

## LIST OF TABLES

Tables	Pages
(2-1) Represents the blend be spun from the waste produced	4
(2-2) Re-workable Materials and Wastes Produced By a Combed Cotton Ring Mil	5
(2-3) Comber waste from long and extra long staple cotton	16
(4-1) Represents the types of machines used in the factory	18
(4-2) Represents the number of pins for each cylinder	21
(4-3) Represents the technical data of rosique carding m/c	27
(4-4) Represents the technical data of the O.E Reiter spinning frame RU 14	29
(4-5) Represents the experimental work for factors	30
(5-1) Represents the properties of open end yarns obtained due to the application of proposed experimental design	33
(5-2) Represents the Values of significant factors of the regression equations for different open end yarns properties	34
(5-3) Represents the sign of the significant factors in the different regressions for yarn properties	35
a) In case of raw material, the cotton factor is calculated through the following data;	54
b) In case of opened cotton clips, the cotton factor is calculated through the following Data	54

## LIST OF FIGURES

Figures		Pages
(2-1)	All purpose cotton waste blow room line	8
(2-2)	Blow room line including pre-treatment of dirty and twisted wastes	9
(2-3)	Blow room line without pre-treatment	10
(2-4)	Parameters of comber waste blend	12
(2-5)	Yarn test results-comber waste	12
(2-6)	Comparative yarn regularity and strength	14
(2-7)	Uster imperfection values	14
(4-1)	Represents the production line diagram of waste recycling	19
(4-2)	Represents the Rotating Cutting Knives	20
(4-3)	Represents the Tearing Machine	22
(4-4)	Represents the oiling unit rot oil 180	24
(4-5)	Represents the Omni bin and emptying unit mod, MO75 machine	25
(4-6)	Represents the carding setting	28
(5-1)	Represents the relation between deviation of Actual yarn Count and Nominal yarn count for different percentage Hard Waste.	36
(5-2)	Represents the relation between Actual yarn Count and Nominal yarn count for different percentage Hard Waste.	37
(5-3)	Represents the relation between Percentage deviation of Actual yarn Count and Nominal yarn Count for different percentage Hard Waste	37
(5-4)	Represents the relation between yarns Count CV% with both percentage Yarn Waste and yarn count	38
(5-5)	Represents the relation between yarns Count C.V% with both percentage Knitted Waste and yarn count.	39
(5-6)	Represents the relation between yarns Count C.V% with both yarn count percentage Yarn Waste (YW).	40
(5-7)	Represents the relation between yarns Count C.V% with both yarn count percentage Knitted Waste (KW).	40
(5-8)	Represents the relation between yarn Evenness CV% with both yarn count and percentage clips.	41

Figures		Pages
(5-9)	Represents the relation between yarn Evenness CV% with both yarn count and percentage yarn waste.	42
(5-10)	Represents the relation between yarn Evenness CV% with both percentage clips and yarn count.	43
(5-11)	Represents the relation between yarn Evenness CV% with both percentage yarn waste and yarn count.	43
(5-12)	Represents the relation between yarn Elongation CV% with both yarn count and percentage clips.	44
(5-13)	Represents the relation between yarn Elongation CV% with both yarn count and percentage yarn waste.	45
(5-14)	Represents the relation between yarn Elongation CV% with both percentage clips and yarn count.	45
(5-15)	Represents the relation between yarn Elongation CV% with both percentage yarn waste and yarn count.	46
(5-16)	Represents the relation between yarn RKM with both yarn count and percentage clips.	47
(5-17)	Represents the relation between yarn RKM with both yarn count and percentage yarn waste.	47
(5-18)	Represents the relation between yarn RKM with both percentage clips and yarn count.	48
(5-19)	Represents the relation between yarn RKM with both percentage yarn waste and yarn count.	48
(5-20)	Represents the relation between yarn RKM CV% with percentage clips	49
(5-21)	Represents the relation between yarn RKM CV% with percentage yarn waste	50
(5-22)	Represents the relation between Number of neps for 1000 meter and percentage clips.	51
(5-23)	Represents the relation between Number of neps for 1000 meter for different percentage yarn waste at different count.	51
Appendix	Dref 2 function scheme	61