



21 Aug, 2012

HALL NO - 6 STALL NO - R - 30

Visit Us - 2nd - 7th DECEMBER 2012.

It is a pleasure to inform all our valued customers that we are participating in the 9th India ITME (International Textile Machinery Exhibition) held at Mumbai between 2nd December 2012 to 7th December, 2012. The 9th India International Textile Machinery exhibition is the most important platform for everyone associated with Textile Industry. It will be showcasing textile technology, machinery, accessories and services by 620 exhibitors from more than 42 countries and around 1,00,000 visitors



Fabric Feel Tester - Designed By IIT with Financial Support from DST - Delhi Mfg - Texlab Industries, Ahmedabad Gujarat

19 May,2012

We introduce ourselves as one of the leading manufacturers of Textile, Dyes & Chemical Laboratory Testing Instruments, based at Ahmedabad, and are glad to inform you that we have been granted License to manufacture and Market Fabric Feel Tester – Highly sophisticated Machine developed by Indian Institute of Technology(IIT), New Delhi.

Fabric feel is a generic term for the tactile sensations associated with fabrics, and it markedly influences consumer preferences of textile products. Although fabric handle is still being judged subjectively to a large extent, the need for objective methods to measure the fabric handle has always existed. At present there are few instruments available for evaluating fabric handle objectively, like Kawabata evaluation system for fabrics. The main disadvantages of this instrument are high cost, complexity and the time consuming procedure. It is proposed to develop a comprehensive system which would give a feel value as well as other mechanical specifications of a fabric in a single test. The proposed instrument will be very helpful to the industries who are dealing with the production, evaluation and applications of textile fabrics for process control, quality control and quick decision making. These industries are mainly weaving industries, processing industries, garment manufacturer, buying houses, test houses etc. It will be also very useful for the academic and research institutes for research and development of new types of fabrics.

Purpose of Instrument

- To measure fabrics softness, feel directly
- To select the optimum fabric finish treatment by comparing feel
- To develop newer fabric with better feel.

Users

- In dyeing & finishing industries
- In weaving industries
- In garment manufacturing industries
- In testing laboratories
- In academic and research institutes.

Salient Features

- Quick evaluation Low cost
- Real time continuous graph
- Different nozzle diameter for different types of fabric
- Fixed operating speed
- Separate load cell for axial and radial force measurement
- Automatic stop motion

The latest development of the instrument draws lot of media attention too. Some of the coverage by prominent media like www.fibre2fashion.com, www.99business.com, www.ebscohost.com, www.facebook.com(blog page whatnext-benext.blogspot.in) given spontaneous coverage of the development as given in the following pages.





Table 4.2(a): Sample No. SS2 - Effect of Number Test on Radial Load (Right)

Test No.	Radial Load (Right) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.025									
2	0.030	0.028								
3	0.022	0.026	0.026							
4	0.027	0.025	0.026	0.026						
5	0.026	0.027	0.025	0.026	0.026					
6	0.031	0.029	0.028	0.027	0.027	0.027				
7	0.036	0.034	0.031	0.030	0.028	0.029	0.028			
8	0.040	0.038	0.036	0.033	0.032	0.030	0.030	0.030		
9	0.015	0.028	0.030	0.031	0.030	0.029	0.028	0.028	0.028	
10	0.028	0.022	0.028	0.030	0.030	0.029	0.029	0.028	0.028	0.028
11	0.032	0.030	0.025	0.029	0.030	0.030	0.030	0.029	0.029	0.029
12	0.035	0.034	0.032	0.028	0.030	0.031	0.031	0.030	0.030	0.029
13	0.045	0.040	0.037	0.035	0.031	0.033	0.033	0.033	0.032	0.032
14	0.037	0.041	0.039	0.037	0.035	0.032	0.033	0.034	0.033	0.033
15	0.041	0.039	0.041	0.040	0.038	0.036	0.033	0.034	0.034	0.034
16	0.039	0.040	0.039	0.041	0.039	0.038	0.037	0.034	0.035	0.035
17	0.033	0.036	0.038	0.038	0.039	0.038	0.037	0.036	0.034	0.035
18	0.028	0.031	0.033	0.035	0.036	0.037	0.037	0.036	0.035	0.033
19	0.024	0.026	0.028	0.031	0.033	0.034	0.035	0.035	0.035	0.034
20	0.038	0.031	0.030	0.031	0.032	0.034	0.034	0.036	0.036	0.035
Avg	0.032	0.032	0.032	0.032	0.032	0.033	0.033	0.033	0.032	0.032
SD	0.007	0.006	0.005	0.005	0.004	0.004	0.003	0.003	0.003	0.003

Table 4.2(b): Sample No. SS2 - Effect of Number Test on Radial Load (Left)

Test No.	Radial Load (Left) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.025									
2	0.023	0.024								
3	0.028	0.026	0.025							
4	0.031	0.030	0.027	0.027						
5	0.033	0.032	0.031	0.029	0.028					
6	0.026	0.030	0.030	0.030	0.028	0.028				
7	0.024	0.025	0.028	0.029	0.028	0.028	0.027			
8	0.038	0.031	0.029	0.030	0.030	0.030	0.029	0.029		
9	0.026	0.032	0.029	0.029	0.029	0.030	0.029	0.029	0.028	
10	0.027	0.027	0.030	0.029	0.028	0.029	0.029	0.029	0.028	0.028
11	0.032	0.030	0.028	0.031	0.029	0.029	0.029	0.030	0.029	0.029
12	0.033	0.033	0.031	0.030	0.031	0.030	0.029	0.030	0.030	0.030
13	0.035	0.034	0.033	0.032	0.031	0.032	0.031	0.030	0.030	0.031
14	0.024	0.030	0.031	0.031	0.030	0.030	0.031	0.030	0.029	0.030
15	0.028	0.026	0.029	0.030	0.030	0.030	0.029	0.030	0.030	0.029
16	0.036	0.032	0.029	0.031	0.031	0.031	0.031	0.030	0.031	0.030
17	0.035	0.036	0.033	0.031	0.032	0.032	0.032	0.031	0.031	0.031
18	0.032	0.034	0.034	0.033	0.031	0.032	0.032	0.032	0.031	0.031
19	0.024	0.028	0.030	0.032	0.031	0.030	0.031	0.031	0.031	0.031
20	0.022	0.023	0.026	0.028	0.030	0.030	0.029	0.030	0.030	0.030
Avg	0.029	0.029	0.030	0.030	0.030	0.030	0.030	0.030	0.030	0.030
SD	0.005	0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001

