

VARDHMAN SPINNING AND GENERAL MILLS, LUDHIANA

Unit Profile

- Vardhman Spinning & General Mills Ludhiana is the unit of Vardhman Textiles Limited.
The Spinning unit of the company at Ludhiana was set up in 1965 with an initial installed capacity of 6000 spindles. Since then it has grown to a modern complex UNIT of 45260 Cotton , 21784 Worsted and Hand Knitting Yarn spindles and a house of dyed of Hand Knitting Yarn.
- The annual turn over of the company is 369 crore rupees. The product mix includes cotton , synthetic/ blended yarns, industrial , knitting and, dyed yarns. Fancy yarns for hand knitting are also produced in this unit. The Cotton and synthetic production for the year 2007-08 is 26.9 Tones/ day, Worsted Yarn and H.K.S. production in 29.3 Tones/ day, Hand Knitting Yarn Dyeing production is 10.57 Tones/ day.

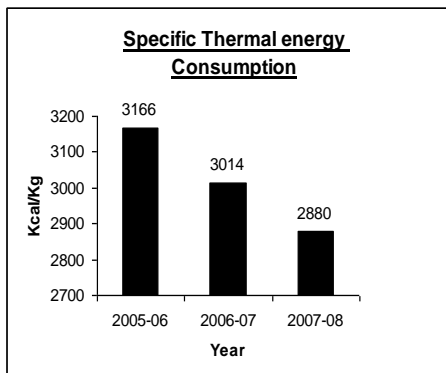
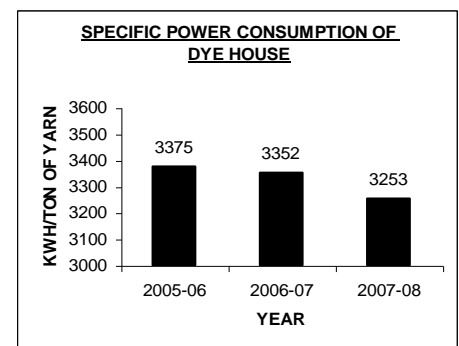
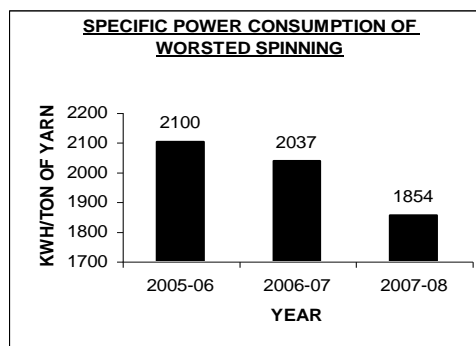
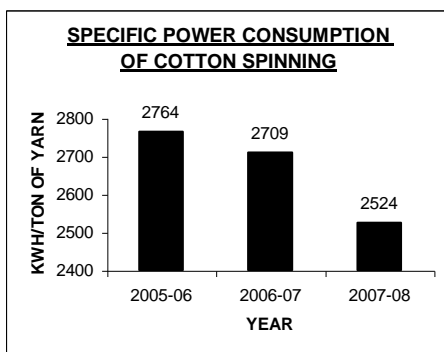


- The company emphasized in the area of Productivity, Quality, Cost effectiveness and Energy Conservation
The philosophy of Vardhman is to focus on use of all resources in achieving perfection in operational performance, standards of productivity, work norms, cost/kg and spindle/shift , These have been appreciated by the various textile institutes in their comparative surveys of industries. The performance is reflected in the balance sheet of the company in the area of energy as per unit product basis.
`Apart from this we have a Training Center at Ludhiana where training programs are being conducted for staff
``and officers .
- For workers a Manav Vikas Kender is established since 1990 inside the mill premises for training & development of workers.and to enhance there **Knowledge, Skill & Behavior** attitudes.
The workers are given attitudinal as well as functional training . Functional training is given on the job as well as off the job . The main aim of the training program is the overall development of the workers.

- Our products exhibit the lot of Innovation & Creativity while manufactured by the team.
- We have adopted the concept of Quality Circle and Total Productive Maintenance (TPM) in our mill.
- We have KAIZEN Scheme to get suggestion on energy savings, water conservation , improvement in work culture, increase in production & productivity, safety, waste minimization and cost reduction etc.

ENERGY CONSUMPTION:

- The company has always accorded top priority for minimization of energy consumption by putting consistent efforts towards optimization of process parameters, modernization, upgradation of machinery and training for overall development at all levels . There are mainly three main production activity in our plant having separately monitored in terms of business. Therefore Energy Consumption trend is enclosed as below for all three functions i.e. Cotton,Worsted & Dye House.



ENERGY CONSERVATION COMMITMENT POLICY & ORG SET UP:

We have developed energy audit practice in our mill. We have decided to carry out energy audit after every three year to identify new areas of energy saving opportunities after the energy audit done, we implement step by step the measures and evaluate the results.

Regular trials are conducted to run the Fluidized Bed Boiler on Agro Waste to save coal. Following Agro Waste products are already tried .

