STUDIES IN WEAR LIFE OF NORMAL AND SPECIALLY FINISHED WOVEN COTTON APPAREL FABRICS

VOLUME - II

BY

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CERTIFICATE

This is to certify that the work reported in this Ph.D. Dissertation has been done by G.V. Sarma under our guidance and supervision. To the best of our knowledge, the work is original and has not been submitted to any other University, Educational Institution or any other body for awarding the Degree of Doctor of Philosophy.

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PREFACE TO VOLUME II

Volume II deals mainly with theoretical aspects. These include theoretical models for tear length distributions (Chapter 8) for frayed lengths (Chapter 9) and data from service wear trials to demonstrate the validity of these models.

Chapter 10 deals with a description of representative wear parameters like the number of tears and frays, etc. by counting Stochastic process. Methods of deducing wear life in time durations are also described in the same Chapter.

Chapter 11 deals with variations in the wear resistance of apparel fabrics as measured by retained levels of mechanical properties as well as actually observed tear and wear damage and the many factors to which these variations could be traced.

Methods of estimating the "Critical Stress" and "Critical Strength" are described in Chapter 11 and illustrated.

The manner in which the nature and directions of predominant tensions in an end-use could be assessed is illustrated in Chapter 11 in which some modifications were introduced in the manner of placing the fabric in the apparels made of special weaves.

In Chapter 12, a theoretical model is proposed to describe Flex Abrasion cycles. A large volume of data is presented to demonstrate the applicability of this theoretical model as well as to examine the often confronted bimodality in abrasion test results.

The theoretical aspects are summarised as a part of Chapter 13 and areas of further research are covered in Chapter 14.

Papers published from the work in Volume II are listed at the end (after references) and reprints are enclosed.

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