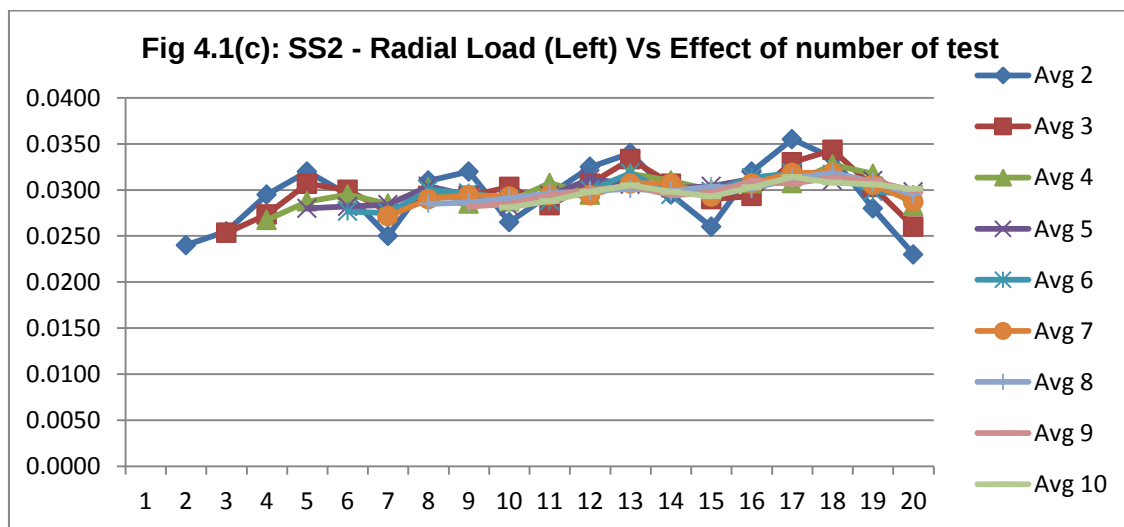
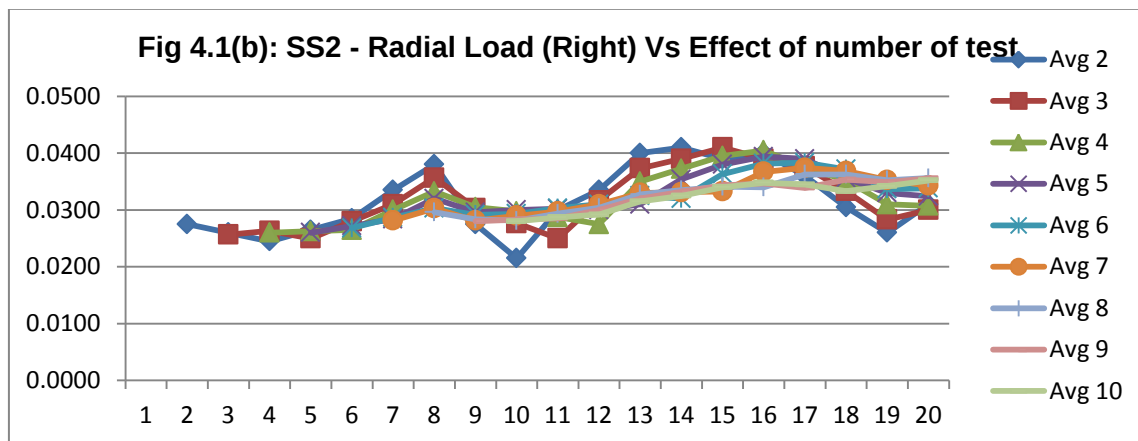
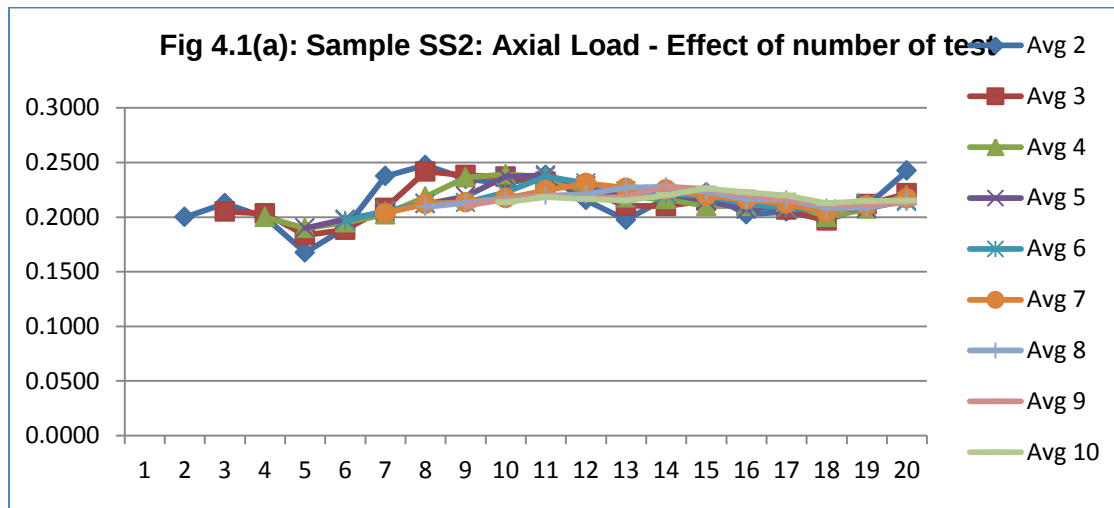


Table 4.4(a): Sample No. SS14 - Effect of Number Test on Radial Load (Right)

Test No.	Radial Load (Right) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.0500									
2	0.0450	0.0475								
3	0.0390	0.0420	0.0447							
4	0.0550	0.0470	0.0463	0.0473						
5	0.0600	0.0575	0.0513	0.0498	0.0498					
6	0.0350	0.0475	0.0500	0.0473	0.0468	0.0473				
7	0.0400	0.0375	0.0450	0.0475	0.0458	0.0457	0.0463			
8	0.0520	0.0460	0.0423	0.0468	0.0484	0.0468	0.0466	0.0470		
9	0.0630	0.0575	0.0517	0.0475	0.0500	0.0508	0.0491	0.0486	0.0488	
10	0.0370	0.0500	0.0507	0.0480	0.0454	0.0478	0.0489	0.0476	0.0473	0.0476
11	0.0480	0.0425	0.0493	0.0500	0.0480	0.0458	0.0479	0.0488	0.0477	0.0474
12	0.0460	0.0470	0.0437	0.0485	0.0492	0.0477	0.0459	0.0476	0.0484	0.0475
13	0.0510	0.0485	0.0483	0.0455	0.0490	0.0495	0.0481	0.0465	0.0480	0.0487
14	0.0630	0.0570	0.0533	0.0520	0.0490	0.0513	0.0514	0.0500	0.0483	0.0495
15	0.0580	0.0605	0.0573	0.0545	0.0532	0.0505	0.0523	0.0523	0.0509	0.0493
16	0.0360	0.0470	0.0523	0.0520	0.0508	0.0503	0.0484	0.0503	0.0504	0.0494
17	0.0620	0.0490	0.0520	0.0548	0.0540	0.0527	0.0520	0.0501	0.0516	0.0516
18	0.0520	0.0570	0.0500	0.0520	0.0542	0.0537	0.0526	0.0520	0.0503	0.0516
19	0.0540	0.0530	0.0560	0.0510	0.0524	0.0542	0.0537	0.0528	0.0522	0.0507
20	0.0600	0.0570	0.0553	0.0570	0.0528	0.0537	0.0550	0.0545	0.0536	0.0530
Avg	0.0503	0.0501	0.0500	0.0501	0.0499	0.0499	0.0499	0.0498	0.0498	0.0497
SD	0.0093	0.0063	0.0043	0.0033	0.0028	0.0029	0.0029	0.0025	0.0020	0.0019

Table 4.4(b): Sample No. SS14 - Effect of Number Test on Radial Load (Left)

