ABSTRACT

In production process of tea powder in PT XZY there are a work station of sorting tea powder. In the sorting process, there are spilled of tea powder that produced most compared to other work stations. In previous research has made the development of a material handling adding aspect of filtering fuction to accommodate spill tea powder in accordance with the desired type. However, that development does not take into consideration the human aspect. Whereas the existing condition, many operator at that work station are complained of pain in their body parts. That pain may cause to the risk of Musculoskeletal Disorders. The risk is evidenced by the result of the Nordic Body Map Quoestionnaire which shows that the operator complained of pain where 93% felt at the waist, 80% felt in the buttocks, 70% felt in the back, 60% felt in the right wrist, and 53% felt in the left wrist.

Designing the ergonomic material handing is one of the way to minimizing the risk of Musculoskeletal Disorders (MSDs). Improving the design begins with the ergonomic evaluation on the existing condition and initial concept was selected. The evaluation is used for consideration of improving the design using Ergonomic Function Deployment (EFD) approach in order to have product attributeswhich applying the EASNE (Effective, Safe, Healthy, Comfortable, Efficient) principle.

Based on the EASNE principle it can be seen that product attributes which consider ther human aspects for developing of an ergonomic material concept. The design improvements can helping to minimize the risk of MSDs viewed based the worker's body posture when using the ergonomic material handling.

Keywords— Product Design, Musculoskeletal Disorders, Ergonomics Evaluation, Ergonomic Function Deployment, Material Handling