

ABSTRACT SUBMISSION



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Assessment of Carbon Emission in Apparel Sewing Process

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ABSTRACT (NO MORE THAN 500 WORDS:)

Carbon emission control during garment manufacture has become one of the important issues for sustainable development of apparel industry. The operation of production line will have an important impact on carbon emissions. Carbon emission assessment models were established for fabrics, accessories, sewing equipment and workers involved in garment sewing production. Among them, the number of sewing equipment and workers is related to the balance of production line. Based on the carbon emission assessment model, the genetic algorithm is used to optimize the production line according to the process flow, machine type and the layout of garment parts. The carbon emissions by different production organization were compared. The results showed that the carbon emissions of the production lines could be controlled by optimization of the production line organization. It is expected that to apply the results of this research to provide the basis for supervision, evaluate and controlling of carbon emissions during garment manufacture.