



# Academic

INTERNATIONAL WORKSHOP  
ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS”

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## Denim Weaving Technologies: Environmental and Economic Evaluation

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### Abstract

The textile sector is relevant in the Brazilian economy due to both job creation and industrial production value. Currently this sector faces the necessity to implement Cleaner Production tools for achieving the sustainable development goals as a consequence of pressures exerted by government and market. Therefore, the aim of this study is to evaluate the economic and environmental gains resulting from the utilization of the Design for the Environment considering two main technologies used to manufacture denim fabrics. To achieve this objective, a case study was developed in one of the major Brazilian denim producers where the two waving technologies are used in parallel. As a result of the case study, it was possible to conclude that air jet looms are more efficient than the older rapier looms, not only in terms of economic gains but also in terms of lower impact to the environment.

*Keywords: Cleaner production; Design for the Environment; textile industry.*

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