VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

"DEVELOPMENT OF YARN AND FABRIC USING BY-PRODUCT OF SUGAR INDUSTRY"

(SPONSORED BY K.S.C.S.T)

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ABSTRACT

An attempt has been made to extract spinnable fibers from "bagasse" a waste material from sugar industry and develop yarn and fabric. It is found that incorporation of bagasse fibers as a basic raw material in textile is possible. Raw materials used in yarn and fabric vary greatly, covering the entire spectrum from synthetic to natural.

Bagasse fibres were extracted from sugarcane rind in two different steps: Mechanical separation and chemical extraction. Several factors were considered such as solutions of sodium hydroxide with different concentrations and time of reaction during extraction of fibres.

However, there is a lack of an instrumental method to evaluate bagasse fibre length and finess. So far the bagasse fibres are known to be used in the manufacture of non-wovens and biocomposite matrerials. In this project we have made an attempt to change this trend and make use of these bagasse fibres in the manufacture of woven fabrics by blending them with modified regenerated fibres.

The bagasse fibres were extracted by treating the bagasse using NaOH alkaline solution and the fibres extracted. These extracted fibres were blended with modified regenerated fibres (modal) and yarn is spun. This spun yarn was used as weft and woven with cotton as warp. The yarn and fabric properties were respectively tested and conclusion drawn accordingly.