

2009

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# REMINISCENCES 2009



# Editorial

I feel proud to write the editorial for 13<sup>th</sup> Issue of Tantu. It is the 14<sup>th</sup> year of existence of the Alumni association. Tantu is our heart and it does not need any bypass. We all share the wealth of health given to us by this small but powerful organ.

We are part of Indian textile industry which is as old as the word textile itself. This industry holds a significant position in India by providing the most basic need of Indians. Starting from the procurement of raw materials to the final production stage of the actual textile, the Indian textile industry works on an independent basis.

Close to 14% of the industrial output and 30% of the export market share is contributed directly by the Indian textile industry. Indian textile industry is also the largest industry when it comes to employment that generates jobs not just within but also in various support industries like agriculture. As per a recent survey the textile industry is going to contribute 12 million new jobs in India by 2010 itself.

The Foreign Trade Policy (FTP) announced by the government recently has evoked a mixed reaction from Indian industry and exporters. Although the primary objective laid out in the policy is to arrest the exports decline and provide additional incentives to sectors severely impacted by the global slowdown, the cosmetic measures included in the Policy may not give requisite relief to the textile and clothing industry, which has been one of the worst victims of the global economic crisis.

With the kinds of problems that the textiles and clothing industry of India has been facing over the years, there is a need to have a comprehensive strategy for ensuring sustainable growth of this sector. Quick fix solutions for problems that cannot be swept under the carpet have been the order of the day and this approach has only worsened the crisis in the industry.

The textile export market of India is expected to reach a high of \$50 billion by 2010. This will eventually make a profit by 300%. In order to attain this target the Indian textile industry needs to improve their design skills, including a combination of various fibres. The industry has to meet international standards and needs to invest \$5 billion in machineries very soon.

Most of the international brands like Marks & Spencer, JC Penney, Gap have started procuring most of their fabrics from India. In fact, Wal-Mart, that had procured textile worth \$200 million last year, intends to procure \$3 billion worth of textile this year.

Hopefully, the golden phase of the Indian textile industry has just begun where the world is chasing it from all nooks and corners.

This issue of Tantu has tried to deal with the issues of quality problems to CSR in our industry.

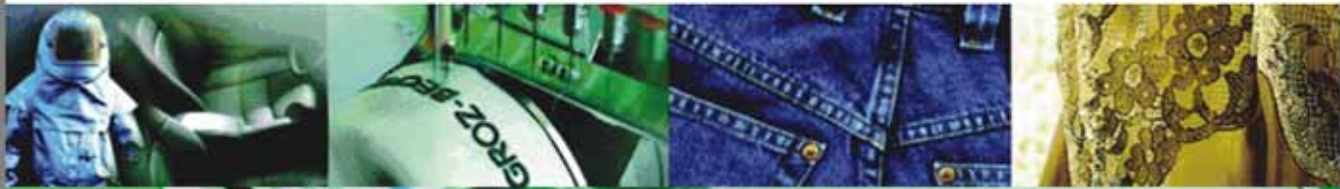
College of Textile Technology, Serampore, observed it's Centenary this year. We share the joy with the Alumni, staff members and present students. It shows our resilience.

For publishing this issue and also for supporting our other activities we express our thanks to all patrons, sponsors and advertisers. Without their support we could not have survived this long. I personally thank all members to bear with me and hope that editing Tantu will pass on to younger and abler hands next year.

**MANIK DATTA GUPTA ■**



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# AN IDEA ON EMBELLISHMENT QUALITY

By Sanjib Kumar Sinha

**E**mbellishment is defined as surface ornamentation of fabrics and garments, home textiles and furnishing products, this is anything which enhances the appearance of clothing or fashion accessories without actually having any workmanship functionality. In sewing and garment construction, an embellishment is anything that adds design interest (value addition) to the article of clothes being developed. A very common use of embellishment is the utilization of embroidery, printing, bows, cord, or rhinestones. It further includes beads, buttons, toggles, zippers, appliqué, piping or lace used to embellish women's fashion or men's fashion. In addition to adding additional trim accessories, a fashion designer can further embellish their clothing by using fancy stitch work such as zig-zag stitching or extra stitching. Some

trimming are Bias tape, Braid, Buttons, Cord, Embroidery, Interfacing, Lace for edgings or insertions, Piping, Ribbon, Ruffles or frills or Tassels.

Embroidery and embellishment works are considered to be one of the oldest and most popular unorganized industries in India. This is mainly considered as home based and skilled activity. India is one of the countries exporting the maximum quantity in terms of quality and diversified design all over world. India is known for its design and activity in this field.

There is immense demand for embellished garments in the world and this industry is growing very fast. Still these beautiful products and arts are not fully marketed internationally and this business is still considered to be unexplored on a larger scale. Only few designer and customers who know this product are keeping these in

their wardrobe. The Indian embroidery market is tuned to around Rs. 800-900 crore per annum and growing at a rate of 15-20 per cent per annum. Few players have realized this potential growth and have entered into the market.

Earlier small home based factories used to make the embroidery products considered to be time consuming and less profit making activity. Typically 5-20 machine equipped factories were the kings in this industry and they worked in a very unorganized way. There were no control over quantity and quality. Few leading players are now coming into the field sensing the potential business opportunity and trying to organize small scale factories. They are now leading the show with the help of small players leasing them as subcontractors. With the increasing demand of quality and quality, there is still a shortfall in this industry. There prevails job workings,

subcontracting, bad working condition etc.

### **Why India is leading the Embellishment Industry?**

India's strength lies in innovative designing and skill execution for which Indian's are beating all other upcoming exporting countries like Vietnam, China and Bangladesh.

Threads, which is one of the most important component for this sector, is easily available in the country. Demand for embroidery thread in the country is growing at a rate of around 7% to 8% per annum. This is the reason that most of the major thread manufacturers are expanding capacities seeing the potential business opportunity.

Skilled and cheap manpower is another parameter which made India as the country of advantage.

The main focus of Indian industries goes into investment. Realizing the need for quality embroidery yarns, few of the leading manufacturers have ventured into the manufacturing of viscose embroidery yarns which is very good in terms of tenacity and sew ability. Consumption of embroidery yarns in the country stands at around 11,000 tonnes per annum. Feeling the business demand, around 3,500 multi-head computerized embroidery machines are being installed in western part of India;

around 1,500 such machines are being installed especially in Mumbai, and a similar number each in Tirupur, Bangalore, Coimbatore and Ludhiana.

As for the machinery, the industry has to import embroidery machines from Germany, Japan, Taiwan, and China. However, the serious players use only German and Japanese embroidery machines, those who compromise on quality go for Chinese makes. According to a market survey 'This is a very price sensitive market', and the industry is finding out that Chinese machines are just as good. For those who require 6-12 head embroidery systems, these machines are working well, both for domestic and export production. The price difference is very vast. While a Japanese machine would cost around Rs. 40-50 lakh, a similar machine from China is available at Rs. 5-7 lakh. This attracts people to go in for Chinese machines."

### **Quality Embellishment Work Area**

India's garment industry is known for its design and embellishment application quality. Efficiencies are achieved through applying standard methods and through a good quality control process. All stages must be strictly monitored and controlled. The operators, who are trained in the proper

procedure of application specifications, should be always encouraged. Regular in-line and instant quality checks must be performed to verify that the standards are being met.

The embellishment application area must be clean, free of excessive waste and with sufficient space to allow easy movement of workers and material handling equipment.

It should be lighted to around 100 foot candles at work surface with extra focused lightening where required. The embellishment is just not a regular process, the workers concentration is one of the factor for which the lighting plays a major role. If the light is not enough or much, this gives or leads to human fatigue which affects the intricacies of embellishment and quality.

An approved light box equipped with internationally approved light sources should be provided. This light source should be in separate area or isolated in order to eliminate outside light influence. Outside light easily affect the approved light intensity and the quality result will not be achieved.

The light box should be located near or inside the production floor. A dedicated person who has good understanding of operation should be always available with the machine.



Personal Safety Equipment must be available and in use by relevant person. Material handling equipment must be appropriate for maintaining the integrity of the product.

Equipment must be checked daily for lubrication and preventive maintenance must take place regularly with individual equipment records maintained by the technicians. All equipment guards must be in place and adjusted correctly.

Maintenance of broken and blunt needles are must, all location where the equipment is kept should be declared as "Metal Free Area". All the loose items and metal parts should be controlled and monitored. A dedicated person is suggested for this job.

### **Quality Embellishment Application Procedures**

Once the factory has all the resources to roll out the embellishment application, factory should have a good and comprehensive procedure. If there is no procedure, the job will not be done as required and end up with faulty products. A quality manager or a representative should be appointed and he should be given the responsibility and accountability to execute this.

Before beginning of production, the operators and executives need to follow the pre-production meeting minutes and the pilot run

comments for any special requirement to follow.

An approved finished sample should be available at all times near to the production for reference. It is suggested to keep all the approved trims and designs along with the approved finished sample. Methods and Standards for each step in the process must be defined with diagram, to be posted and the workers should be trained to read and understand as appropriate. A pictorial diagram with coloured outline can be given as a good quality enhancement.

Training is considered to be one of the important tasks for factories who are working in this section. A record must be kept of which operator performed which operation (Working Instruction) with their quality review and accountability. This can be accomplished in several ways; the most common is marking the bundle ticket, the bundle ticket will give the feedback once this goes into the next level, how this bundle works and what is the rejection! All the workers must receive training and certification in each operation they perform. Every operator must be monitored for their work. Any issues that workers addressed, should be documented and discussed in review meetings for its repeatability and correction for future.

A formal training program is the best way to ensure that

each new worker has the opportunity to learn the skills necessary for the process. Correct methods, handling techniques, quality standards, and machine operation can be taught in a training program more effectively than letting new workers figure things out by themselves as so called "on filed training"

Each worker must be thoroughly trained for each piece of equipment they will use. These might include how to thread or set up the machine, the machine parts and basic adjustments. Safety concerns and guards, safe operating procedure, recognizing when the machine is malfunctioning and what the worker can do to fix the problem before requesting a technician's assistance are some of the areas of training.

New worker training should take place in separate area from the main shop floor. This will allow the trainer to work closely with the new operator and minimize the distractions that are present on the main floor. However workers who are already trained in one operation can be trained on the main assembly floor. All workers must have the detailed method of each operation explained and demonstrated like how to lay out the work, special instructions, quality standards and requirements and machine adjustments etc.

Each worker must be allowed opportunity to practice. The instructor must demonstrate the operation in case worker require several times. The workers should not be paid by the numbers of works or embellishment they did; they should be paid as per the quality and time of work.

