

PERFORMANCE OF POLYNOVIC/COTTON BLENDED YARN
IN THE PROCESS OF WEAVING

A dissertation submitted in fulfilment of the requirements for the Post Graduate Diploma in Textile Technology.



University of Moratuwa, Sri Lanka
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

by

M.P.L. Fernando

677 "85"
677.026

UM Thesis

University of Moratuwa



78495

78495

Department of Textile Technology
University of Moratuwa.

February, 1985.

78495

ACKNOWLEDGMENTS

The author wishes to express his sincere thanks to Mr. D. P. D. Dissanayaka for the advice and assistance given during the course of this work.

He also wishes to thank Messrs. M.A.Mack and M. Karunakaran for giving permission to carry out the project in the Pugoda Mill and for the assistance given in practical work.

CONTENTS

Chapter I		Page No.
	Introduction	
1.1	Historical Development	01
1.2	Historical Background of Polynosic Fibres	02
1.2.1	Polynosic Fibres	03
1.3	Classification of Polynosic Fibre	04
1.4	Manufacturing Process of Polynosic Fibres viz; 'Junlon'	06
1.5	Fibre Properties of Polynosics	07
1.6	Fine Structure and Appearance of Polynosic Fibres	11
1.7	Fibre Properties of Junlon	12
1.8	Special Properties of Junlon	13
1.9	Polynosic Yarn Properties	14
Chapter II		
2.1	Spinning Condition for Junlon/Cotton blended yarns	18
2.2	Spinning of Junlon/Cotton blended yarns	18
2.3	Details of the yarn manufacturing process at Pugoda Mills	20
Chapter III		
3.1	Effect of sizing on weaving performance	22
3.2	Effect of percentage of size in yarn	23
3.3	Viscosity of size	24
3.4	Speed of the Machine	26
3.5	Pressure and Nature of covering of Squeezing Rollers	26
3.6	Concentration of size in the beck	31
3.7	The purpose of adhesive in sizing	32
3.8	Effect of Temperature	35
3.9	Effect of Stretch Control	39
4.0	Drying of Sized Warps	43
Chapter IV		
4.1	Cone Winding	45
4.2	Warping	46
4.3	Size Application	47

Chapter V		Page No.
5.1	Conclusions .	52
	Appendix - I	57
	Appendix - II	58
	Appendix - III	59
	Appendix - IV	60
	References	61

