SITRA, Coimbatore

Ministry of Textiles

1. Design and development of low cost shuttleless looms for decentralized power loom sector.
2. Yarn quality improvement with an air-jet attachment in cone winder.
3. Optimisation of inter roller distance of draw frames, speed frames and ring frames and ring frames based on AFIS length data.
4. Development of a computerized system for market making in garment industry
5. Development of fire-resistant yarns and fabries using air-jet spinning technology
6. Design and fabrication of different types of flat tops for carding and use of vario-comb in combers for removal of smaller size neps towards producing yarns meeting international quality standards.
7. Development of a compact yarn spinning system for yarn quality improvement.
8. Detection and standardization of sensitizing disperse dyes by chromatographic techniques.
9. A study on the effect of extra sensitive yarn imperfections on fabric appearance.
10. Design and development of energy management information system for textile industry-phase II.
11. A study on the influence of fibre and yarn parameters on lint shedding propensity.
12. Development of a technology package for speciality polyester fibres.
13. Development of energy efficient twisting system for two for one twisters.
14. Online monitoring of yarn quality on weft knitting machines.
15. Disposal of processing of textile sludge.
16. Study on chromium in gin lint due to chrome composite leather clad rollers in ginneries.
17. Development of an attachment for producing elastane core yarn on rotor spinning machine.
18. Interaction of the properties of individual cotton fibres in a blend.
19. Evaluation of knitting behavior and performance of knitted fabrics during garment manufacturing using artificial neural network.
20. Development of functional spacer fabrics for medical inlays in orthopedic shoes.
21. Design and development of a hernia mesh.
22. Development of bifurcated vascular grafts.
23. Cut-resistance technical fabrics spectra filament yarns.
24. Development of speciality 3D compression bandage for lymphedema.
25. Breath ability of woven surgical gows treated with nano finishes (Anti microbical & blood repellent finishes).
26. Development of spunsilk garments made of hollow yarn.
27. Development of barbed, bi-directional surgical sutures.
28. Development of spunlace non-woven wound dressings using bamboo fibres

Jute manufactures Development Council

1.Application of artificial neural network for predicting rotor yarn properties and process parameters.

2.Manufacture of different jute blended yarns fabrics (furnishing & upholstery) for home textiles-secondary apparels and other jute diversified products.

3.Application of functional chemical finishes for improving of the functional properties of jute-based technical Textiles.

United Nations Development programme

1.Betterment of farmers through promotion of more remunerative fine jute fibre cultivation and creation of direct grower - mill links.

2.Quality assurance for decentralized and organized jute sectors.

Office of the Development Commissioner for Handlooms

1.Design and development of a high production handloom

2.Design and development of a jacquard card repeating machine for handloom industry

Petroleum Conservation Research Association

1.Design and development of energy efficient control system for humidification plants in textile mills

2.Energy conservation in overhead cleaners used in textile industry

3.Design and development of a microcontroller based energy saving and information system for air compressors used in textile mills

Department of Science and Technology

1.Design and development of a tester to measure the processing propensity

2.Development of new textile effiuent treatment technology towards zero sludge

3.Design and fabrication of an instrument to assess the barrier properties of operation theatre surgical apparels with specific reference to blood and other body fluids

Ministry of Communication and Information technology, Department of Information Technology

Study on the application of information technology in textile industry pertaining to SME sector

Naval Physical and Oceanographic Laboratory, Ministry of Defence

1.Department of 3D fabric using para-aramid filament yarn

2.Development of high performance polymer fabric tapes and polymer fibre ropes

Ministry of Power (Bureau of Energy Efficiency)

Study for setting u of standards & norms for designated consumers in textile industry

Vikram Sarabhai Space Centre (Indian space research Organisation)

1.Development of tricot Knitting technology for 1.5 m wide gold plated molybdenum wire metallic mesh for large aperture unfurable space antennas

2. Development of polyester performs for membrane Bellowfram

3.Weaving of ultra high molecular weight polyethylene fabrics for radiation shielding tiles

4.Development of silicon carbide fabric for ceramic matrix composite to be used in space application

3- Dimension carbon fibre perform for space application

Government College of Engineering & Textile Technology- Serampore

Design an development of a weavality tester

SITRA INHOUSE PROJECTS

1999

1. Assessment of maturity of indian cottons

2.Measurement of trash content by HVI

3.High volume testing for cotton selection and bale management

4.Assessment of yarn hairiness

5.A survey of the quality of yarns produced from man-made fibres and their blends

6.Rating of yarn quality against SITRA norms

7.Dimensional properties of milange knitted fabric

8.Studies on azoic dyes as per ECO specifications

9.Investigation on dyeings containing heavy metals

10.Effect of wet processing on the mechanical properties of spun yarns

11.Development of low cost dyeing machine and a suitable dyeing technique for the production of denim fabric in the decentralized powerloom sector