### **Key Quality requirements for embellishment**

**Embroidery:** This should be verified against the reference or approved sample, if the correct thread is being used for both needle & bobbin. The stencils and / or placement aids must be used to ensure correct pattern & placement are followed at every step. For machine embroidery the operator need to refer to production file and the preproduction meeting comments and notes. He also needs to confirm that the correct embroidery tape or disk is loaded on the machine or not. If applicable and necessary, verify against the reference sample and approved product file that the correct embroidery backing and/or topping are being used. If needed, the backing or topping should be re removed completely. Otherwise these will be considered as defects for the product. This is one of the quality control points to be addressed. Refer to the preproduction meeting comments and to confirm that the correct needle size and type are used on each colour on each embroidery machine

head. Chain stitch embroidery (either machine or hand applied) must be tacked at the sew-off end for a minimum of 2 to 3 stitches to prevent unraveling. This is again to be checked with client's expectation.

**Beading, sequins and other sewn-on trinkets:** This should be again verified against the reference or approved sample, if the specified beads, sequins or trinkets are being used. The quality representative and the operator have to review the file and reference and approved sample to confirm that the specified thread is being used. Beading must be attached with a thread that is appropriate for the application. Generally a core spun product ( 40, 50 tex) is appropriate, again this depends upon the fabric and beading used. The hand needle beads and sequins must be tied off every 1" (2.5 cm) or after every bead if the bead is bigger than ½" (1.25 cm) in length. The thread floats (float = the distance between 2 individual points of attachment) must be no longer than one inch in length unless approved in advance of production. Stencils and/or placement aids must be used to ensure that correct pattern and placement are followed. Sewn-on beads, sequins, or trinkets must not have sharp edges so as to minimize thread cutting. Moreover, this may injure the end user which might be very potential

damaging for the client who sell the products the in market.

**Appliqué – sewn on:** This should be reviewed against the production file, if the correct thread is being used for both needle & bobbin. The operator needs to check if the correct appliqué, with the correct fusible (if applicable) is being used. Refer to the preproduction meeting notes and/or the production file and confirm the location, sequence and application stitch method. Again stencils and/or placement aids must be used to ensure that correct pattern and placement are followed. For appliqués applied by machine embroidery, refer to the production file or preproduction meeting notes and confirm that the correct embroidery tape or disk is loaded on the machine. Again the backing and topping should be checked and removed as applicable. Need to refer to preproduction meeting notes to confirm that the correct needle size and type are used. Chain stitch applied appliqués (either machine or hand applied) must be tacked at the sew-off end for a minimum of 2-3 stitches to prevent unraveling.

**Rhinestones and other heat set products:** Again the operator to follow the same procedure like verify against the reference sample and production file that the correct rhinestone or other head-set product is being used; refer to

the preproduction meeting comments. The operator needs to follow the correct layout and location of the heat-set product. In case of the heat setting process, it is very important to follow the right temperature, pressure and curing time. The impact of irregular curing or uneven pressure leads to defective and faulty products. The operator and quality people have to look to the products to ensure complete and correct application around areas of varying thickness. Under no circumstances, should a hand iron or hand press be used to attach heat-set product; the operator will not have

consistent control over application of curing or dwell time or pressure. This heat setting is one of the very sensitive and important processes; the product gets a look after this embellishment.

There are many different types of embellishment and its unique attachment process; it is always advisable to engage the manufacturer of the embellishment for recommendations of attachment methods and any equipment settings. The operator and the quality person should have understanding and knowledge about the testing requirement

of the the security and function of the embellishment. Once all the above procedures and requirements are respected and followed, it gives a quality to the product.

The quality especially for the embellished product is seen in different ways. The functionality and other workmanship parameter of the product should be as usual considered as core quality concern, however the appearance and design due to embellishment are looked as enhancement of the product for its uniqueness, the quality concept has to be extended beyond its definition.

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# TANTU ACTIVITIES 2008-'09

By Kingshuk Pandit & Pradip Bhattacharya

**Y**ear 2008 – 09 witnessed a number of achievements governed by various activities of TANTU. To begin with meetings and gatherings: AGM 2008 was held at Vrinda Garden, NOIDA on Sunday November 16, 2008. We had a very good interactive discussion regarding various techno-commercial aspects. Family gathering was accompanied by magic show. There was a fantastic arrangement of wide array of mouth watering kebabs and snacks followed by lavish buffet lunch.

In this period 2008 – 2009, there were a record number of increases in TANTU membership. A collection of more than Rs. One lakh was also funded by TANTU members towards centenary celebration of CTTS (Now GCETTS).

Picnic 2009 was organized at Kalindi Kunj Udyan, New Delhi in February, where

members enjoyed a lot with friends and family, also exchanged greetings and best wishes for the New Year. Needless to mention, it was followed by splendid lunch with exotic traditional Bengali delicacies.

Viewing the seriousness of the global crisis and cut throat competition in world trade, TANTU has organized an “Interaction Meet on Career Growth” and “Career Counseling Session” to share experience and knowledge related to job opportunities, emerging challenges and career growth. The event has been specially designed to provide requisite inputs to the younger generation, professionals to get accomplished with the professional activities, enabling them to climb on the ladder with a little knee jerk.

TANTU celebrated Poila Baishakh – Bengali New Year's Day by organizing Naba

Barsha Milan Utsav 2009 at Vivekananda Vihar, New Delhi. Grand bengali lunch was the special attraction.

CTT forum emerged as a boon for job seekers and queries. Many success stories reveal this fact. This inspired the launch of a website 'texalumni: Your Reason to be Communed' exclusively for CTTS & CTTB. It has become a good platform for posting and searching jobs, business proposals and exchanging ideas and suggestions.

We look ahead to arrange an informal meet focusing on Global Business Environment on Textiles and Clothing. The special guest on this occasion would be director of well known multinational company.

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# CONCEPT OF CSR IN TEXTILE INDUSTRY

By M.C. Datta Gupta

Corporate Social Responsibility (CSR) is emerging as one of today's most important and hottest topics for firms, big or small. Especially, for manufacturing firms in developing countries such as China, India Pakistan and Bangladesh, the 'manufacturing floor' – are under heavy scrutiny from many parties. There are mounting concerns of the limits of government legislative and regulatory initiatives to effectively capture all the issues that CSR addresses. Textile industry has been attacked by NGOs for much of the river pollutions in the third world, but yet, a review of literature shows little is available on the status of CSR practices in the textile industry.

The concept of Corporate Social Responsibility is a fairly recent one in the business world. Awareness about the CSR of business organizations is rapidly on the rise and firms

are also accepting this concept. The textile industry is no exception. Textile producing and trading firms are also realizing their responsibility towards the society and the environment. This article aims at analyzing the concept of social responsibility and the common ways in which textile firms try to fulfill it.

The concept of CSR has moved far beyond the simple definition of ethical trading and has now grown in importance to become a system of managing a company in a way that balances interests of all stakeholders, customers, employees, investors, suppliers, society, government, and environment. With focus on workers on parameters of human rights and dignity of work, retailers worldwide are under pressure to give 'sweatshop-free' clothing to the consumers.

International Standard, SA 8000, know as Social

Accountability 8000 is the international standard for management systems, primarily dealing with the working conditions. The principles of SA 8000 are:

- No child labour
- No forced labour
- Health and safety of workmen to be ensured
- Freedom of association and right to collective bargaining to be respected
- No discrimination on the basis of sex, religion, caste, etc.
- No unjust disciplinary practices
- Working hours not more than eight hours
- Fair compensation (wages), and
- Management systems to be in place to monitor the implementation of the standard

CSR also refers to the organization's responsibility towards environment protection.

Certain experts, who believe that it is a cynical and selfish

idea, have criticized the concept of corporate social responsibility. They are of the opinion that corporates undertake projects for social welfare only because of the increase in reputation that they would get due to them.

### **CSR In Indian Textile Industry**

Like the firms in other industries, textiles firms are also realizing their responsibility towards the various parties associated with them and the environment. However, the ways by which different organizations choose to fulfill their social responsibility might be different.

India has one of the world's richest traditions of CSR, even before the multi-national companies came into picture. Decades before CSR become a popular cause, the concepts of nation-building and trusteeship have been alive in the operations of long-established industrial dynasties, such as the Birlas and the Tatas. There are other leading Indian companies such as Hero Honda, HLL (Hindustan Lever Ltd.), ITC, and Maruti Udyog, BHEL (Bharat Heavy Electricals Ltd.), HDFC (Housing Development Finance Corporation), NTPC (National Thermal Power Corporation), and ONGC (Oil and Natural Gas Corporation) where, despite the march of privatization, social

obligations form an integral part of their business.

### **Welspun**

Keeping in view the concept of empathy, Welspun undertakes a number of projects in the interest of the society at large. The organization periodically makes contributions to schools for the visually impaired. It provides employment to the orphans and others associated with visually impaired people. Welspun gifts products made by such people to its employees on occasions such as birthdays. The firm has also undertaken an afforestation drive in the sandy area of Anjar in Gujarat. Welspun also organizes periodic blood donation camps. The blood collected in these camps is used for the benefit of people from the economically weaker section of the society and people suffering from critical diseases like cancer.

For the purpose of empowerment of women too, Welspun has initiated several activities like Project Kishori and Project Lijjat. Under Project Kishori, Welspun organizes computer classes for women who intend to take up government jobs. Under Project Lijjat, Welspun organizes training programmes for rural women in the making of Papads, with the view of providing employment to them and strengthening their financial condition.

### **Arvind Mills**

Arvind Mills is a leading Indian producer of textiles since 1931. Founded by the Lalbhai Group, it is now a well-known firm all over the world. It is one of the top 3 denim manufacturers in the world. It is also known for its shirting, knits and khakhis.

Arvind strongly believes that participating in the development of the society, helps in its development. It has made valuable contributions to the society.

It helped in the establishment of the IIMA, ATIRA, and The Kasturbhai Lalbhai Textile Training Centre in Ahmedabad. It established the Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund for the benefit of the weaker sections of the society. It also organizes nutritional programmes and food camps for rural people.

Arvind helped in the establishment of SHARDA Trust, i.e. Strategic Help Alliance for Relief to Distressed Areas. This organization works for providing a better quality of life to the people in urban areas. SHARDA works in co-ordination with the Ahmedabad Municipal Corporation to provide basic infrastructure and clean water to the society. It co-ordinates with a number of hospitals to provide



basic medical facilities to the general public.

Arvind has developed an environmental policy with a view to protecting the environment from the negative effects of its operations. It strives for optimum utilization of energy, cotton and water. It takes steps to ensure minimum discharge of waste and for the recycling of waste as far as possible. It undertakes measures to ensure minimum pollution. It provides training to its employees on environmental issues and encourages its buyers and suppliers to be environmentally responsible. It takes measures for increasing the greenery cover.