Test No.	Radial Load (Left) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.0490									
2	0.0680	0.0585								
3	0.0650	0.0665	0.0607							
4	0.0720	0.0685	0.0683	0.0635						
5	0.0600	0.0660	0.0657	0.0663	0.0628					
6	0.0450	0.0525	0.0590	0.0605	0.0620	0.0598				
7	0.0700	0.0575	0.0583	0.0618	0.0624	0.0633	0.0613			
8	0.0630	0.0665	0.0593	0.0595	0.0620	0.0625	0.0633	0.0615		
9	0.0660	0.0645	0.0663	0.0610	0.0608	0.0627	0.0630	0.0636	0.0620	
10	0.0680	0.0670	0.0657	0.0668	0.0624	0.0620	0.0634	0.0636	0.0641	0.0626
11	0.0710	0.0695	0.0683	0.0670	0.0676	0.0638	0.0633	0.0644	0.0644	0.0648
12	0.0550	0.0630	0.0647	0.0650	0.0646	0.0655	0.0626	0.0623	0.0633	0.0635
13	0.0650	0.0600	0.0637	0.0648	0.0650	0.0647	0.0654	0.0629	0.0626	0.0635
14	0.0770	0.0710	0.0657	0.0670	0.0672	0.0670	0.0664	0.0669	0.0644	0.0640
15	0.0740	0.0755	0.0720	0.0678	0.0684	0.0683	0.0680	0.0674	0.0677	0.0654
16	0.0680	0.0710	0.0730	0.0710	0.0678	0.0683	0.0683	0.0680	0.0674	0.0677
17	0.0650	0.0665	0.0690	0.0710	0.0698	0.0673	0.0679	0.0679	0.0677	0.0672
18	0.0540	0.0595	0.0623	0.0653	0.0676	0.0672	0.0654	0.0661	0.0663	0.0663
19	0.0570	0.0555	0.0587	0.0610	0.0636	0.0658	0.0657	0.0644	0.0651	0.0654
20	0.0630	0.0600	0.0580	0.0598	0.0614	0.0635	0.0654	0.0654	0.0642	0.0649
Avg	0.0638	0.0642	0.0644	0.0646	0.0647	0.0648	0.0650	0.0649	0.0649	0.0650
SD	0.0083	0.0060	0.0047	0.0036	0.0029	0.0025	0.0022	0.0022	0.0019	0.0016

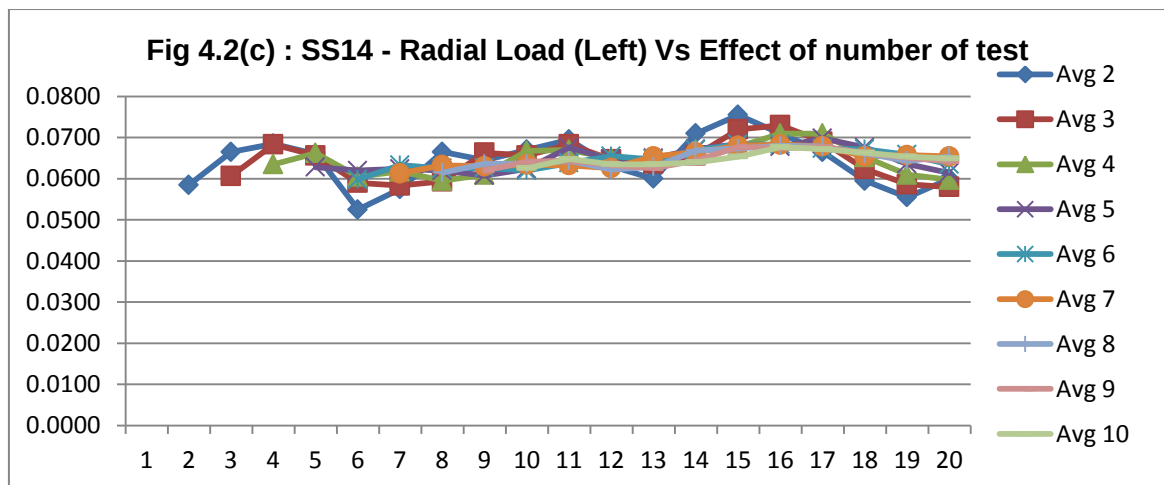
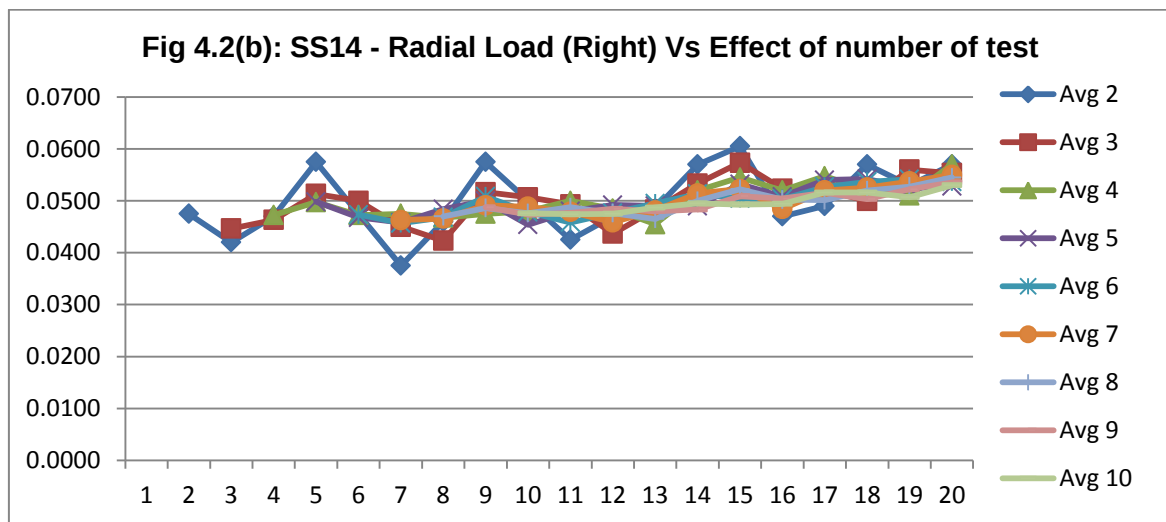
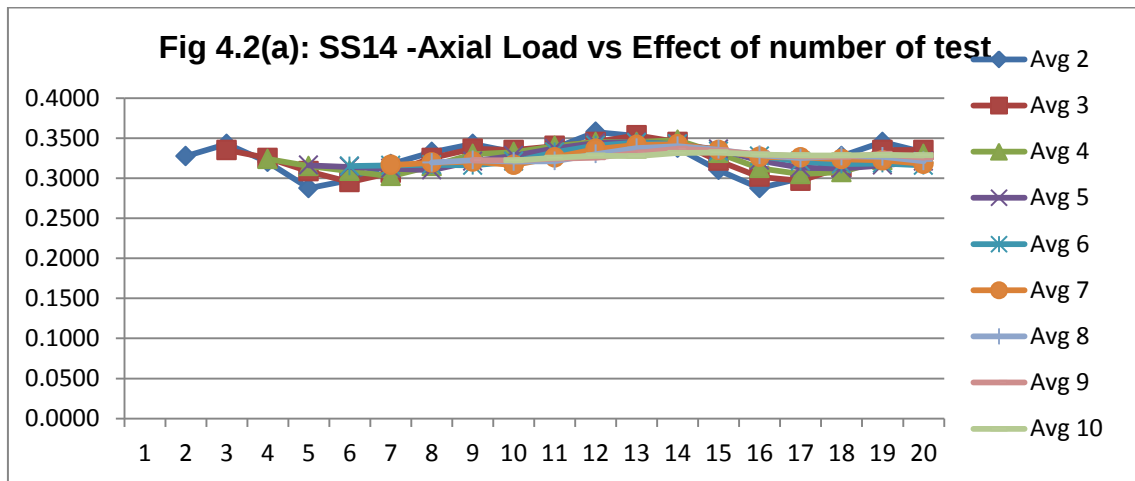


