

Prototype of Accessible Patchwork Splicing Machine for People with Disabilities Mitra Handayani: Collaboration with UKM Pesawat

by Apri Nuryanto; Ishartiwi; Anggi Tias Pratama; Angga Damayanto

ABSTRACT

The accessibility of people with disabilities in productive activities is a strategic issue in ensuring inclusion in all aspects. People with disabilities who have productive businesses have various kinds of obstacles that hinder the production process so that there is a need for assistive technology that helps in improving the quality of performance and productivity. One of the productive businesses for people with disabilities that exists in Indonesia is Mitra Handayani. Mitra Handayani is part of a subsidiary of the Mitra Sejahtera Disability Empowerment Center (PPDMS) which handles the production of woven doormats. Mitra Handayani has quite complete production facilities although there is still a major obstacle, namely the problem of complaining about doormat products on patchwork woven cloth full of joints. The research aims to downstream the applied technology of patchwork connecting machines that are accessible for people with disabilities. The prototype designed is the result of continued research in 2020 – 2024 with a focus on fulfilling appropriate technology for doormat businesses for people with disabilities in the Gunungkidul Regency area.

The research method refers to *the design thinking process* step to produce a *prototype* patchwork connecting machine that is ready to be downstreamed. There are 5 main stages that must be done, namely *empathise*, *define*, *ideate*, *prototype*, and *test* which are integrated between stages. This research involved two partners, namely Mitra Handayani located in Gunungkidul Regency and UKM PESAWAT located in Kulon Progo Regency. This research involves the production process in UNY's workshops and laboratories by involving students as part of MBKM. The output of this research is Submitted to International Journals, Prototype Products, Patent IPR, Cooperation Agreement Manuscripts, and Proceedings at International Seminars. TKT's target is 6.

Kata Kunci: Doormat splicing machine; persons with disabilities; patchwork