### **CSR in China Textile Industry**

China is experiencing a rapid transformation of its labour market as it moves from a system of central economic planning to a more open, market oriented economy. This transformation has thrown up many challenges including an evident need to build local capacity within its enterprises, and develop its labour market regulatory framework to meet changing circumstances. As one of the most traditional industries in China, the textile industry is experiencing substantial pressure to address these challenges and specifically how to incorporate labour-related and environmental standards into its core business operations.

Under the auspices of Swiss State Secretariat for Economic Affairs (SECO), *Corporate Social Responsibility in the Chinese Textile Industry* aims to facilitate sustainable value growth of the Chinese textile industry by promoting Corporate Social Responsibility, by way of enabling textile-producing enterprises to adopt good management, labour and environmental practices. The strategy focuses on the development and pilot testing of the comprehensive training and advisory support services for managers and workers in selected enterprises, verifying the validity of the approach through action research. The results of the project would be replicable in the textile industry and beyond in China.

The ILO and the UNIDO integrate and apply their complimentary expertise and resources to develop a comprehensive and integrated programme to address the unique challenges faced by the Chinese textile industry. At the same time, the project serves the purpose of integrating ILO's and UNIDO's approaches to enterprise competitiveness improvement with their respective competencies in the labour, industrial and environmental domains.

Meanwhile, the project will be partnering with the China National Textile and Apparel Council (CNTAC). CNTAC is

the national federation of all textile-related industries, and is a non-profit organization formed on a voluntary basis, whose aim is to provide services in the modernization of China's textile industry. Through CNTAC, the project will have direct access to the enterprises for conducting pilot activities. The Responsible Supply Chain Association (RSCA) under the CNTAC will play a key role in developing technical tools and implementation know-how through the project and building its own capacity to expand the CSR practices in the whole textile industry and contribute to other industries by supplying its knowledge base as well.

The project will support the creation of a viable industry-wide framework for high quality business management (in labour-management cooperation, productivity and quality up-grading, environment, human resources management, working conditions and occupational safety and health) for a sustainable development of the Chinese textile industry.

### **CSR in Pakistan Textile Industry**

HAP Consultants have appraised a textile project in Pakistan, under the Danish Public Private Partnership (PPP) Programme, thus established a sound basis for Danida to make a decision on

whether to support the proposed project. The Danish project proponent seeks to implement their Code of Conduct with first tier suppliers in Pakistan, thus improving social, ethical and environmental standards.

The Appraisal Mission activities included an assessment of the proposed partnership between the Danish textile company and the suppliers in Pakistan including the review of project activities and budgets. Further, HAP Consultants evaluated how the project contributed to meeting the PPP programme's six development criteria covering:

1. Promotion of human and workers' rights
2. Protection and improvement of the environment
3. Promotion of sound business practices
4. Promotion of gender equality and empowerment of women
5. Combating HIV/AIDS, malaria and other diseases and lastly,
6. Promotion of innovative partnerships for investment and competitiveness

A brief self-assessment questionnaire at supplier level was completed to spot potential CSR related hot topics, which the Code of Conduct should address. In continuation, detailed factory visits were completed to

identify specific areas of intervention. These included the introduction of compliance monitoring of environmental parameters and the early introduction of personal protection items and working clothes. HAP Consultants also recommended that the project consider the possibility to increase the level of female employment.

### **CSR in Bangladesh Textile Industry**

The discussions on CSR practices in Bangladesh in its modern global terms, are relatively new, but not so for the concept itself. Because, being a part of the global market, it is difficult to ignore CSR standard specifically in the export sector. In general, it is true that in Bangladesh, the status of labour rights practices, environmental management and transparency in corporate governance are not satisfactory, largely due to poor enforcement of existing laws and inadequate pressure from civil society and interest groups like Consumer Forums. Globally, as CSR practices are gradually being integrated into international business practices and hence is becoming one of the determining factors for market accesses, it is becoming equally instrumental for local acceptability. A focus on CSR in Bangladesh would be useful, not only for improving corporate governance, labour rights, work place safety, fair

treatment of workers, community development and environment management, but also for industrialization and ensuring global market access.

Since, CSR entails working with stakeholders it is important to work from within and diagnose the stakeholders concerns so that CSR is truly embedded in the companies. By now, many CSR dimensions are practiced in Bangladesh. The SMEs largely depend upon export. The US and EU buyers set guidelines to Readymade Garment (RMG) industry to ensure the standards. The 1992 Harkin's Bill and subsequent consumer and industry boycott of RMG products by USA and the consequent remedial moves by local RMG sector is one example. Moreover, some buyers from EU visited the sites of recently collapsed garments factories. A temporary ban was also imposed on shrimp export to the EU on health and hygienic standard and appropriate remedial action followed in that instance too. But, some of the exporters found difficulty in convincing the US/EU buyers to have positive attitude towards Bangladesh due to inadequate CSR practices.

Lack of enforcement of Industrial Laws and Regulations, weak unions, absence of consumer rights groups and high level of corruption within the

regulatory bodies make CSR violation rampant in Bangladesh. Two most significant foreign exchange sources is the RMG sector and the overseas manpower export. Unbelievably low compensation, working hours, health/hygiene/sanitation conditions, fire safety and various types of abuse are so common and to the extent of inhumanity that it will shock any conscientious individual to the core. Recently, the RMG sector employees have embarked on a industry wide movement to establish their rights.

**Conclusion**

CSR situation is best known to the people working in textile and allied industries. Following are some of the

statistical positions available to us in Indian context.

77 Textile companies have been rated for CSR by Karmayog, a group of Mumbai-based citizens, non-profits organization. Sixtyfour per cent companies were not doing any Corporate Social Responsibility (CSR) activities. CSR activities undertaken by rest 34 per cent of the companies mainly included education, healthcare and rural development at a lower scale.

**References**

1. <http://apparel-industry.blogspot.com/2009/10/social-accountability-in-indian-apparel.html>
2. <http://greenprofs.com/>

3. <http://www.indiaenvironmentportal.org.in/taxonomy/term/3700?page=2>
4. <http://hap.dk/content/view/40/41/lang,en/>
5. [www.burberryplc.com](http://www.burberryplc.com)
6. [www.welspun.com](http://www.welspun.com)
7. [www.arvindmills.com](http://www.arvindmills.com)
8. <http://www.fibre2fashion.com/industry-article/2/179/corporate-social-responsibility1.asp>
9. <http://www.ammado.com/nonprofit/105776/articles/9858>
10. <http://www.ilo.org/public/english/region/asro/beijing/whatwedo/csr.htm>
11. <http://www.scribd.com/doc/19582504/Textiles-77>

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Wide varieties of car seat covers: Fabric seat covers, PU seat covers, Leatherite seat covers, Art leather and many more are available. But fabric car seat covers attract the large users due to their profound benefits. Our Indian climate is hot and the temperture inside the car shoots up to 70-80 degree but fabric being poor heat absorbent, keep the seats cool and make driving a pleasurable experience.

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# RELEVANCY OF WATER QUALITY ON PROCESSING OF COTTON TEXTILES

By Pradip Bhattacharya, CPS Division, Bureau Veritas (India)

**W**ater is an important constituent in all chemical processing. The application of water in various chemical processing of textiles is ubiquitous. Chemical processing includes a number of processing like scouring/bleaching, finishing, dyeing & printing etc. The processes are applicable both for fabric and garments. Usually, substantial quantity of water is used in every process. Hence the requisite quality of water is very important to maintain the desirable quality of the products after chemical processing. Besides, the quality of water is quite important for washing/laundrying of garments and home furnishing products. It reveals that water source from various points contain diverse nature impurities, which are as follows:-

- Calcium & Magnesium (hardness)
- Heavy Metals (Iron, Copper, manganese etc.)

- Aluminum
- Chlorine
- Miscellaneous Anions (Sulphide, Fluoride etc.)
- Sediments, Clay, Suspended Matter
- Acid, Alkali & Buffer
- Oil & Grease
- Dissolved Solids

It is stated that Colorless odorless water is called as universal solvent and it easily picks up the impurities. The water contaminants/impurities adversely affect the quality of chemical processing at various stages as well as laundrying of garments & home furnishing items.

### Important checkpoints

Quality water may be sourced for applications, but the same may be affected due to some faults at various points. So it is important to keep a constant vigil at various points. These are as follows:-

- Improper Water Storage facility
- Rusted & leakages in Pipes, Valves & tap etc.

**TABLE-1**

Impurities	Limits
Color	Should be colorless
Smell	Odorless
pH	Neutral(pH7-8)
Water Hardness	<5OdH (< 90 ppm)
Dissolved Solids	<150 mg/L
Organic Substances	<20 mg/ L
Inorganic Salt	<500 mg/L
Iron	<0.1mg/L
Manganese	<0.02 mg/L
Copper	<0.005 mg/L
Nitrate	<50 mg/ L
Nitrite	<5 mg/L

- Unclean Machinery
- Reuse of untreated water with fresh water.

The permissible limits of impurities present in the water (used in Textile) are summarized as above (table 1).

### Causes of Contaminated Water

#### Hardness

Calcium and Magnesium are the primary minerals easily soluble in water, results in hardness.

**TABLE-2**

Classification	MgfL or PPM	Grain/Ga11on
Soft	0-17.1	0-1
Slightly Hard	17.1-60	1- 3.5
Moderately Hard	60-120	3.5 - 7.0
Hard	120 - 180	7.0 - 10.5
Very Hard	180 & Above	10.5 & Above

The classification of water hardness by US Department of Interior and The Water Quality Association is stated as above (table 2).

The hard metals affect the surfactant at the time of laundering. The soap combines with the metals, form sticky soap curd. This curd is deposited on the substrate that prevents the removal of soil and to some extent micro-organism. The micro-organism causes a foul smell and generates harmful bacteria. Moreover, the deposit of such materials result in harsh hand feel and stiffness, which are not desirable for apparel.

**Ways to Remove Hardness**

Hardness of water can be removed by warming the water at a certain temperature for a couple of minutes or treated with the chemical auxiliaries as recommended to precipitate the undesirable contents to have the desirable quality of water suitable for chemical processing.

- Using packaged water softener or water conditioner.

- Using sequestering agent viz. **Disodium-Ethylene diaminetetraacetic acid (EDTA)**
- (EDTA) at wet processing stage.

**Other Heavy Metals**

The metal ions (Copper, Iron etc.) catalyze the decomposition of hydrogen peroxide while using in bleaching. This results in improper bleaching and a substantial loss of tensile strength. In addition high concentration of Iron content causes a severe problem in laundering processes. This also invites a change in appearance of the product like yellow/orange. Sometimes it spoils the appearance, leaving, brown strain or spots on the surface of the materials. Iron eventually decelerates the rate of bleaching that results undesired dull shade after dyeing.