Table 4.6(a): Sample No. SS28 - Effect of Number Test on Radial Load (Right)

Test No.	Radial Load (Right) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.1530									
2	0.1620	0.1575								
3	0.1500	0.1560	0.1550							
4	0.1550	0.1525	0.1557	0.1550						
5	0.1720	0.1635	0.1590	0.1598	0.1584					
6	0.1550	0.1635	0.1607	0.1580	0.1588	0.1578				
7	0.1800	0.1675	0.1690	0.1655	0.1624	0.1623	0.1610			
8	0.1700	0.1750	0.1683	0.1693	0.1664	0.1637	0.1634	0.1621		
9	0.1450	0.1575	0.1650	0.1625	0.1644	0.1628	0.1610	0.1611	0.1602	
10	0.1820	0.1635	0.1657	0.1693	0.1664	0.1673	0.1656	0.1636	0.1634	0.1624
11	0.1750	0.1785	0.1673	0.1680	0.1704	0.1678	0.1684	0.1668	0.1649	0.1646
12	0.1710	0.1730	0.1760	0.1683	0.1686	0.1705	0.1683	0.1688	0.1672	0.1655
13	0.1630	0.1670	0.1697	0.1728	0.1672	0.1677	0.1694	0.1676	0.1681	0.1668
14	0.1650	0.1640	0.1663	0.1685	0.1712	0.1668	0.1673	0.1689	0.1673	0.1678
15	0.1750	0.1700	0.1677	0.1685	0.1698	0.1718	0.1680	0.1683	0.1696	0.1681
16	0.1690	0.1720	0.1697	0.1680	0.1686	0.1697	0.1714	0.1681	0.1683	0.1695
17	0.1740	0.1715	0.1727	0.1708	0.1692	0.1695	0.1703	0.1718	0.1688	0.1689
18	0.1550	0.1645	0.1660	0.1683	0.1676	0.1668	0.1674	0.1684	0.1699	0.1674
19	0.1690	0.1620	0.1660	0.1668	0.1684	0.1678	0.1671	0.1676	0.1684	0.1698
20	0.1730	0.1710	0.1657	0.1678	0.1680	0.1692	0.1686	0.1679	0.1682	0.1689
Avg	0.1657	0.1658	0.1659	0.1663	0.1666	0.1668	0.1669	0.1670	0.1670	0.1672
SD	0.0104	0.0069	0.0054	0.0047	0.0038	0.0037	0.0032	0.0030	0.0028	0.0023

Table 4.6(b): Sample No. SS28 - Effect of Number Test on Radial Load (Left)

Test No.	Radial Load (Left) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.1630									
2	0.1820	0.1725								
3	0.1600	0.1710	0.1683							
4	0.1800	0.1700	0.1740	0.1713						
5	0.1750	0.1775	0.1717	0.1743	0.1720					
6	0.1650	0.1700	0.1733	0.1700	0.1724	0.1708				
7	0.1700	0.1675	0.1700	0.1725	0.1700	0.1720	0.1707			
8	0.1850	0.1775	0.1733	0.1738	0.1750	0.1725	0.1739	0.1725		
9	0.1560	0.1705	0.1703	0.1690	0.1702	0.1718	0.1701	0.1716	0.1707	
10	0.1760	0.1660	0.1723	0.1718	0.1704	0.1712	0.1724	0.1709	0.1721	0.1712
11	0.1720	0.1740	0.1680	0.1723	0.1718	0.1707	0.1713	0.1724	0.1710	0.1721
12	0.1680	0.1700	0.1720	0.1680	0.1714	0.1712	0.1703	0.1709	0.1719	0.1707
13	0.1650	0.1665	0.1683	0.1703	0.1674	0.1703	0.1703	0.1696	0.1702	0.1712
14	0.1760	0.1705	0.1697	0.1703	0.1714	0.1688	0.1711	0.1710	0.1703	0.1708
15	0.1850	0.1805	0.1753	0.1735	0.1732	0.1737	0.1711	0.1729	0.1726	0.1718
16	0.1700	0.1775	0.1770	0.1740	0.1728	0.1727	0.1731	0.1710	0.1726	0.1723
17	0.1850	0.1775	0.1800	0.1790	0.1762	0.1748	0.1744	0.1746	0.1726	0.1738
18	0.1830	0.1840	0.1793	0.1808	0.1798	0.1773	0.1760	0.1755	0.1756	0.1736
19	0.1780	0.1805	0.1820	0.1790	0.1802	0.1795	0.1774	0.1763	0.1758	0.1758
20	0.1720	0.1750	0.1777	0.1795	0.1776	0.1788	0.1784	0.1768	0.1758	0.1754
Avg	0.1733	0.1736	0.1735	0.1735	0.1732	0.1731	0.1729	0.1728	0.1726	0.1726
SD	0.0087	0.0052	0.0043	0.0039	0.0036	0.0032	0.0028	0.0023	0.0021	0.0018

