

List of Tables

| <u>Table No.</u> | <u>Description</u> | <u>Page No.</u> |
|-------------------------|--|------------------------|
| 2.1 | Parameters measured and calculated on FAST system | 21 |
| 4.1 | Fabric sample particulars for validation test | 71 |
| 4.2 | Sample No. SS2 - Effect of Number Test on Axial Load | 74 |
| 4.3 | SS2 - Number of test data grouped Vs Standard Deviations | 75 |
| 4.4 | Sample No. SS14 - Effect of Number Test on Axial Load | 76 |
| 4.5 | SS14 - Number of test data grouped Vs Standard Deviations | 77 |
| 4.6 | SS28: Effect of Number Test on Axial Load | 78 |
| 4.7 | SS28 - Number of test data grouped Vs Standard Deviations | 79 |
| 4.8 | Sample No. SH27: Effect of Number Test on Axial Load | 80 |
| 4.9 | SH27 - Number of test data grouped Vs Standard Deviations | 81 |
| 5.1 | Shirting Fabric Sample Particulars | 85 |
| 5.2 | Suiting Fabric Sample Particulars | 86 |
| 5.3 | Extraction Force for Shirting Fabric Sample | 88 |
| 5.4 | Extraction Force for Suiting Fabric Sample | 89 |
| 6.1 | Extraction forces and fabric feel factor | 112 |
| 6.2 | Summary output for regression analysis of average and peak axial and radial forces | 113 |
| 6.2(a) | Regression statistics of average and peak axial and radial forces | 113 |
| 6.2(b) | ANOVA for regression analysis of average and peak axial and radial forces | 114 |
| 6.2(c) | Residual output for regression analysis of average and peak axial and radial forces | 115 |
| 6.2(d) | Probability output for regression analysis of average and peak axial and radial forces | 115 |
| 6.3 | Summary output for regression analysis of only average axial and radial forces | 120 |
| 6.3(a) | Regression statistics of only average axial and radial forces | 120 |
| 6.3(b) | ANOVA for regression analysis of only average axial and radial forces | 121 |
| 6.3(c) | Residual output for regression analysis of only average axial and radial forces | 121 |
| 6.3(d) | Probability output for regression analysis of only average axial and radial forces | 121 |
| 6.4 | Summary output for regression analysis of only average and peak axial forces | 124 |

| | | |
|--------|--|-----|
| 6.4(a) | Regression statistics of only average and peak axial forces | 125 |
| 6.4(b) | ANOVA for regression analysis of only average and peak axial forces | 125 |
| 6.4(c) | Residual output for regression analysis of only average and peak axial forces | 125 |
| 6.4(d) | Probability output for regression analysis of only average and peak axial forces | 125 |
| 6.5 | Extraction curve parameters notations | 127 |
| 6.6 | Extraction curve parameters | 128 |
| 6.7 | Summary output for regression analysis using extraction curve | 129 |
| 6.7(a) | Regression statistics using extraction curve | 129 |
| 6.7(b) | ANOVA for regression analysis using extraction curve | 130 |
| 6.7(c) | Residual output for regression analysis using extraction curve | 130 |
| 6.7(d) | Probability output for regression analysis using extraction curve | 130 |
| 7.1 | Sample particulars prepared on CCI loom | 136 |
| 7.2 | Effect of nozzle diameters | 137 |
| 7.3 | Effect of testing speed | 138 |
| 7.4 | Effect of nozzle material | 139 |
| 7.5 | Extraction Curve Parameters Notations for CCI loom sample | 140 |
| 7.6 | Extraction Curve Parameters for CCI loom sample | 140 |
| 7.7 | Summary output for regression analysis for CCI loom samples | 141 |
| 7.7(a) | Regression statistics for CCI loom samples | 141 |
| 7.7(b) | ANOVA for regression analysis for CCI loom samples | 142 |
| 7.7(c) | Residual output for regression analysis for CCI loom samples | 143 |
| 7.7(d) | Probability output for regression analysis for CCI loom samples | 143 |
| 7.8 | Sample No. SS2: Effect on repeat test | 144 |
| 7.9 | Sample No. SS14: Effect on repeat test | 145 |
| 7.10 | Sample No. SS28: Effect on repeat test | 146 |
| 7.11 | Sample No. SH27: Effect on repeat test | 147 |