**Acidity and alkalinity**

Inconsistent shade, blotchy dyeing can be caused due to chlorine contamination in water. Even at neutral PH, the water may contain substantial amount of acid or alkali. It

may retard the dye fixation; reduce the dye uptake, exhaustion rate etc.

**Solid content in water**

Organic Contamination like sediments, clay, alum or other residuals is responsible for blotches and inconsistent shade as these elements resist proper washing and dye-fixation on cotton textiles.

**Sulphide, fluoride ions**

A considerable amount of sulphide or fluoride ions can acidify the water result in damage of physical properties of the cotton.

**Conclusion**

It is evident that quality of water is a pre requisite in chemical processing for cotton textile, as contaminated water invites several bad effects on textile materials. Hence, serious initiatives should be made to tackle the issue, complying with the standards to have the desirable effect after chemical processing. Otherwise such lapse may cause a heavy loss in business as customers will lose confidence and it will be difficult for other entrepreneurs to have confidence to continue with the business. This will invite a tough time to an entrepreneur to sustain in the competitive market. So the entrepreneur attached to the sector, should take precautionary measures to safeguard their business interest for future.





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FASTNESS PROPERTIES5							
DYE CLASS	Light	Washing	Dry Cleaning	Gas Fading	Staining (Bleeding)	Perspiration	Crocking
<b>Basic (Cationic)</b>	Poor on wool/silk; satisfactory on acrylics, especially modified variety	Poor on natural fibers; good on acrylics	Mostly poor; good on acrylics	Not affected	Bleeds easily on wool, silk; good resistance on man-made fibers	Generally poor on natural, some blues good; good on acrylics	Good resistance on acrylics
<b>Oxidation Bases</b>	Excellent	Very good	Very good	Not affected	Very good	Good	Very good
<b>Acid (Anionic)</b>	Generally very good; range poor to excellent	Poor	Good	Not affected	Bleeds easily; stains adjacent fibers	Fair	Excellent
<b>Acid- Milling</b>	Generally very good; range poor to excellent	Good	Good	Not affected	Good resistance; generally will not stain adjacent fibers	Fair to good	Excellent
<b>Acid Pre-metallised (1:1)</b>	Good to excellent	Fair to good	Good	Not affected	Generally good resistance to staining other fibers	Good	Good to excellent
<b>Neutral- Pre-metallised(1:2)</b>	Very good to excellent	Fair to good	Good	Not affected	Generally good resistance	Good	Good to excellent
<b>Mordant (Chrome)</b>	Good to excellent, depending on depth of shade, dyeing method	Good	Fair to good	Not affected	Considerable staining of adjacent fibers, particularly silk, nylons; more resistant to cellulostics	Generally good; some greens fair	Fair to good
<b>Substantive or Direct</b>	Poor to good	Poor	Good	Not affected	Good resistance	Good	Very good in most shades on cottons, rayons
<b>Azoic (Naphthol and Rapidogens)</b>	Good to excellent, depending on type, shade, depth	Good; some sensitive to chlorine bleach	Good	Not affected	Fair, sometimes stain adjacent whites; some bleed in peroxide bleach	Generally good	Poor to moderate depending on dyeing technique and after treatment
<b>Sulfur</b>	Poor to fair for yellows and browns; good to excellent for black, green and some blues	Poor to Good; most sensitive to chlorine bleach	Good	Not affected	Fair to good depending on shade, depth, after treatment	Good	Poor to good, depending on shade, depth

FASTNESS PROPERTIES5							
DYE CLASS	Light	Washing	Dry Cleaning	Gas Fading	Staining (Bleeding)	Perspiration	Crocking
<b>Vat</b>	Generally excellent	Excellent	Good	Generally not affected; a few are susceptible	Good resistance	Good	Fair to good, depending on dye, depth of shade
<b>Reactive</b>	Good to very good on most fibers; poor to moderate to nylon	Good; generally sensitive to chlorine bleach	Good	Not susceptible	Good resistance	Good	Good
<b>Pigment</b>	Very good to excellent	Good	Good if properly bound; otherwise poor.	Majority not susceptible; a few sensitive	Good	Good	Good for light to medium shades; very poor for dark shades
<b>Disperse</b>	Fair to excellent, depending on fiber	Fair to Good; better on polyesters than on acetate or nylons	Good	Poor to excellent	Some Stains wool badly	Good	Excellent

# A READY RECKONER FOR TEXTILE PROFESSIONALS

## Yarn Count Definitions

Metric Count (Nm)	Number of meters of yarn per gram
Tex (tex)	Weight in gram of 1000 meters
Denier (den)	Weight in gram of 9000 meters
English Cotton Count (Ne)	Number of 840 yds in one lb
Worsted Count (Ne <sub>w</sub> )	Number of 560 yds in One lb
English Jute Count (Ne <sub>j</sub> )	Weight in lbs of 14,400 yds
English Linen Count (Ne <sub>l</sub> )	Number of 300 yds in one lb

## Yarn Count Conversion

Cotton to Denier	5315 / Cotton Count
Denier to Cotton	5315 / Denier
Cotton to Metric	Cotton Count x 1.69
Metric to Cotton	Metric Count x 1.69
Denier to Metric	9000 / Denier
Metric to Denier	9000 / Metric Count
Cotton to Tex	590.5 / Cotton Count
Tex to Cotton	590.5 / Tex Count
Tex to Metric	1000 / Tex Count
Metric to Tex	1000 / Metric Count
Tex to Denier	Tex Count x 9
Denier to Tex	Denier / 9
Denier to Decitex	Denier / 0.9
Metric to Decitex	10,000 / Metric Count
Cotton to Decitex	5905 / Cotton Count

## Yarn Diameter in Inches

$$\text{Diameter} = 1 / (28 \times \sqrt{\text{count}}) \text{ inches}$$

REED COUNT :

$$\text{Reed count} = \frac{\text{EPI}}{1 + \text{Weft Crimp \%age}}$$

REED WIDTH:

$$\text{Reed width} = \text{Cloth Width} \times \frac{100 + \text{Weft Crimp \%age}}{100}$$

CRIMP PERCENTAGE :

$$\text{Warp Crimp \%age} = \frac{\text{Warplength} - \text{Cloth length}}{\text{Cloth length}} \times 100$$

$$\text{Warp Crimp \%age} = \frac{\text{Warplength} - \text{Cloth width}}{\text{Cloth width}} \times 100$$

FABRIC COVER FACTOR :

$$1. \text{ WarpCover Factor} = \frac{\text{EPI}}{\sqrt{\text{Warp Count}}}$$

$$2. \text{ WeftCover Factor} = \frac{\text{PPI}}{\sqrt{\text{Weft Count}}}$$

$$3. \text{ Cloth Cover Factor} = \text{Wp. C.F.} + \text{Wt. C.F.} - \frac{\text{Wp. C.F.} \times \text{Wt. C.F.}}{28}$$

USUAL EPI :

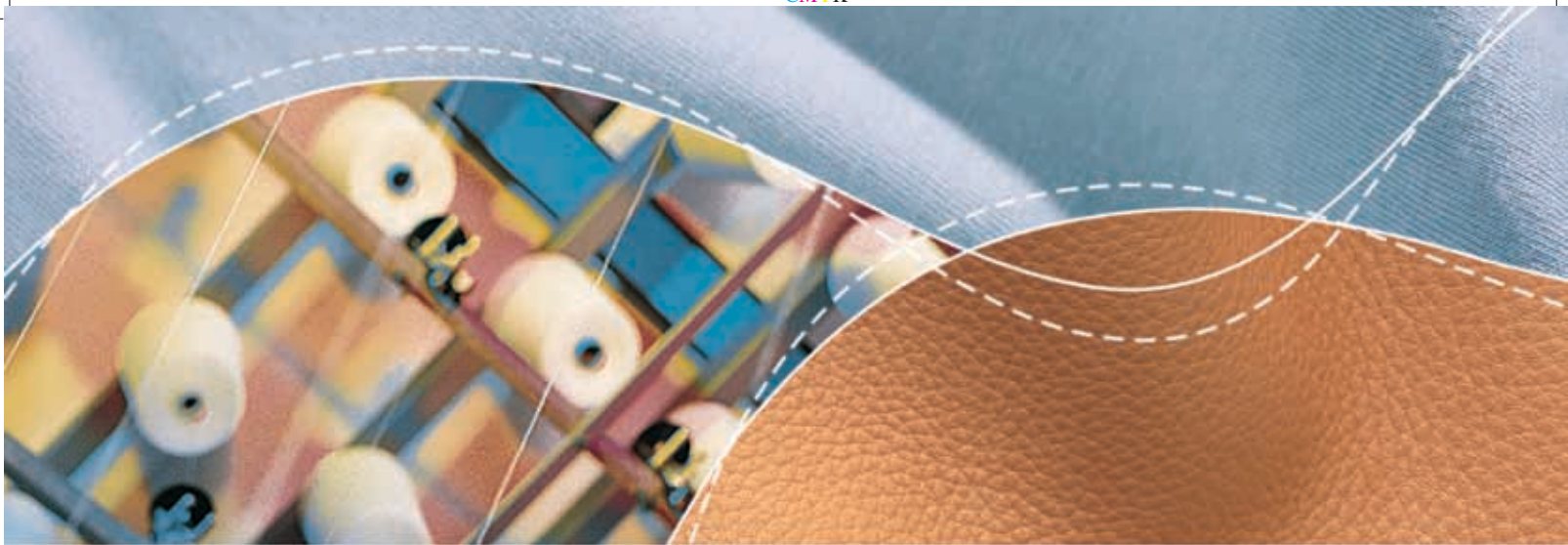
$$1. \text{ For Plain Fabrics} = 14 \times \sqrt{\text{Count}}$$

$$2. \text{ For Drill Fabrics} = \sqrt{\text{Count}} \times 28 \times \frac{4}{6}$$

$$3. \text{ For Satin Fabrics} = \sqrt{\text{Count}} \times 28 \times \frac{5}{7}$$

$$4. \text{ Other Design} = \frac{\text{Ends/repeat} \times 1 / \text{Yarn Diameter}}{\text{No. of Insertions/repeat} + \text{ends/repeat}}$$

$$5. \text{ Yarn Diameter} = \frac{1}{28 \times \sqrt{\text{Count}}}$$



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# 3D BODY SCANNING SOFTWARE – A REVOLUTION IN APPAREL INDUSTRY

Mr. Sumit Mandal, Assistant Professor, Pearl Academy of Fashion, New Delhi

## Introduction

Clothing that is custom made for a single individual is rare today due to the cost and the time it takes to manually measure, create patterns, and construct garments. The menswear tailor and couture fashion house are exclusive venues that offer high quality, custom clothing to select few. Even sewing at home has become a leisure activity and creative outlet instead of a way to provide clothing for the family. It has become more economical to buy ready to wear clothing than to make our own. Until the early 20<sup>th</sup> century, the majority of clothing was made one garment at a time for individuals. Women provided clothing for their families either by making it themselves or with the assistance of seamstresses. Men of the upper classes went to a tailor for individually fitted garments. Class distinctions were well

defined by clothing as the garments made by professional seamstresses and tailors were fitted and styled differently from those made in the home. At the time the process of going to a shop to buy pre made garments was limited to sailors, who purchased roughly constructed garments called slops.