Fig 4.3(a): Axial Load : Effect of number of test

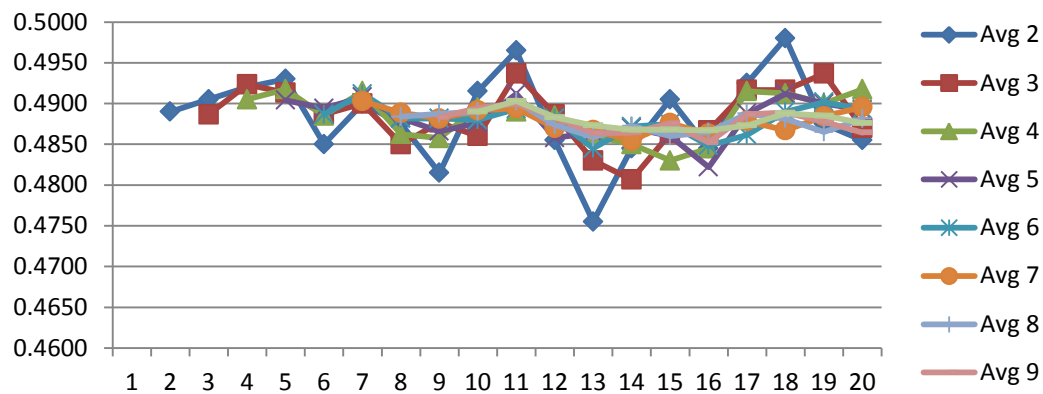


Fig. 4.3(b): Radial Load (Right): Effect of number of test

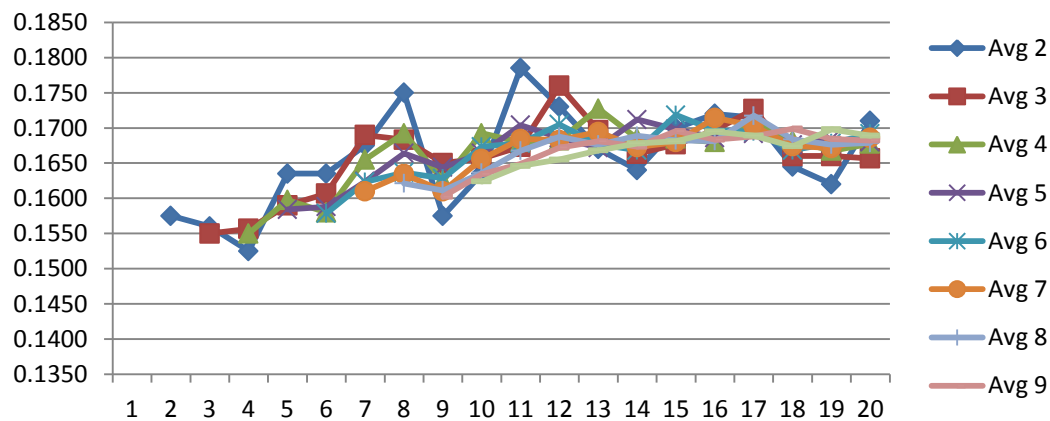


Fig. 4.2(c): Radial Load (Left): Effect of number of test

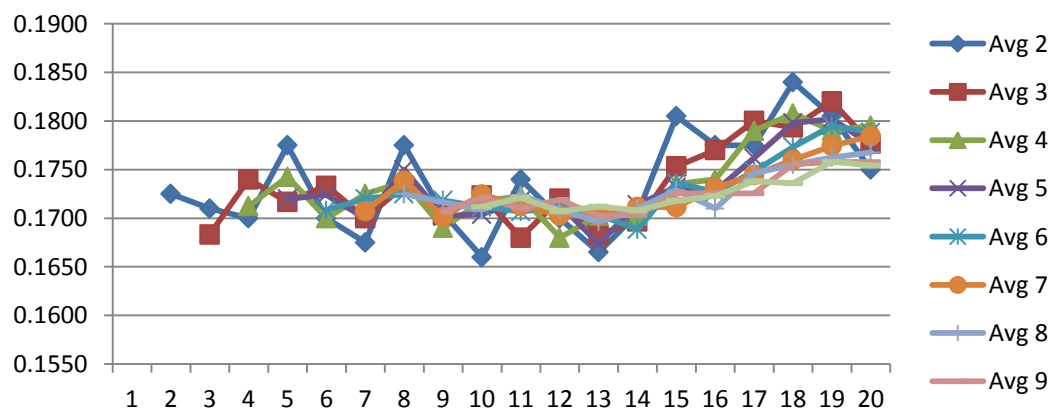


Table 4.8(a): Sample No. SH27 - Effect of Number Test on Radial Load (Right)

Test No.	Radial Load (Right) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.0060									
2	0.0100	0.0080								
3	0.0090	0.0095	0.0083							
4	0.0140	0.0115	0.0110	0.0098						
5	0.0070	0.0105	0.0100	0.0100	0.0092					
6	0.0150	0.0110	0.0120	0.0113	0.0110	0.0102				
7	0.0060	0.0105	0.0093	0.0105	0.0102	0.0102	0.0096			
8	0.0090	0.0075	0.0100	0.0093	0.0102	0.0100	0.0100	0.0095		
9	0.0100	0.0095	0.0083	0.0100	0.0094	0.0102	0.0100	0.0100	0.0096	
10	0.0200	0.0150	0.0130	0.0113	0.0120	0.0112	0.0116	0.0113	0.0111	0.0106
11	0.0150	0.0175	0.0150	0.0135	0.0120	0.0125	0.0117	0.0120	0.0117	0.0115
12	0.0130	0.0140	0.0160	0.0145	0.0134	0.0122	0.0126	0.0119	0.0121	0.0118
13	0.0100	0.0115	0.0127	0.0145	0.0136	0.0128	0.0119	0.0123	0.0117	0.0119
14	0.0080	0.0090	0.0103	0.0115	0.0132	0.0127	0.0121	0.0114	0.0118	0.0113
15	0.0070	0.0075	0.0083	0.0095	0.0106	0.0122	0.0119	0.0115	0.0109	0.0113
16	0.0100	0.0085	0.0083	0.0088	0.0096	0.0105	0.0119	0.0116	0.0113	0.0108
17	0.0180	0.0140	0.0117	0.0108	0.0106	0.0110	0.0116	0.0126	0.0123	0.0120
18	0.0120	0.0150	0.0133	0.0118	0.0110	0.0108	0.0111	0.0116	0.0126	0.0123
19	0.0110	0.0115	0.0137	0.0128	0.0116	0.0110	0.0109	0.0111	0.0116	0.0124
20	0.0090	0.0100	0.0107	0.0125	0.0120	0.0112	0.0107	0.0106	0.0109	0.0113
Avg	0.0110	0.0111	0.0112	0.0113	0.0112	0.0112	0.0112	0.0113	0.0115	0.0116
SD	0.0039	0.0028	0.0024	0.0018	0.0014	0.0010	0.0009	0.0009	0.0008	0.0006

Table 4.8(b): Sample No. SH27 - Effect of Number Test on Radial Load (Left)

Test No.	Radial Load (Left) (kg)	Avg 2	Avg 3	Avg 4	Avg 5	Avg 6	Avg 7	Avg 8	Avg 9	Avg 10
1	0.0200									
2	0.0180	0.0190								
3	0.0260	0.0220	0.0213							
4	0.0240	0.0250	0.0227	0.0220						
5	0.0150	0.0195	0.0217	0.0208	0.0206					
6	0.0120	0.0135	0.0170	0.0193	0.0190	0.0192				
7	0.0170	0.0145	0.0147	0.0170	0.0188	0.0187	0.0189			
8	0.0230	0.0200	0.0173	0.0168	0.0182	0.0195	0.0193	0.0194		
9	0.0260	0.0245	0.0220	0.0195	0.0186	0.0195	0.0204	0.0201	0.0201	
10	0.0270	0.0265	0.0253	0.0233	0.0210	0.0200	0.0206	0.0213	0.0209	0.0208
11	0.0180	0.0225	0.0237	0.0235	0.0222	0.0205	0.0197	0.0203	0.0209	0.0206
12	0.0220	0.0200	0.0223	0.0233	0.0232	0.0222	0.0207	0.0200	0.0204	0.0210
13	0.0260	0.0240	0.0220	0.0233	0.0238	0.0237	0.0227	0.0214	0.0207	0.0210
14	0.0240	0.0250	0.0240	0.0225	0.0234	0.0238	0.0237	0.0229	0.0217	0.0210
15	0.0270	0.0255	0.0257	0.0248	0.0234	0.0240	0.0243	0.0241	0.0233	0.0222
16	0.0230	0.0250	0.0247	0.0250	0.0244	0.0233	0.0239	0.0241	0.0240	0.0233
17	0.0200	0.0215	0.0233	0.0235	0.0240	0.0237	0.0229	0.0234	0.0237	0.0236
18	0.0170	0.0185	0.0200	0.0218	0.0222	0.0228	0.0227	0.0221	0.0227	0.0230
19	0.0140	0.0155	0.0170	0.0185	0.0202	0.0208	0.0216	0.0216	0.0212	0.0218
20	0.0150	0.0145	0.0153	0.0165	0.0178	0.0193	0.0200	0.0208	0.0209	0.0206
Avg	0.0207	0.0209	0.0211	0.0212	0.0213	0.0214	0.0215	0.0216	0.0217	0.0217
SD	0.0047	0.0041	0.0034	0.0028	0.0023	0.0020	0.0018	0.0016	0.0014	0.0011