12.Design and development of new spindle drive SITRA enerspin

13.Design and development of energy efficient fans for textile Industry

14.Development of an electronic device to interface with the existing dobby

15.Calibration of textile testing instruments

16.27th productivity survey in spinning- September, 1998

17.Inter-mill survey of costs and profits for the years 1996-97 and 1997-98

18.Joint norms in spinning

19.Costs operational performance and yarn quality : 3rd and 4th inter-mill studies of key factors

20.Study on energy conservation in auto coners

21.Study on power quality in textile mills

22.Industrial disputes in textile mils

23.A study on voluntary retirement scheme in textile mills

24.Development of a high speed ring frame for jute spinning

2000

1.Calibration of high volume instrument by HVI calibration cotton

2.Inter laboratoty test of cotton fibres

3.Fibres-yarn relationships using newer fibre properties like mean length, upper half men length and uniformity index measured by HVI test system

4.Influence of fibre properties on low stress mechanical properties of air jet and ring spun yarns

5.Development of woven arterial prosthetic graft

6.Determination of metal content in cotton fibres and its effect on wet processing

7.Development of an economy model computerized single yarn strength tester

8.Development of a device for measuring pneumafil suction pressure in ring spinning and simplex frames

9.Development of a device to test the motor overload relay

10.Jari length measuring instrument

11.Sitra's viscosity cup

12.Fibre sample opener

13.Costs, operational performance and yarn quality ; 5th and 6th inter-mill study of key factors

14.Inter-mill study on power consumption

15.Working capital status in spinning mills in 1996-97 and 1997-98

16.Study on energy conservation in autoconers

17.Economics of energy efficient equipment

18.Study on energy conservation in two-for-one twisters

19.Study on power quality in textile mills-harmonic analysis in generators

2001

1.Development of ASTM yarn appearance standard on EIB for fine yarns

2.Yarn engineering in Air-Jet spinning-application of neural network development of ASTM grade for fine yarns

3.A new extra weft designing on handlooms

4.Characterisation of solid waste from the textile effluent

5.Study of dimensional stability of double lacoste knitted fabrics

6.Design and development of an automatic jacquard card punching machine.

7. 28th productivity survey in spinning-September, 2000

8.Costs operational performance and yarn quality an inter mill study of key factors 6th and 7th studies

9.Inter-mill survey of costs and profits for 1998-2000

10.Staffing pattern in spinning mills

11.Conversion of existing jute flyer spinning frame for improved performance

2002

1.Development of a technology package for specialty polyester fibres

2.Impact of fluorescence values of cotton and MAN-MADE fibres on fibre and tarn characteristice

3.Manufacture of paper boards and fuel briquettes using pineapple leaves

4.Measurement of yarn diameter and twist by image analysis

5.An inter mill study of quality of cotton yarn

6.A study on the knitting performance and quality characteristics of compact spun yarn and fabric

7.Fabric objective measurement for garment industries-SITRA development

8.An instrument for energy monitoring in textile mills-SITRA enertime integrator

9. A device for calibration of Nilometer in spinning mills- SITRA nilocalibrator

10.Financial performance of spinning mills

11.Costs operational performance and yarn quality : an inter-mill study of key factors- 8th and 9th studies

2003

1.Fluorescence values of cotton and its impact on shade variation and streaky dyeing

2.Dynamic tensile properties of yarn and prediction of yarn behaviour during mechanical processing

3.Application of artificial neural networks for predicting ring yarn properties and process parameters

4.A new methodology to arrive at combing efficiency using single fibre length data and nep removal efficiency

5.Online monitors of yarn contamination of weft knitting and winding machines

6.Development of protective fabrics using friction spinning machine

7.Prediction of knitted fabric shrinkage using artificial neural network

8.SITRA's29th productivity survey in spinning cone winding and reeling- September,2002

9.Costs operational performance and yarn quality an inter mill study of key factors 10th and 11th studies.

10.Financial and operational strengths and weakness of spinning mills for rehabilitation of potentialaly viabl espining mills.