Technological developments, patternmaking insights, and mass production changed how clothing was constructed from the very early age. Early in the fifteenth century, Leonardo da Vinci was fascinated by the survey of the human body.(1).The idea was adapted and the methods were assimilated into the possibilities of today. Since the late 1800s, anthropologist used tape to measure the calipers which are still being utilized for measuring the human body (2). These methods are time consuming

and often not accurate. Therefore many researchers all over the world have directed their efforts towards obtaining more reliable measurements and 3D profiles of the human body using various techniques (3). Twenty first century technologies are defining a new era of customized and mass customized clothing. World wide apparel firms are experimenting with economical strategies that individualized clothing for each customer by offering a variety of design and fit options.

## Technological Development

Mass customization strategies are driven by a host of enabling technologies ranging from bar codes to laser cutters, body scanners to web applications. In the fashion industry, the critical technologies for mass customized clothing are the

body scanners for collecting body measurement. One weak link in the internet ordering process is self measurement, which tends to be inaccurate. When it is more widely available, body scan technology will solve this problem. The 3D body scanner is fast and reliable tool for collecting measurements. Once a scan is taken, it is transferred to the computer and visualized on the screen. In the next step software automatically locates body landmarks and generates measurements.



Body Image

These measurements are very reliable but protocols for locating body landmarks still need to be perfected. Human come in a very wide range of shapes. A human tailor can recognize the similarities in dissimilar bodies and make informed choices about how to make a body measurement ,

while a computer must be programmed for every eventuality. As new software is developed, the automated measurements generated by computers continually improve.

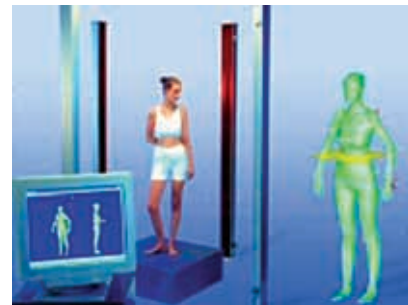
**Specifications of 3D body Scanning Software**

- Dimensions: 5' x 9'
- Area: 45 sq. ft.
- Power: 15 amp (one outlet)
- Technology: White light, non-moving scan heads
- Operation System: Windows XP

**Uses of 3D body Scanning Software:**

New software programs are being developed that actually unwrap a 3D representation of a garment to make a 3D pattern shape. 3D Body Scanner scans the whole human body in less than 6 seconds and produces a true-to-scale 3D body model within minutes (4). The uses of 3D body scanning software are:

- Custom fitting apparel
- Apparel sizing standards development
- 3D product development, including apparel, automotive seating and other equipment applications.
- Body shape analysis
- Animation and graphics
- Health and fitness management
- Medical applications
- Computer gaming immersion



3D Body Scanner

**Features of the 3D body Scanner and 3D Software**

- Low cost, high quality, easy to use, and safe white light 3D body scanning: White light is considered to be the safest body scanning technology. Laser based scanning technologies (even at low power levels) have been rejected for perceived safety issues.
- Private self-scanning automated body scan acquisition: The scanner is self-operated by the scan subject in a fully private environment, without the need for a “scanner technician” to operate the scanner
- Auto-registration and accurate sensor head alignment
- Body Scan Volume: The world largest manufacturer [TC]<sup>2</sup> scanner has one of the largest scan volumes available – scanning objects over 2.1 meters tall and 1.2 meters wide.
- Portability, Transportability, and Mobility
- Automatic creation of 3D

body models from 3D body scan point cloud data: 3D scan data is very dense. The Software has automatic noise elimination, data filtering, data smoothing, hole filling, and data compression as part of a process which automatically creates a high fidelity segmented 3D model of the human subject.

- Automatic body measurement extraction (numbering in the hundreds), which can be user-customized for each apparel, garment, or equipment application:
- Automatic body shape and body volume extraction: Body shape and body volume extraction is

fully automatic.

- Internal joint location approximation for 18 major body joints
- Seamless output data flow of measurements for made-to-measure apparel CAD applications
- Integrated size recommendation or custom fit functionality
- Fully web enabled - direct data transfer from the scanner over local networks or over the web

### Conclusion

The potential of 3D body scanning software seems tremendous, so the cost and benefit will become more apparent with time. Technology improves the speed

of image capture, reduces the errors arising from body movement, improves accuracy, resolution and provides full colour as well as shape information. The development of data extraction software is now very much important.

### References

1. Rosheim M E., ' In the footsteps of Leonardo', IEEE Robotics & Automation Mag., 1997, June,12-14
2. Delog M, Ashdown S, Butterfield L and Turnbladh K F., ' Data specification needed for apparel production using computers', Cloth Text Res J., (1993) 11(3) 1-7
3. Fan J, Yu W, and Hunter. L., Clothing appearance and fit: science and technology( The Textile Institute)(2004)
4. www.tc2.com

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Alumni Association, College of Textile  
Technology, Berhampore & Serampore  
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## INDIAN INSTITUTE OF CARPET TECHNOLOGY

(Under the aegis of the Development Commissioner (Handicrafts), Ministry of Textiles, Govt. of India )  
 Affiliated with U. P. Technical University & Approved by AICTE, Ministry of HRD, Govt. of India  
 Chauri Road, Bhadohi: 221401 Tel: 05414 225504, Fax: 05414 225509  
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The institute offers an undergraduate course leading to B. Tech. degree in Carpet & Textile Technology. During the first two semesters, the students take courses in Basic Sciences, Engineering, Humanities and Social Sciences. From the third semester onwards, they are in the study of subjects related to their Trade. In the whole curriculum, the emphasis is given on Design, Process and Product development activities. In the final year, students are classified into three groups, depending upon the specialization subjects they undertake. These specialization areas are:-

1. Textile Design Technology (TDT)
2. Home Textile Technology (HTT)
3. Advances in Carpet Technology (ACT)

### Invitation for campus interview



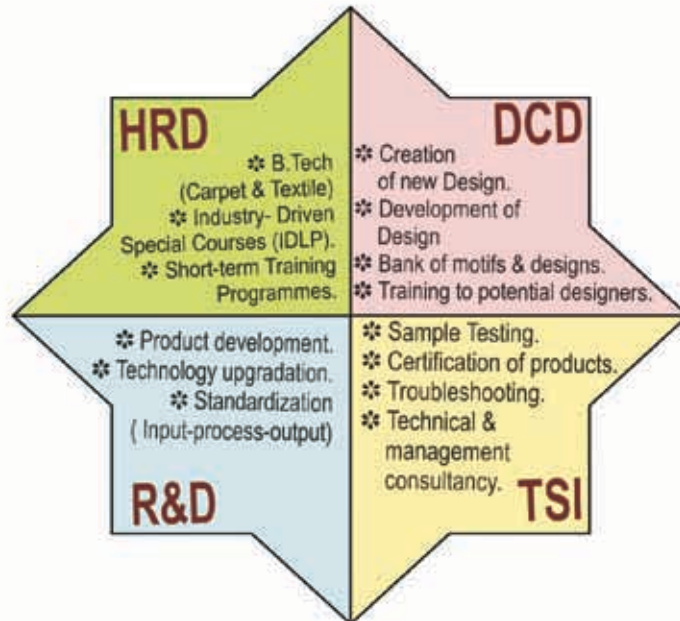
**Prof (Dr) J.K. GOSWAMI**  
 Director, IICT

It is my pleasure to thank the Carpet & Textile Industry for inducting the Graduates of Indian Institute of Carpet Technology. All our sincere efforts in developing the requisite

skills in our students over the years have resulted in ultimate contribution to business, economy, exports and the society. With continuous interactions with the industry leaders and related institutions (National & International) and through ISO 9000 certification of the institution, we are constantly improving quality of education of our students. Improvement in all desired portfolios including HRD on continual basis is our quality policy and strength.

Now the sixth batch of these technocrats is knocking at doors of the Carpet & Textile world for a graceful entry to shoulder higher challenges. These students have under gone through in house training and internship in industries. It is my profound privilege to invite the representatives of the industry for considering our students for offering suitable employment through the campus interview.

### PORTFOLIOS WISE ACTIVITIES



For correspondence regarding Training & Placement activity of the Institute, Kindly contact

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For TSI& DCD, contact Mr. R.K. Malik & Dr. R. Karmakar respectively.

The details are available in web site ([www.iict.ac.in](http://www.iict.ac.in)).



## INNOVATIVE TECHNOLOGY FOR BUTTON SEWING

**L**OIVA products are Made in Korea. Although it is a modern company run by a group of dynamic professionals, yet LOIVA products have found their rightful places in garment industries in Bangladesh, India, Sri Lanka and abroad. We understand that high reliability, higher quality, value addition and high technology are the key words in quality garment production. Remaining profitable and competitive is probably more intense and challenging for the Garment industry today than it was at any time during industry's last 40 years of existence.

For a long time it was felt that the weak link of button feeding (for feeding properly oriented buttons to the sewing station) in production line needs a savior. Loiva, Korea's ST-12 Industrial sewing machine button feeder attachment has come out as the ideal unit to fill this gap and boost production in a garment production line.

This attachment is easily installed in to any brand of lock-stitch button sewing machine. With two different modes available, automatic and manual, it is a magic wand in the hands of an operator. The X & Y axes are automatically adjusted depending on button diameter. No cumbersome and tedious manual adjustment and production downtime need worry you. An encoder measures up the sample button and sends digital data to the stepping motor for necessary correction while the LCD screen for the operator makes this fully programmable digital machine an easy game. Now since the button feeder attachment increases the speed of supply to the sewing machine the operator can maximize the speed of the button sewing machine head. This results in very high productivity. None of you should be surprised if a new operator (beginner) shows double productivity than a skilled operator. The user will easily gain up to 50% of time. The return on investment will be very fast.

ST-10 machine is used for knotting & wrapping buttons after providing a looseness in a Button Stitch Machine. The button knotting & wrapping process provides a strong stem to the button which previously was loosely attached to the fabric. By using this process the button-hole placket fits easily into the button placket. After the cloth is buttoned it does not show an expanded view of the button hole which is never pleasant. Further it uses normal thread.

With a maximum sewing speed of 3000spm, this sewing machine delivers high productivity. In comparison to other machines, this one has electronic control instead of mechanical cam.