- 1) Rice Husk
- 2) Rice Straw
- 3) Sarson
- 4) Forest Waste

ENERGY CONSERVATION PLAN AND TARGETS:

- The company is striving consistently for further reduction in electrical as well as thermal energy consumption, Hence further studies are being undertaken as below:
 - Installation of electronic chokes, CFL & servo stabilizer
 - Installation of VFD ,energy efficient motors, optimization of motor loading
 - Installation of capacitors, high efficient pumps, high efficient compressors.
 - Operating high efficiency D.G. sets
 - Heat recovery from DG sets and compressors
 - Heat recovery , recovery of condensate, re-use of used water in Dye House

We have developed different measures to motivate our employees to suggest and implement energy conservation measures ideas. We organized a energy conservation awareness week in the month of April 09 from 22 April to 29 April. And Energy Management Policy & Energy Saving tips booklet was launched by our Chief Executive .

Best suggestion awards on slogans poster, poems, savings, etc were distributed to staff and officers on 15th May 08.

In the awareness week energy saving and thermal savings posters and slogans were installed all over the mill premises:-

1. We educate our employees about the importance of energy and its impact on cost of products by simple diagrams & examples etc.
2. We send our employees to various training courses to upgrade their knowledge with the latest development in the field of energy conservation.
3. We circulate various papers, magazines, and newspapers cutting to our cell members and discuss the same in the meetings.

We have developed the energy conservation monitoring systems as follows;

1. We have developed energy monitoring document system by which we can compare power consumption data with that of our previous years. We are also taking production figures of different departments and calculations of kWh/Kg to compare and monitor power consumption month wise and on daily basis.
2. We have prepared electrical index and fuel index on monthly/yearly basis to find out savings or achievement in power and fuel saving compared to last year.
3. Yearly review for setting up energy targets for the next year.
4. Review by energy conservation cell on monthly basis and revising the targets of energy consumption as and when required.
5. Various studies are being conducted in the unit by energy conservation cell from time to time and suitable recommendations are made for achieving energy objectives. Annexure-1
6. In view of creating more awareness about energy saving among the employees on various levels, an energy policy has been formulated and displayed at various locations of the mill and labour colony.

PLAN :

- Installation of ac drives on the machine where frequent speed regulation is required. Approx. saving per annum Rs.1.0 Lac
- Saving in energy by installation of 18.5 kW energy efficient motor on ring frame DJ/5 in spinning-2 for the year 2008 - 2009. There is saving of 6500 kWh / Ring frame/Yr.
- Replacement of tube rod with CFL bulb for energy saving. total 250 tube rod are to be replaced with CFL lamp. total saving will be $(40-18)*24*250/1000 = 48180$ kWh per year.
- Reduction in Pneumafil Impeller Dia with respect to suction pressure of Ring Frame suction fan in Spinning 1. Approx. saving per annum Rs.11.5Lac.
- Ring Frame over head blower stoppage at each end by 1.25 min. in Cotton Spinning -1 & 2.25 min Worsted spinning Approx. saving per annum Rs.26.21 Lac.
- Optimization of tube lights according to the requirement of lux level in various plants. Approx. saving per annum Rs.12.54Lac.
- Switching off one rotary filter in Blow Room of Spinning 2. Approx. saving per annum Rs.7.5Lac
- Reduction of Dye House Effluent. Approx. saving per annum Rs.8.0Lac
- Insulation of dyeing machines for thermal saving. Approx. saving per annum Rs.2.93Lac
- Changing of steam traps in dye house. Approx. saving per annum Rs.2.0Lac
- Conversion of Electrical heaters to steam heaters in yarn conditioning Xorella machine. Approx. saving per annum Rs.4.7Lac
- Installation of Eco ventilator fans in dye house & switching off exhaust fans. Approx. saving per annum Rs.1.6Lac
- Reduction in air consumption by optimizing the air pressure & plugging the leakages. Approx. saving per annum Rs.9.83Lac
- Use of Humidification plant exhaust air to generate electricity.
 - Installed diffused aeration system on ETP by replacing surface aeration fans.
 - Zero discharge of rain water into the public sewage system by installing rain harvesting system 11nos of capacity -----.

ENVIRONMENT AND SAFETY:

Besides energy conservation the company has a safety cell headed by Chief Security Officer. To keep the environment of the mill healthy, we have taken the following measures;

1. Provide and development of green belt/park etc.
2. Plantation of trees in the mill premises.
3. Surrounding area of the mill is maintained neat and clean.
4. House keeping is maintained in all departments.
5. We had instilled O2 analyzer ion the boiler to utilize the fuel in efficient manner and to control the emission of Carbon Mono-oxide.
6. We had installed cyclomax T.T on our 10 tons boiler to reduce SPM level in air.

7. We have established an effluent treatment plant, which runs round the clock and meets all standard norms of Punjab Pollution Control Board.

SAFETY:

We have a safety committee headed by a safety officer and safety meeting is held every 15 th of the month.

A Safety Manual has also been prepared to carry out the safe working practices at all units of Vardhman Group.

1. All electrical sub-station/premises are maintained as per Indian Electricity Rules and Electricity Act.
2. Complete mill is covered within the network of hydrant sprinklers/fire extinguishers systems.
3. Electrical portable tools are checked regularly.
4. Shock treatment/respiration charts are displayed in all the sub-stations.
5. Safety committee meetings are being conducted once in the month to monitor all the safety aspects.
6. Periodically lectures are being delivered in Manav Vikas Kendra. To give more awareness to all staff and workers.
7. Earthing resistance of all equipment including 66 kV sub-station, sub-station A& B is being checked periodically.
8. Safety committee members group consists of one or two representatives from various departments.
9. All type of Accidents are monitored , analyzed & Why -Why analysis sheet displayed in the departments to educate the staff.
10. Safety week is organized every year to create awareness.