ABSTRACT

The problem in this study is that the flour packing machine at the Braling Gold Seasoning Flour UMKM has not been designed ergonomically. As a result, workers have difficulty in filling materials, are at risk of injury, and the packaging results are inaccurate. This study produces a new machine design based on direct input from workers. This topic is important because operator comfort and safety greatly affect the productivity of UMKM. Machines that are too high, difficult to fill, and inaccurate measuring instruments indicate a gap between the current condition of the machine and the expectations of users in the field. The solution is carried out through the Quality Function Deployment (OFD) approach to convert user needs into technical specifications. Data was collected through interviews and observations, then processed into a House of Quality (HoQ). Two alternative designs were developed, then compared using the Weighted Objective method to choose the best design that meets ergonomic needs, accuracy, and ease of use. The final design selected has an ergonomic structure, a wider and lower hopper, and anti-slip feet. These results show that the QFD approach is effective in designing machines that suit the operational needs of UMKM.

Keywords: Product design, Ergonomics, HoQ, Flour Packing Machine, QFD