The microprocessor controlled stepping motor is largely responsible for stable and eye-catching stitches. Perfect lock-stitch mechanism is used for knotting. This is again achieved by a microprocessor controlled powerful stepping motor. Amazingly no needle and hook-set is used.

# ST-12

## Digitally Controlled Fully Programmable Button Feeder Attachment



Successfully running in Bangladesh & Sri Lanka

### APPLICATION

This robot mechanism device is used to feed the buttons to the button clamp on the button sewing machine. Operator no need to align the holes of button. With its increased feeding speed, the sewing machine head speed can be used up to maximum, which results in higher productivity. Using the device a beginner shows double productivity than skilled operation.

### FEATURES

- Easy installation to any brand of lockstitch button sewing machine.
- Different type of Sorting method in vibrator. Vibrator speed can be controlled as per requirement. Less traveling time between vibrator and clamp due to minimum distance.
- Transfer Pin to be changed by operator when the size of the buttons are changed, as per their center hole distances.
- Two different modes available; Automatic (Continues feeding to the button from the feeder with the help of sensor), Manual (Operator manually places) the button to the clamp.
- Fully programmable digitally controlled mechanism with LCD.
- The X & Y axis automatically get adjusted according to the button dia. The sample button to be kept in a place so encoder automatically give signals to change X & Y axis stepping motor.

# ST-10

## Button Wrapping & Knotting Machine

PATENT

Normal Thread Used



### APPLICATION

The machine is used for Wrapping & Knotting of the Button after providing looseness in a Button Stitching Machine. This process provides a strengthen steam of button which is attached to the fabric with looseness. By using this process the button hole placket fits easily into the button placket. Also after fixing the button there is no expanding view of the button hole.

### FEATURES

- Fully programmable LCD Operation Panel
- **Wrapping Mechanism** : The stepping motor controlled by Microprocessor ensure that wrapping frequency is equally divided between the button and the fabric. The distance can be programmed on the LCD display Panel.
- **Knotting & Wrapping Option** : The default setting in the machine is programmed as one knotting is starting wrapping, three knotting in end. There is a programming facility available in control panel option as (a) Knotting, Wrapping, Knotting (b) Knotting (c) Wrapping.
- **Knotting Mechanism** : Individual arms controlled by Microprocessor and Stepping Motor ensured a perfect double hand made knotting without any use of needle and hook assembly.
- **Thread Mechanism** : By using pneumatic system easy to thread the machine without any delay. The way of threading is also explained in the LCD Display panel.
- **Thread Trimming Mechanism** : By using pneumatic thread trimmings system it is used guaranteed that there will be no damage to the button & the fabric.

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44	K.C. Chatterjee, BSc (Tech), M Tech		1976 (B)						
45	K.C. Tapadar, B.Sc. (Tech), PGD (Leeds), ATAC. Text, ATL, MIE	Spouse: Regina Children: Rupali, Dr. Damini, Dr. Priyanka	1963 (B)	0129- 2431088/ 6579864		kc.tapadar@ gmail.com	104, .Sector 21 A, Faridabad - 121001	Res. In Germany : Kirchstr 44, 65375 Oestrich-Winkel, Germany . 06723- 885980	
46	Dr. K K Goswami, B.Sc. Tech, Phd Tech (CU)	Spouse: Sipra Children: Propa (1988), Parag (1996)	1974 (B)	05414- 225504	05414- 226775	dr_kk_goswami@ rediffmail.com	<b>Director, Indian Institute of Carpet Technology.</b> Chauri Road , Bhadohi 221401, Fax 05414 225509	Director's Bungalow, IIC Campus, Chauri Road, Bhadohi 221401	Teaching, Research and Training Consultancy of Carpet Textiles (Including Home Textiles)
47	Kanchan Kamjilal, B.Sc.Tech, M Tech		1990 (S)	05947- 275320	98373- 70038	kanchankanjilal@ yahoo.com	<b>Technical Head - Textile, India Glycols Limited, A -1</b> Industrial Area, Bazpur Road, US Nagar, Kashipur - 244713, Uttarakhnad	1st Floor, Girital Colony, C/s, Mr. Vishal Choudhary, US Nagar, Kashipur - 244713, Uttarakhand	Product & Business Development, Marketing of Textile Specialty Chemicals
48	Kingshuk Pandit, BSc (Tech), MBA (Int Business, IIFT Delhi)	Spouse: Amrita Children: Kushankur (1999), Kononika (2007)	1990 (S)	0120- 2463347	93501- 94105	kingshuk.pandit@ gmail.com	<b>Tag India, No</b> 48, Pocket-A, 1st Floor, VDS Market, Sec-93 , Noida-201304	B-244, Pocket-1, Sector-82, NOIDA- 201304	Fabric Garment Export/ Import Agency
49	Kishore Kumar Paul	Spouse: Shyama Paul	2001(S)	0120- 4368124	98107- 52560	kishore_16d@ rediffmail.com	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd.</b> F-5, Sec-8, Noida, U.P. Pin - 201301	W-47, Sec-12, Noida	Textile Testing & client communica tion.
50	Krishna Kamal Chakraborty, B.Sc.Tech	Spouse: Kuheli Chakraborty Children: Atrayee (1999)	1990(B)		99960- 13950	krishkamal@ rediffmail.com	<b>Guetermann India Pvt. Ltd.</b> D-2, 2nd floor Infocity, Ph-II , Sec -33, Gurgaon	M-5, Govt Employee CGHS, Rewari-123401	Manufacturing (Yarn & Thread)

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
51	Kunal Ghosh, B.Sc.Tech		2003(S)		033-25818598	98717-60359	knl.beck@gmail.com	<b>STR(I) Pvt. Ltd.</b> , Plot no.-106, Sector-56, IMT Maneswar, Gurgaon		Quality Assurance
52	Madan Mohan Maitra, B.Sc. (Tech.)	Spouse: Shampa Children: Jhilmil	1983 (S)							
53	Manas Kumar Biswas, B.Sc. Tech		2005(S)			98969-22426	manas.ccf@gmail.com	<b>Clariant</b> , 102, Sec-29, HUDA, Panipat	82/5, Sister Nivedita road, Thakurpukur, Kol-63	Dyeing, Chemical
54	Manas Mukherjee, B.Sc. (Tech.)	Spouse: Ruma Children: Manuj	1971 (S)				works@pasupati.com			
55	Manik Dattagupta, B.Sc. B.Sc. (Tech.), MBA(FMS -Delhi)	Spouse: Neelam Children:Bornona, Snigdha	1965 (B)		011-25255468	98732-26180	manikgupta04@yahoo.com		48B, Sunder Apartments, Pocket GH-10, Paschim Vihar, New Delhi-110087	Advisor Life Quality; Airjet and Sulzer projectile Looms
56	Mihir Kanti Deb, B.Sc. (Tech.)	Spouse: Anuradha Children: Chiradeep (1972)	1964 (B)			98101-88922	mihiranu@yahoo.co.in	<b>Executive Director, Malwa Cotton Spinning Mills</b> , Division of Malwa Group	D-11/08 FF, DLF Exclusive Floor, DLF Phase-5, Gurgaon-122001	Long Range Corporate Planning; Also new Project & Product Development
57	Nihar Kanti Das, B.Sc. (Tech), GMT(NIFT)	Spouse: Meena Joshi Children: Adwik( 2006)	1995 (S)	011-41818324	0124-4060427	98113-17210	Itnak74@yahoo.co.in	<b>Manager Technical, Li &amp; Fung (India) Pvt Ltd</b> , 216, Amarchand Towers, Okhla Industrial Area-III, New Delhi	P-1B-122, Princeton Estate, DLF City Phase-V, Gurgaon	
58	Nishit Kumar Baksi, B.Sc. (Tech)	Spouse:Gita Baksi	1966 (B)		011-25120202	98995-61115	nkbaksi2003@yahoo.com	<b>Prospecta Soft Pvt. Ltd.</b> , K/2/5 DLF CITY, Phase-2, Gurgaon	Maya Enclave, EB 145 (SFS), New Delhi - 110064	Finance & Management
59	Paresh Chandra Das, B.Sc. (Tech.), M. Tech, MBA	Spouse: Kalpana Children : Aronima ( 1989) Gaurav ( 1993 )	1978 (S)	011-26280628, 26237355	011-41600937	98113-81419/98108-24891	kalpatarudelhi@airtelmail.in	<b>Kalpataru Impex. B</b> 36 A (1st Floor), Kalkaji N.Delhi - 110019, Fax: 26280818	G 2B (Second Floor), Kalkaji N. Delhi - 110019	Buying agent for Textiles

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
60	Partha Sarathi Chandra B. (Tech), M.Tech Prabhas Chandra Basu B.Sc. (Tech), M.B.A.	Debika	1995 (S)	0124-4091200	98187-02577	pschandra1@rediffmail.com	<b>Quality Control. Home Textile. William E. Connors &amp; Associates Ltd.</b> , 13th Floor, Signature Towers, South City, Gurgaon	No 103 Nalanda Apartment, IIT Delhi, Hauz Khas, New delhi-16	Quality Control Home Textiles	
61		Spouse: Ruma Children: Anupam(1985) Anindam(1988)	1972 (S)	011-25771350 / 25771198	93505-47878	pcbasa@enaindia.com	<b>General Manager, Engineering &amp; Agencies Pvt. Ltd.</b> , 9 D, Local Shopping Complex - A Block, Ring Road, Naraina, New Delhi-110028	C-177, Brotherhood Apartments, H-3/17, Vikas Pur, New Delhi-110018		
62	Dr. Prabir Kumar Banerjee, B.Sc. (Tech), M.Tech., Dr.Ing.	Spouse: Enakshi Children: Soma (1986)	1966 (S)	011-26591409	011-26591939	pkbt@hotmail.com	<b>Professor, Deptt. of Textile Technology, IIT, Hauz Khas, N</b> Delhi-110016	Texila, 30, New Campus, IIT, Hauz Khas, New Delhi-110016	Education, Research and Advisor	
63	Prabir Jana, B.Sc. (Tech), GMT (NIFT)	Spouse: Swati Children: Ritam(2002)	1988 (S)	011-26542129	011-26510908	Janaprabir@rediffmail.com	<b>Professor ,Dept of Fashion Technology, NIFT, Hauz Khas, New</b> Delhi - 110016	C7- 135, SDA Naveen Niketan, New Delhi - 110016		
64	Prabir Kumar Chaudhuri, B.Sc.(Tech)		1975 (S)			dirtex1@ncdc.delhi.nic.in	Regional Director (Uttaranchal) NCDC			
65	Prabir Kumar Mukhopadhyay	Spouse: Sonali Children: Arnab(1994)	1978 (B)	011-25813333-6	98711-99323	prabir_ind2002@yahoo.com	<b>Executive President, AMD Textiles Limited</b> , 18, Pusa Road, Karol Bagh, New Delhi	Express Garden, Flat No-2, Block-2, Vaibabh Khand, Indirapuram, Ghaziabad		
66	Pradip Bhattacharya, B.Tech	Spouse: Soumita	1999 (S)	0120-4368144	0120-4258812	pradipbhattacharya@rediffmail.com, pradip.b003@gmail.com	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd.</b> , F-5, Sector-VIII, Noida, UP-201301	H No -C 27, Sector-53, Noida - 201301	Fabric Sourcing, Quality & Finishing , Product Integrity	
67	Pradip Dey, B.Sc. (Tech), M.Tech, Ph.D.	Spouse: Rima Children:Rishav	1978 (B)	0120-2403674	98251-27486	drdeypradip@welspun.com	<b>Senior VP, Welspun India Ltd.</b> , Glowflame Cotspin (India) Spinning Dept, Village Morat, Dt: Valsad, Vapi, Gujarat	Plot B/1, Flat B-905, Sector 62, Noida		