2004

1.Indian and imported cottons-trends in fibre quality (April 2002 to March 2003)

2.A technique to measure the drapability of fabrics using image analysis

3.A study on the manufacture of heavy density fabrics

4.Yarn quality requirements for different type of looms
Enzymatic scouring

5.Method development, optimization and validation of OEKO tex parameters

6.Development of an intelligent monitoring and information system for combers-SITRA CIM

7.Development of a sample conditioning system-SITRA fastcon

8.Development of a single yarn strength tester -SITRA tensoclassic

9.Design and development of a compressed AIR consumption analyzer

10.Costs, operational performance and yarn quality: an inter-mill study of key factors-12th and 13th studies

11.Development of an energy efficient system for water cooling towers in textile industry-SITRA enercool

2005

1.Indian and imported cottons-trends in fibre quality (april,2003 to March,2004)

2.An inter mill study of quality of MAN-MADE fibre yarns and blended yarns

3.Influence of yarn conditioning on cotton yarn properties

4.Influence of cotton fibres blending on spun yarn quality

5.An investigation of the performance of ELI-TWIST yarn during high speed weaving and knitting and fabric properties

6.A study on the manufacture of fabrics made out of bamboo yarns

7.Improvement of light fastness of reactive dyed cotton textiles

8.Inter-mill study of two-for-one twisters

9.Inter-mill survey of operatives employment pattern in spinning mills

10.30th productivity survey in spinning cone winding and reeling

11.Costs operational performance and yarn quality an inter-mill study of key factors 14th and 15th studies.

12.An Inter- Mill study of key factors related to energy utilization in spinning mills.

2006

1.Quality update for Indian and imported cottons (October,2004 to September,2005)

2.An inter-mill study of quality of cotton yarns (22nd yarn quality survey)

3.Studies on spinning behavior and anti-fungal properties of bamboo fibres

4.A study on the tensile and hairiness characteristics of manifold ring spun yarns weak spots analysis in spun yarns

5.Spinning process variables influencing deviation rate in yarn mass

6.A study on the cost and the quality of fabrics imported by the garment industry vis-A-vis that of fabrics sourced with in the country

7.Improvement of light fastness of reactive dyed cotton textiles

8.Development of a physico chemical methods for the determination of flax in a fla/-16th and 17th studies

9.A study on packing materials costs in spinning mils

10.An inter-mill survey of costs and profits for 2000-01 to 2004-05

11.Costing software for spinning mills

2007

1.Quality update for Indian and imported cottons (October,2005 to September,2006)

2.An inter-mill study of quality of cotton yarns (23rd yarn quality survey)

3.A study on the factors influencing yarn quality change during high speed winding

4.A study on the processing performance of BT cottons

5.Evaluation of knitting behavior using artificial neural network

6.Manufacture of value added products using silk/cotton blended yarns

7.Improved catalytic oxidation of textile waste water towards zero sludge

8.31st productivity survey in spinning cone winding and reeling

9.Costs, operational performance and yarn quality : an inter-mill study of key factors-18th and 19th studies

2008

1.Quality update for Indian and imported cottons (October,2006 to September, 2007)

2.SITRA inter-laboratory proficiency test

3.Application of finish on fabrics made out of compact and conventional ring spun yarns

4.A comparison of properties of yarns produced on different compact spinning systems

5.Optimum twist in roving based on fibre properties and roving hank

6.Optimisation of roll space seting in sliver lap ribbon lap and comber draw box

7.A study on the comport properties and dyeing characteristics of fabrics made out of compact yarns

8.Development of bandages using bamboo fibres

9.A comparative study on the technical performance of different makes of draw frame auto levelers

10.Design and development of high performance reel for textile mills

11.Costs operational performance and yarn quality an inter-mill study of key factors - 20th and 21st studies.

12.Modernisation in Spinning Mills.

2009

1.Quality update for Indian and imported cottons (October,2007 to September.2008)

2.Inter-mill study of quality of cotton yarns

3.Studies on gassing and mercerizing of combed cotton yarns and process optimization

4.fibre yarn relationships for compact spun materials

5.Twist for maximum strength and twist contraction in compact yarns

6.Fibre-yarn relationships for compact spun materials

7.Studies on barrier properties of surgical apparels used in hospitals

8.Design and development of an instrument to assess the macterial filtration characteristics of medical fabrics

9.Costs operational performance and yarn quality an inter-mill study of key factors-22nd and 23rd studies

10.32nd productivity survey in spinning mills 2008

11.video cassette/CDS on work methods for spinning mill operatives

SITRA's Major consultancy Works

1.Maintenance and quality audit

2.Yarn quality improvement

3.Techno-economic viability of spinning weaving and processing units
work assignment study

4.Time and motion study for fixing work assignment for workmen and improvement in efficiency

5.Comprehensive energy system

6.Mandatory energy audit

7.study and weaving efficiency improvement

8.Valuation of textile machineries

9.Indepth analysis of yarn and fabric faults

10.Ecoparameters for raw materials and product

11.technical problems related to dyeing

12.Reduction of waste at different stages of processing

13.Implementation of quality management system such as ISO 9000, TQM etc.

14.Consultancy study on "can your mill more profit"

15.Study on cost saving and modernization
16.Rehabilitation cum modernization of electrical system