Fig. 4.4(a): Axial Load : Effect of number of test

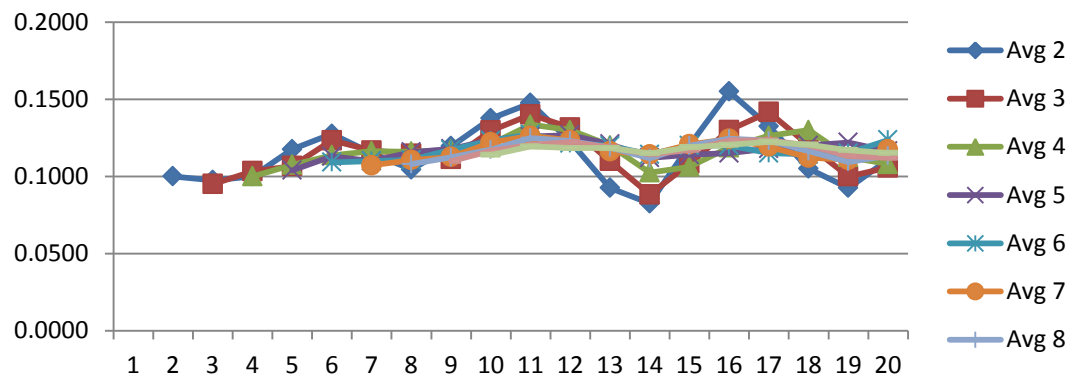


Fig. 4.4(b): Radial Load (Right): Effect of number of test

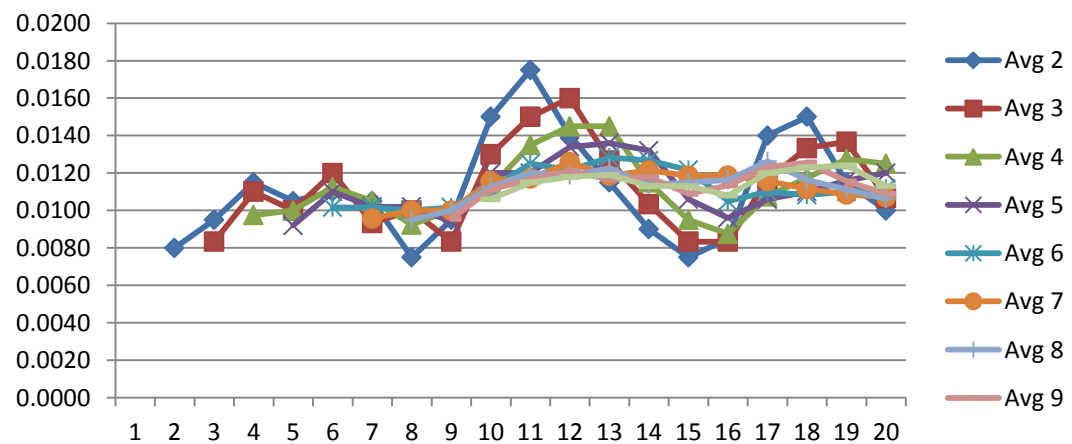
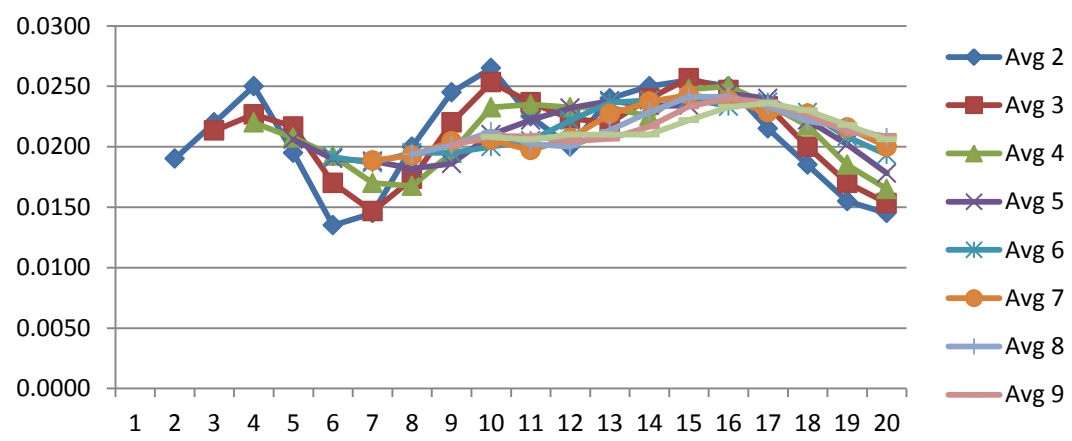
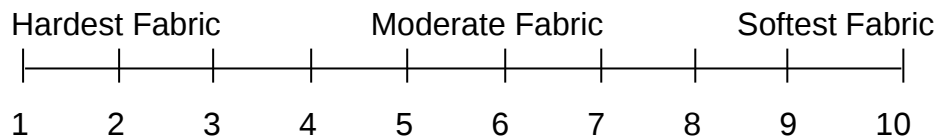


Fig. 4.4(c): Radial Load (Left): Effect of number of test



Subjective Assessment of Fabric: 10 point scale is used for the assessment. Point 10 indicates the best feel of the fabric and 1 indicates the worst. In order to evaluate the fabric hand values subjectively, pallets of fabric samples were prepared. In survey each assessor was asked to rank the softness of the fabric sample based on a 10 point scale as given below:



The assessors were reminded to ignore the effect of colour and pattern while ranking the fabrics. In the survey total 170 assessors were included at random. Heterogeneity of the group were taken care of in terms of age, sex, profession, etc.. The definition and criteria of the softness rating were explained to the assessors. The fabric samples were presented to individual assessor for feeling, rubbing, bending, squeezing by their hand and record their response.

Fabric samples procured from market:

Assessors: Male, Age Group: 15-30 yrs

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	7.5	6	5.5	5	6.5	5	6	6.5	2	1.5
2	8.5	8	6	7	8.5	6	8	9	5	3.5
3	9.5	9	8.5	8	7	4	7	8	3	4
4	7	9	9	4	3	5	10	9	2	1
5	7	7.5	7	6	4	5.5	8	8	4	2
6	4	3	3	5	6	4	6	5	4	3
7	8	8	5	4	7.5	4	7	6	1	1.5
8	8	7	6	5	7	6	8	7.5	3	2.5
9	8	8	5	6	6	5	7	5	3	3
10	9	8	6	6	5	4.5	10	9	2	4
Avg	7.65	7.35	6.1	5.6	6.05	4.9	7.7	7.3	2.9	2.6

Assessors: Male, Age Group: 30-60 yrs

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	8	7	5	6.5	6	4	7	5	3	2
2	8	7	7.5	7	5	6	6	6.5	2	3.5
3	5	5	4	5	7	4	9	6	4	1
4	8	8	7	6	3	2	8	7	6	3
5	8.5	8	6	7.5	7	6	8.5	9	3	2
6	7	7	6	5	5	2	7	5	2	1
7	7	6	5	6	3	4	9	8	6	3
8	6	7	6	7.5	7	5	7	6	3	2
Avg	7.19	6.88	5.81	6.31	5.38	4.13	7.69	6.56	3.63	2.19