Sl No.	Name	Spouse/ Children	Year of Passing	Telephone		Email	Office Address	Residence Address	Area of work
				Office	Res				
68	Pranab Kr Maity, B.Tech		2001 (S)	0120-2424846	03228-254619	pranab_bapj@yahoo.co.in	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd.</b> , F-5, Sector-VIII, Noida, UP-201301	Vill: Joykrishnapur, Po: Panskura, Dt: Midnapur (E),- 721139	Inspection & Assessment
69	Pranab Das					pranab38@rediffmail.com			
70	Pranab Samul B.Sc. (Tech)		1976 (S)	05662-235096			<b>Pasupati Fabrics Ltd.</b> , Kosikalan, U.P.-281403		
71	Pratap Sharma, B. Sc. (Tech.)	Spouse:Jayanti Children : Dr Yashdeep	1971 (S)	079-3041113 (d)	079-32506831	pratap_sarma@yahoo.co.in	<b>Truetzschler/ Trumac Engineering</b> , Ahmedabad	BH-002, Abhimannu Appt.65, Vasundhara Enclave, Delhi-110096	
72	Pratul Gobindo Majumder	Spouse: Gauri Children: Pralay, Sangita	1960 (B)	011-22750491		pgmajumder@hotmail.com		B-51, Manu Apartment Lawyer's Coop. Society, Delhi-110091	
73	Prithwiraj Mal, B.Sc. Tech	Spouse:Shampa Chaudhury	2000 (B)			pmal77@rediffmail.com	<b>SGS India Pvt Ltd.</b> , 250, Udyog Vihar, Phase 4 , Gurgaon, Haryana	353/3, Prem Nagar (opposite Raj Cinema)	Spinning . Testing
74	Pulak Debnath, B.Sc. (Tech), M.Tech		2005(S)	0129-4044444		pulak.debnath06@gmail.com	<b>Shahi Export Pvt. Ltd.</b> , Plot no.-1, Sec - 28 Faridabad	Vill- Badhagachi, PO-Dhatrigran, Burdwan WB- 713405	Product Development, Quality Control
75	Pulak Mukherjee, B. Sc, Tech	Spouse: Mita	1975 (B)	0124-4380450	0124 - 5051512, 5055622	pmpg@airtelbroadband.in	<b>Director, PMP Global</b> , E - 12 / 3, DLF City, Phase - 1 , Gurgaon - 122 002	E - 12 / 3 , DLF City, Phase - 1 , Gurgaon - 122 002	
76	Pulak Gangopadhyay, B.Sc(Tech), M.Tech		1964 (B)	0180-2671608	0180 - 2671277	pkgangopadhyay@hotmail.com	<b>Abhitec International</b> , Plot No. 3 & 4 HUDA, Sector - 29, Panipat	House No. 444, HUDA Phase-1, Sector 11, Panipat-132103	
77	Pulokesh Guha Niyogi, B.Sc(Tech), M.Tech(I.I.T)	Spouse: Swapna Children: Ruchita(1982) Somnath	(B)			pgniyog@ownnathar.com	<b>Oswal Denim, Oswal Wollen Mills Ltd</b> , Vill: Jalaipur, PO:Dappar, Ambala Chandigarh Rd-140506	802, Sector-11, PKL, Haryana	R & D Management

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
78	Rabin Kumar Bera, B. (Tech)		2000 (S)			99110-10449	kumarbera@yahoo.com	<b>SHAHI EXPORTS PVT. LTD, F 88-OKHLA INDUSTRIAL AREA . PHASE - 1, New Delhi-110020</b>	Vill- Gokulnagar, Po- Baragokulnagar, Purba Medinipur, West Bengal - 721152	
79	Dr. Rabishankar Chattopadhyay, B.Sc. (Tech), M. Tech, PhD	Spouse: Sonali Children: Kinjal	1977 (S)	011-26591412, 48	011-26581977	98710-95892	rchat@textile.ilttd.ernet.in	<b>Professor, Deptt. of Textile Technology, IIT, Hauz Khas, New Delhi - 110016</b>	New Campus, IIT, Hauz Khas, New Delhi-110016	Spinning, Quality Issues, Product Designing.
80	Rajarshi Sengupta, B.Sc. (Tech), MBM (IIT-KGP)	Spouse: Anamika	1998 (S)		033-6544 2032	98312-89642	rajarshi.sengupta@gmail.com	<b>Manager, Advisory, PricewaterhouseCoopers LLP, 300, Madison Avenue, New York, NY-10017</b>	FD 470/7, Salt Lake, Sector 3, Kolkata - 700 106/   Liberty View Apartment 99, Battery Place, New York City, NY - 10280	Business Consulting
81	Rajkumar Rai, B.Sc. (Tech), PGDIT, IIFT	Spouse:Ranjana Children: Rachana (1983) Ruchika (1990)	1980 (B)	011-26145885/3860/3784	0124 - 2382328	98108-31771	rkr@intercontiprojects.com / rajkr.rai@indiatimes.com	<b>Product Manager, Interconti Projects Pvt. Ltd. C-5, Main Shopping Centre, Paschim Marg, Vasant Vihar, New Delhi - 110057, Fax-6143167</b>	M 107, 2nd Floor, South City 1, Gurgaon	Textile processing & International Marketing
82	Ram Ranjan Rudra, B.Sc. (Tech), M.Tech	Spouse: Papiya Children: Ankita, Anayna	1980 (B)							
83	Rati Kant Malik, B. Sc. (Tech), M. Tech		1990 (S)	05414-225504		94502-54736	r_k_malik@rediffmail.com	<b>Asstt. Prof, Indian Institute of Carpet Technology, Chauri Road , Bhadohi 221401, Fax 05414 225509</b>	Indian Institute of Carpet Technology, Chauri Road , Bhadohi 221401	
84	Rudra Prasad Sengupta, B.Sc. (Tech)	Spouse: Kalyani Children: Rijul (1985), Pushan (1990)	1974 (B)		011-25083988				274C, Dakshinyan Aptt.Plot No. 19, Sector-4, Dwarka, New Delhi-110045	

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
85	Dr. R. Mandal , B.Sc. (Tech), M.Tech (IIT-D), PhD(Manchester)	Spouse:Ratna Children:Deveshish (1980), Sreelkha (1986)	1969 (S)	011- 30615703	0124- 4145346	98105- 62455	rmandal@ yojana.nic.in/ r.mandal@hotmail.com	<b>Executive Director, SREI CAPITAL MARKETS LTD.</b> , D2, Saket place, 5th floor, Southern Avenue, New Delhi 17	B 84 Sun City, Sector 54, Gurgaon	
86	Sabayasachi Basu, B.Sc.Tech	Spouse: Indrani Basu Children:Srinjal Basu (2004)	1995 (S)	011- 23378458	0120- 4110936	98117- 04857	basu1973@gmail.com	<b>Clariant Chemicals</b> , 102 Hans Bhawan, BS Jafar Marg, New Delhi-2	E6 Aloknanda Apt., Suryanagar, Ghaziabad	
87	Dr. Saileen Kumar Chaudhuri, B.Sc. (Tech), M.Tech, Ph D.	Spouse: Tripti Children: Sougat (1979), Suhrtd (1982)	1968 (S)	011- 40612104	0129- 4045220	98101- 88118	Saileen.Chaudhuri@ wool.com	<b>Country Manager,Woolmark Services Private Ltd.</b> , 310, Elegance Tower, Jasola District Center, New Delhi - 110025	220, Sector 21 B, Faridabad - 121001	
88	Sajal Chowdhury , B.Sc. (Tech)	Spouse: Soumi Children: Anurag	1980 (S)	05662- 233008	05662- 235060			<b>Senior Manager, Weaving, Pasupati Fabrics Ltd.</b> , Kosikalan, U.P.- 281403	C/o Pasupati Fabrics Ltd, Kosikalan,U.P.- 281403	
89	Samir Kumar Ghosh, B.Sc. (Tech), M.Tech	Spouse: Pritha Children: Souvik (1982), Saptrishi(1987)	1973 (S)	0172- 5092397	011- 26674313	99157- 39575	skghosh_textile@yahoo.com	<b>CEO,Winsum Knitware Ltd.</b> , Mohali	A-254, Shivalik, Malviya Nagar, NewDelhi-110017	
90	Samir Majumdar, B.Sc. (Tech), M.Tech, MIE	Spouse: Shampa Children: Swatilekha (1989), Anulekha (1991)	1976 (B)	011- 23313445	011- 22770338	98105- 01298	majumdarsk@ peclimited.com	<b>General Manager, PEC Ltd</b> , Hansalaya, 15, Barakhamba Road, N.Delhi - 110001, Fax: 011-23313647	212-A, Pocket-B, Mayur Vihar Phase-II, Delhi - 110 091	
91	Dr. Samrat Mukhopadhyay, B.Tech, M.Tech, Phd, (IIT D)	Spouse: Halmanti	1996 (B)	011 26591477			sm_itd@yahoo.com	<b>TX 105, Department of Textile Technology, IIT Delhi</b> , New Delhi 110016	16, North Avenue, IIT Delhi	
92	Sandip Kayal, B.Sc. (Tech)	Spouse:Sunipa	2002(S)	0120- 4368102	98732- 80841	98732- 80841	sandips.kayal@gmail.com	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd</b> , F-5, Sector-VIII, Noida, UP-201301	28G, New Koldni, Mayur Vihar, Phase-III, Pkt-II, New Delhi-96	Garments & apparel products service

