process, employing the Quality Function Deployment (QFD) method, which aims to meet the needs of welding operators as users of safety goggles. The designed product meets the users' needs as most of it has been realized in the designed safety goggles. The welding operator is satisfied with the proposed design of the safety goggles provided, as they feature impact-resistant lenses, UV protection, a nose guard to protect the operator's respiratory system, and a lens cover to protect the safety goggles' lenses. Additionally, the proposed safety goggles are designed with a strap to adjust to the size of the welding operator's head. The results obtained were that the product designed had succeeded in meeting most of the user's needs and the user was satisfied with the results of the proposed safety goggles design because it could help with the user's safety and comfort during the welding process without having to worry anymore about eye complaints experienced during the welding process. wear regular glasses.

Keywords: Welders, Safety Goggles, QFD, Regular Glasses