Assessors: Female, Age Group: 15-30 yrs

S No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	7	6.5	6	5	6.5	3	8	7.5	2	4
2	4	5	6	7	9	6	8	6.5	2	3
3	5	6	6	5	7	6	6	4	2	3
4	4	3	4	6	6	5	8	4	3	3
5	6	7.5	5	5	8	6	7	5	3	2
6	4.5	3.8	3.5	5	6.5	4.6	6	5	4	3
7	6	7	6	6	8	5.5	7	6	4	3
8	3	4	4.5	3	7	2.5	8	6	3	2
9	2	4.5	4	5	7.5	4	7	6	0	1
10	3	5	4	5	7	2	8	7	6	3
11	4	6	5	6	8	3	9	7	5	2
12	2.5	4.75	5	6.5	8	4.5	7.5	6.5	1.5	2
Avg	4.25	5.25	4.92	5.38	7.38	4.34	7.46	5.88	2.96	2.58

Assessors: Female, Age Group: 30-60 yrs

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	8	7	4	5	7	4	7.5	6	3	3.5
2	8	6	7	8	5	5	9	6	3	2
3	7	6	6	5	7	6	6	4	2	3
4	6	7	6	4	5	4	5.5	6	1	3
5	8.5	8	7	5	6	6	8	5	4	3
6	6	7	5	6	7	5	8	5	2	5
7	5	6	4	6.5	7	6	6	7	3	5
Avg	6.93	6.71	5.57	5.64	6.29	5.14	7.14	5.57	2.57	3.5

Assessors: Textile Student, Male

S No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	8	7	6.5	6	5	4.5	7	8.5	4	1
2	6	4.5	6	7.5	3.5	4	8	7	3	2
3	7	9	9	4	3	5	10	10	1	0
4	6	5	8	3	4	6	7	9	4	2
5	8	6.5	7	7.5	5	5	9	6	3	2
6	6	5.75	5.5	5	3	2	6	5	1.5	1
7	8.5	8	5	5	8	5	8	9	5	2
8	7	7	4.5	5	5.5	3	6.5	6	3	2.5
9	6.5	6	3.5	7	6	5	7	7.5	4	2
10	7.5	7	5.5	4	4	6	7	6	2	1
Avg	7.05	6.58	6.05	5.4	4.7	4.55	7.55	7.4	3.05	1.55

Assessors: Textile Student, Female

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	2.25	5	4.5	5.5	8	4	8	7.5	1.75	2.5
2	2	4.5	4	5	7.5	4.5	7	6	0.5	1.5
3	4	6	6	7	8	6	9	8	2	3
4	2	3	4	4	8	4	8	6	2	3
5	1	3	4	4	7	3	7	6	1	1.5
6	5	4	5	6	8	4	8	7	7	5
7	3	5.5	5	6	8.5	5	8	7	1	2
8	2	3	4	5	8	4	9	5	3	2
9	2.5	5	4	5	7.5	4	7	6	2	3
10	7	6.5	6	5	6.5	3	8	7.5	2	4
11	5	6	6	5	7	6	6	4	2	3
Avg	3.25	4.68	4.77	5.23	7.64	4.32	7.73	6.36	2.2	2.77

Assessors: Textile Faculty, Male

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	9	8	4	4	8	5	8	9	5	2
2	9	9	5.5	5	7	6	7	7.5	6	3
3	6	4	5.5	5	3	4	8	7	7	5
4	8	7	6	6	4	5	9	8	4	3
5	8	9	9	5	4	4	10	10	2	3
6	8	8	6	6	8	5	7	7.5	2	4
Avg	8	7.5	6	5.17	5.67	4.83	8.17	8.17	4.33	3.33

Annexure -I

Assessors: Textile Faculty, Female

Sr. No.	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
1	8	7	5	5	7	4	9	7	3	2
2	8	6	3	6	6	5	8	8	4	4
3	9	8	5	7	4	5	7	9	3	5
4	8	7	4	6	4	3	8	7	4	4
5	7	6	5	5	6	4	7	8	4	3
Avg	8	6.8	4.4	5.8	5.4	4.2	7.8	7.8	3.6	3.6

Fabric samples prepared on CCI loom:

Assessors: Male, Age Group: 15-30 yrs

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	2	4	4	4.5	5.5	6	6	9	8
2	3	1	2	4	5	6	7	8	9
3	5	6	6	7.5	6.5	8	9	10	9.5
4	4	5.5	6	6	6.5	7	8	8.5	8.5
5	2	1	3	5	6	7	8	8.5	8
6	1	2	3	4	5	6	7	8	9
7	0	1.5	3	4	4.5	6	7	10	9
8	2	3	4	6	5	7	7.5	9	9.5
9	2	1	2	4	3	6	7	7.5	8
10	3	4	5	7	8	7.5	9	9.5	10
11	0	1	3	4	5.5	6	7	8	9
12	4	5	5.5	6	6.5	7	8	9	9.5
13	2	3	2	4	6	5	8	7	8.5
14	0	1	2	4	5	6	7	8	8
15	1	1.5	3	4.5	4	6	7	7.5	8
Avg	2.07	2.7	3.57	4.97	5.47	6.43	7.5	8.5	8.77

Assessors: Male, Age Group: 30-60 yrs

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	2	3	4	4	5	6	6	7	7
2	4	1	2	4	6	5	8	9	10
3	3	1	2	5	6	6.5	8.5	8	8.5
4	2	2.5	3	5	6	7	7.5	8	10
5	4	5	4	6	7	6.5	8	10	9
6	5	4	4.5	6	7	8	9	10	9
7	4	5	6	6.5	7	7.5	8	8	10
8	1	3	4	5	6	7	8	9	10
9	2.5	3	5	6	8	7	7.5	9	9.5
10	3	4	5	6	7	7.5	7	9	10
Avg	3.05	3.15	3.95	5.35	6.5	6.8	7.75	8.7	9.3

Assessors: Female, Age Group: 15-30 yrs

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	3	5	6	5	6	7	6	8	9
2	4	4	5	4	6	7	6	9	8
3	2	2	1	4	6	7	4	7	8
4	3	2	2	5	5	6	5	7	9
5	3	3	3	5	6	7	6	7	7
6	2	3	4	4	5	6	6	9	9
7	2	3	4	6	7	6	8	10	9
8	3	1	2	5	4	6	8	10	8
9	0	4	4	6	8	9	5	10	8
10	0	2	3	5	4	8	7	8	6
11	1	1.5	1.5	2.5	3	5	4.5	4.8	7
12	2	1	2.5	5	4	6	6.25	8.2	8
13	4	8	6	4	6	8	4	8	6
14	4	6	7	7	8	6	5	6.5	8
15	1	2	2	4	5	5.5	6	8	8
16	0	2	2	4	6	5	6	7	7.5
17	1	3	3	5	5	6	6	7.5	8
18	3	3.5	4	6	6	7	8	9	9
19	0	3	3	5	6	6	7	8	8
20	1	3	3	4	5	8	6	8	9
21	2	3	5	5	6	8	7	8	9
Avg	1.95	3.1	3.48	4.79	5.57	6.64	6.04	8	8.02