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
93	Sanjib Kumar Dey, B.Sc. (Tech)		2003 (S)	011-6626760		93134-99964	deysanjib@yahoo.co.in	Li & Fung Pvt Ltd,	W-145, 1st Floor, Sector-12, Noida	Fabric Sourcing
94	Sanjib Kumar Sinha, B.Sc. (Tech)	Spouse: Anjana Children: Ananya (2005) Sidhant (2007)	1995(S)	0120-2424846/879/979/889	4129514	98102-88976	sanjib.sinha@in.bureauveritas.com / sanjibsinha2000@yahoo.com	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd.</b> , F-5, Sector-VIII, Noida, UP-201301. Fax: 0120-2424846/880	B 201, Plot 24, Gateway Tower, Sector 4, Vaishali, Ghaziabad, U.P-201010	Inspection, Testing, Audit (Factory Audit), Assessment (Social Audit)
95	Saamyadip Santra, B.Sc. (Tech)		2004(S)		3212240275	98117-08054	saamyadip.santra@gmail.com	S/6/11-1st Floor DLF phase-III, Gurgaon.	Vill-Sahapur, P.O.-Bhangamsa, Hoogly, WB-712410	Fabric/Lab
96	Sheikh Minhazuddin, B.Sc. (Tech)		2002(S)	0124-4503400/3437		98686-46525	minhaz_sheikh@rediffmail.com	<b>Lab Supervisor, Intertek Consumer Goods</b> , 290-Udyog Vihar, Phase-2 Gurgaon,Haryana		Textile Testing and Certification.
97	Sibaji Dasgupta, B.Sc. (Tech)	Spouse: Arpita Children: Niladri (1993)	1985 (B)	011-22248966	011-22232321	98111-40934	asb_sibaji@vsnl.net	<b>Director, ASB Textiles &amp; Chemicals (P) Ltd.</b> , 16 & 17, Pankaj central Market,LSC, I.P.Extension,Delhi - 110092	D-703, Vidisha Apartments, Plot No. 79, J.P.Extn., Patparganj, Delhi-110092	Representing European, Chinese and Indian companies in the field of Synthetic fibre and Textile machinery, Spin finish, Auxilliary Chemicals for textiles and Dyes.
98	Sobhan Pramanik, B.Sc. (Tech)	Spouse: Moumita, Children:Srijan (2009)	2000(S)			98716-98185	sobhan_pramanik@rediffmail.com	<b>Orient Craft Ltd.</b> , Gupta House, KH 20 - 22, Kherki Daula, N.H.-8, Gurgaon-122015	508B/9, Shivpuri, Gurgaon-122001, Haryana	Quality Assurance
99	Somnath Bhadra, B.Tech, Masters in Fashion Management		2002(B)		0341-2270421	98732-64517	somnath_bhadra2000@yahoo.com	<b>Marketing Manager, Future Group</b> , Plot No.- 82, Sector-32, Gurgaon	Railpar,Debopara K.S Road, Asansol, Burdwan	Marketing & Merchandising



Sl No.	Name	Spouse/ Children	Year of Passing	Telephone		Email	Office Address	Residence Address	Area of work
				Office	Res				
100	Soumen Ghosh, B. Tech			0124-2451000-08	03243-255811	sourav_pan@rediffmail.com	<b>Quality Executive, Omega Design,</b> 863 Udyog Vihar, Phase-V, Gurgaon	Vill + Po: Khatra, Dt Bankura, West Bengal-722140	Textile Testing and Fabric Technology
101	Sourv Pan, B.Tech		2006(B)	011-66505521	94340-84320		<b>Service engineer, Voltas Ltd, A/43,</b> Mohan Co-operative Industrial Estate, New Delhi-110044	S/O- Jaharlal Pan, Bakura Rail Colony, G No-DS/105B, West Bengal-722101	
102	Soubhik Mallick B. (Tech.), M.Tech.		2004 (B)	9999310310/9999310320		souvik.mallick@gmail.com	<b>Senior Officer production, Weaving Loomshed, Sarla Fabric Pvt.Ltd,</b> 30/2 Loni Road, Mohan Nagar, Ghaziabad, U.P. 201007	9/178 A, Sec 3, Rajendra Nagar, Shahibabad, Ghaziabad, U.P.	Weaving Loomshed prod.dept.Want to switch over in marketing/ garment industry
103	Sraban Mukherjee B.Sc. (Tech.), M.Tech, PhD.	Spouse: Dr. Urmil Children: Neil (1993)	1976 (S)	0124-4200531	011-30220453	sraban.mukherjee@heromindmine.com	<b>Principal Consultant, Hero Mindmine,</b> Palm Court, 20/4 MG Road, Gurgaon-122001	22D, OCS Apartments, Mayur Vihar Phase-I, J64 Delhi-110091	Management Consulting.
104	Subhadip Datta, B. Tech		2002(S)	0120-4368102		Subhadip.dutta@decathlon.com	<b>Indeeca Sporting Goods Pvt. Ltd,</b> Decathlon, Vatika towers, 8th floor, Mehrauli-Gurgaon Road, Sector-54	67/220, Sector-17A, Sukhrall, Opposite to water tank, Near sukhrali market, Gurgaon	Quality Assurance
105	Subhash Banerjee, B.Sc. (Tech)	Spouse: Dola Children: Ipsita (1982)	1970 (S)	011-25172081	011-26293068		<b>Vidyt Motors Pvt Ltd,</b> M1, Himland House, Karampura Commercial Complex, New Delhi-110015	627G, Gali No.6, Govind Puri, New Delhi-110019	
106	Subir Kumar Palit, B.Sc.Tech, M. Tech	Spouse: Soma Children: Sombir (1988)	1978 (B)	011-25736525	011-25254782	palitisk@hotmail.com	<b>General Manager Marketing, Veejay Lakshmi Engineering Works Ltd,</b> 602, Sethi Bhawan, 7 Rajendra Place, N. Delhi-110008	8F, Nivedita Enclave, A-6, Paschim Vihar, New Delhi-110063	
107	Subrata Kapri, B. Tech		2004(B)			subratkapri_81@yahoo.co.in	<b>Executive, SGS India Pvt. Ltd,</b> 250, Udyog Vihar, Phase-IV, Gurgaon	U-60/17, DLF Phase-III, Gurgaon	Retail

Sl No.	Name	Spouse/ Children	Year of Passing	Office	Telephone Res	Mobile	Email	Office Address	Residence Address	Area of work
108	Subrata Palit, B. Tech		2002 (S)			98795-62015	palit.subrata@gmail.com	Welspun, Anjar.		
109	Suman Kalyan Pal, B.Sc. (Tech)		1985 (S)					<b>Manager (Planning &amp; Design), Porritts and Spencer(Asia) Ltd.</b> , 113/114A, Sector-24, Faridabad -1210005	Flat No Q 188, Kapil Vihar Welfare Maintenance Society , Sector 21 C, Faridabad - 121001	
110	Sumantra Pal, B. Tech	Spouse: Ananya	2001 (S)	0120-4368128		97900-09191	sumantra_p@rediffmail.com	<b>Bureau Veritas Consumer Products Services</b> , Dy. Lab Manger, Tirupur	S 54 (1st floor), Sector 12, Noida 201301	
111	Sumanjit Sengupta, B.Tech.		2003(B)	0124-2399742	033-25360605	93126-53787/99713-48981	sumanjit.sengupta@gmail.com	<b>Service Executive, SGS India Pvt. Ltd.</b> , 250-Udyog Vihar, Phase-4, Gurgaon-122015	Vill- Gangapur (Swamiji Park), P.O- Duttapukur, Dist-24pgs(N), W.B-743248	
112	Sushil Bala, B.Tech		2005(S)	0120-2424878/79		98734-47358	sushil.bala@gmail.com	<b>Bureau Veritas Consumer Products Services (India) Pvt. Ltd.</b> , F-5, Sector -8, Noida, U.P	25 C/1, R.M.D.G. lane, Kol- 700010	Testing
113	Suwendu Bikash Das, B.Sc. (Tech)	Spouse: Sanjkuta	1993 (S)					<b>Pasupati Fabrics Ltd.</b> , Kosikalan, U.P. - 281403		
114	Suvodeep Mukherjee, B.Sc. (Tech), MTech, MBA (International Business)	Spouse - Sangita	2000(B)			99248-24482	sdeep_21@rediffmail.com, suvodeep_21@yahoo.com	Business Development Manager, Bureau Veritas Consumer Products Services (India) Pvt. Ltd., Gurgaon		
115	Swarup Sarkar		1994(B)	011-55505526		98106-11534	swarup1973@gmail.com	Associated Head - Marketing, Dharampal Satyapal Ltd, Noida		
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Sl No.	Name	Spouse/ Children	Year of Passing	Telephone		Email	Office Address	Residence Address	Area of work
				Office	Res				
117	S.K. Mangal, B.Sc. (Tech)		1955 (S)	0129- 2289322 95129- 2280322	98910- 99934	samitmangol@ yahoo.com	<b>P.M.Associates &amp; Consultants</b> , 2570, Sector - 17, Faridabad - 121002		
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119	Tapan Mandal, B.Sc. (Tech) ,M. Tech, IAS		1973 (B)						
120	Tarun Gulati, B.Sc. (Tech.)	Spouse: Rekha Children: Shivang (1997) And Mihika (2000)	1988 (B)	011- 26283896	011- 22167981 98100- 77060	tarun.gulati@ rieter.com	<b>Head, NW &amp; FYT Sales-India Rieter India (P) Ltd</b> , 1005- 1008 Hemkunt Tower, 98 Nehru Place, New Delhi-110019, Fax: 011- 26448505	B-159, Vivek Vihar, Delhi-110095	
121	Umed Sethia, B. Sc. (Tech.)	Spouse:Puja, Children: Kavya (2004)	1995 (S)	0120- 4390059	99682- 35522	umedsethia@ lnjb.com, umedsethia@ hotmail.com	<b>LNJ Bhilwara Group</b> , Bhilwara Tower, A-12, Sector-I, Noida, U.P- 201301	A-38, Preet Vihar,2nd Floor, Delhi-110092	
122	Vivek Agarwal, B.Sc. (Tech), M.B.A	Spouse: Monika Children: Vaibhav (1992) Shreya (1994)	1987 (B)	011- 27231498	98991- 20006	vivek.aggarwal@ mnylindia.com	<b>Financial Advisor</b> , H- 28, Ashok Vihar Phase-I, New Delhi- 110052		Financial Advisor



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# REMINISCENCES 2009



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1. You may enter into the ‘Registration’ Form (which is off course FREE) by clicking on ‘Create Profile’. You to fill up the form with user id & password. The column marked as ‘\*’ are mandatory to be filled.
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3. You will be able to log in and browse after verification from admin.
4. Job opening can be searched or posted in member’s area.
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everybody. It is better if articles are posted in .pdf format. The size of the article should be below 2 MB.

7. You may greet other alumni by sending a request to admin (mail to: [info@texalumni.com](mailto:info@texalumni.com) or [texalumni@gmail.com](mailto:texalumni@gmail.com)) with Message. Admin will post the message in ‘Greetings’.

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