

Context-specific design interventions in blending workstation: an ergonomics perspective/ J Sanjoy; Biswaksen Patnaik; Thaneswer Patel

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Abstrak

Work comprising of manual labor is a distinctive shop floor feature of Indian micro-small and medium-scale enterprises in manufacturing sectors. Investigations from an ergonomics perspective have not been performed in Indian plastic processing industries till date. Present paper aims to evaluate physical workload, psychosocial work environment, and subjective workload associated with blending workstations of small and medium scale plastic processing industries, in order to propose context-specific design interventions. An innovative combination of techniques featuring direct observation, questionnaire study, postural assessment, work study, virtual human modeling, and simulation were utilized toward achieving the stated aim. Prevalence of awkward work postures, symptoms of musculoskeletal ailments, and perception of high physical demand; urged for design interventions in these workstations. Following evaluation of existing working circumstances; concept model of modified blending workstation along with work accessories were assessed ergonomically in a virtual environment for making it human centric.