Assessors: Female, Age Group: 30-60 yrs

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	1	3	2	5	6	6.5	8	9	8
2	2	3	4	6	6	7	9	10	9
3	2	4	5	6	7	8	8	10	9
4	3	1	3	4	6	5	8	7	9
5	3	2	1	5	6	7	9	9.5	9
6	2	3	2	4	6	5	8	8.5	8
7	4	5	5	6	7	7	7.5	8	8
8	2	2	3	4	5	6	7	7	8
9	1	2	3	4	5	6	7	8	9
10	1.5	2.5	2.5	3	5	4	7.5	8	8
11	3	2	1	4	5	6	7	8	9
12	2	2.5	2.5	4	5	5	7	8	9
13	4	3	4	5	6	7	8	9	8
Avg	2.35	2.69	2.92	4.62	5.77	6.12	7.77	8.46	8.54

Assessors: Textile Student, Male

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	1	1	2	2	5	4	9	9.5	9.5
2	2.5	3	4	3	4	4.5	8	8.5	9.5
3	2	3	1	5	6	4	7	9	8
4	3	2	4	5	7	6	8	9	10
5	5	6	7	6	8	9	8	9	10
6	5	4	5	6	7	7	8	9	8
7	3	5	4	6	7	7	7	9	8
8	1	3	5	2	6	4	6	7	9
9	1	1.5	2	3	4	4	5	7	8
10	4	6	7	8	6	3	7	4	8
11	2	3	4	2	4	5	6	8	9
12	0	3	2	5	7	6	10	8	9
13	1	2	2.5	4	7	6	10	8	9
14	1	2	5	4	7	6	10	8	9
15	2	3	2.5	4	6	4	7	9	8.5
16	2	3	4	5	5	6	7	8	9
17	2	4	3	5	7	6	8	9	10
18	1.5	2	3	3.5	5.5	6.75	8.5	9	9.5
19	6	9	7.5	6	9	7	8	7	9
20	1	2.5	3	5	6	6	8	9	10
21	2	1	3	5.5	7	7	10	9	8
22	0	2	4	6	8.5	8	9	9	10
23	1.5	2	2	3.5	4	5	7	8.5	9
24	3	1	2	5	0	4	10	8	9
Avg	2.19	3.08	3.69	4.56	5.96	5.64	7.98	8.27	9

Assessors: Textile Student, Female

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	1	2	3	5	6	8	7	10	9
2	3	4	5	8	6	7	9	8.5	8
3	1	2	5	6	5	5	8	9	10
4	1	3	2	4	5	6	7	8	9
5	1	3	2	4	6	7	8	9	9
6	1	2	2	6	7	5	9	8	10
7	2	3	5	6	7	8	8	9	8
8	3	4	5	5	6	6	6	6.5	8
9	0	3	2	5	7	6	10	8	9
10	3	4	2	5	7	6	9	10	9
11	2	3	0	5	7	6	9	10	8
12	4	5	6	6	7	4	8	7	9
13	3	1	2	4	4	3	5	6	6
14	3	2	4	5	7	6	8	9	10
Avg	2	2.93	3.21	5.29	6.21	5.93	7.93	8.43	8.71

Assessors: Textile Faculty, Male

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	1	3	3	5	5	6	8	8	9
2	2	3	4	5.5	6	7	9	10	9
3	1	3	2	4	5	6	8	9	8
4	2	3	4	5	5	6	7	8	9
5	1	1.5	3	4	4.5	5	6	7	8
6	3	2	2	5	4	6	7	8	9
7	2	1	2	3	4	4	5	7	9
8	1	2	3	4	5	5	8	8	9
Avg	1.63	2.31	2.88	4.44	4.81	5.63	7.25	8.13	8.75

Assessors: Textile Faculty, Female

S No.	P	T	S	PS	TS	SS	PSO	TSO	SSO
1	1	3	5	6	7	7	9	10	9
2	2	3	4	5	6	7	7	8	9
3	2	1	2	4	5	6	7	7	8
4	3	3	2	5	5	6	7	8	9
5	2	3	3	4	5	6	8	9	9
6	1	3	4	5	6	7	8	8	9
Avg	1.83	2.67	3.33	4.83	5.67	6.5	7.67	8.33	8.83

In order to determine the consistency of subjective assessment of the assessors, rank co relation method is used to determine the level of agreement between assessors.

Average rank values for all subjective assessors of fabric sample procured from market:

Groups	SS1	SS2	SS8	SS10	SS13	SS14	SS23	SS24	SS28	SS29
Male, Age Group: 15-30 yrs	7.65	7.35	6.1	5.6	6.05	4.9	2.6	2.9	7.3	7.7
Male, Age Group: 30-60 yrs	7.19	6.88	5.81	6.31	5.38	4.13	2.19	3.63	6.56	7.69
Female, Age Group: 15-30 yrs	7.05	6.58	6.05	5.4	4.7	4.55	1.55	3.05	7.4	7.55
Female, Age Group: 30-60 yrs	8	7.5	6	5.17	5.67	4.83	3.33	4.33	8.17	8.17
Textile Student, Male	4.25	5.25	4.92	5.38	7.38	4.34	2.58	2.96	5.88	7.46
Textile Student, Female	6.93	6.71	5.57	5.64	6.29	5.14	3.5	2.57	5.57	7.14
Textile Faculty, Male	3.25	4.68	4.77	5.23	7.64	4.32	2.77	2.2	6.36	7.73

Textile Faculty, Female	8	6.8	4.4	5.8	5.4	4.2	3.6	3.6	7.8	7.8
Average	6.54	6.47	5.45	5.57	6.06	4.55	2.77	3.16	6.88	7.66

Average rank values for all subjective assessors of fabric samples produced on CCI

looms:

Group Name	P	T	S	PS	TS	SS	PSO	TSO	SSO
Male, Age Group: 15-30 yrs	2.07	3.57	2.7	4.97	6.43	5.47	7.5	8.77	8.5
Male, Age Group: 30-60 yrs	3.05	3.95	3.15	5.35	6.8	6.5	7.75	9.3	8.7
Female, Age Group: 15-30 yrs	1.95	3.48	3.1	4.79	6.64	5.57	6.04	8.02	8
Female, Age Group: 30-60 yrs	2.35	2.92	2.69	4.62	6.12	5.77	7.77	8.54	8.46
Textile Student, Male	2.19	3.69	3.08	4.56	5.64	5.96	7.98	9	8.27
Textile Student, Female	2	3.21	2.93	5.29	5.93	6.21	7.93	8.71	8.43
Textile Faculty, Male	1.63	2.88	2.31	4.44	5.63	4.81	7.25	8.75	8.13
Textile Faculty, Female	1.83	3.33	2.67	4.83	6.5	5.67	7.67	8.83	8.33
Overall Ranking	2.22	3.51	2.89	4.95	6.3	5.84	7.48	8.84	8.38

Correlation coefficient between different groups of assessors:

	Male, Age Group: 15-30 yrs	Male, Age Group: 30-60 yrs	Female, Age Group: 15-30 yrs	Female Age Group: 30-60 yrs	Textile Student, Male	Textile Student, Female	Textile Faculty, Male	Textile Faculty, Female
Male, Age Group: 15-30 yrs	1							
Male, Age Group: 30-60 yrs	0.96	1						
Female, Age Group: 15-30 yrs	0.97	0.96	1					
Female, Age Group: 30-60 yrs	0.95	0.92	0.95	1				
Textile Student, Male	0.72	0.71	0.66	0.61	1			
Textile Student, Female	0.94	0.88	0.84	0.80	0.76	1		
Textile Faculty, Male	0.62	0.58	0.57	0.51	0.97	0.66	1	
Textile Faculty, Female	0.90	0.89	0.88	0.94	0.59	0.80	0.51	1