

RAYMOND LIMITED
(TEXTILE DIVISION-JALGAON)

(i)

Unit Profile

Raymond Limited (Textile division) under the flagship of **JK Group** (Worsted and woolen Division) is undoubtedly numerous Uno in the Indian Textile Industry comprises of four units. **Textile Division-Jalgaon** is situated at M.I.D.C. area, Jalgaon. which became operational in March,1979. Ours unit started with spinning and weaving activities. Our unit has latest internationally available technologies on many machines. We have quality circles for quality improvement. We are following KAIZEN – doing autonomous maintenance on many machines. Ours is an ISO-9001 company.

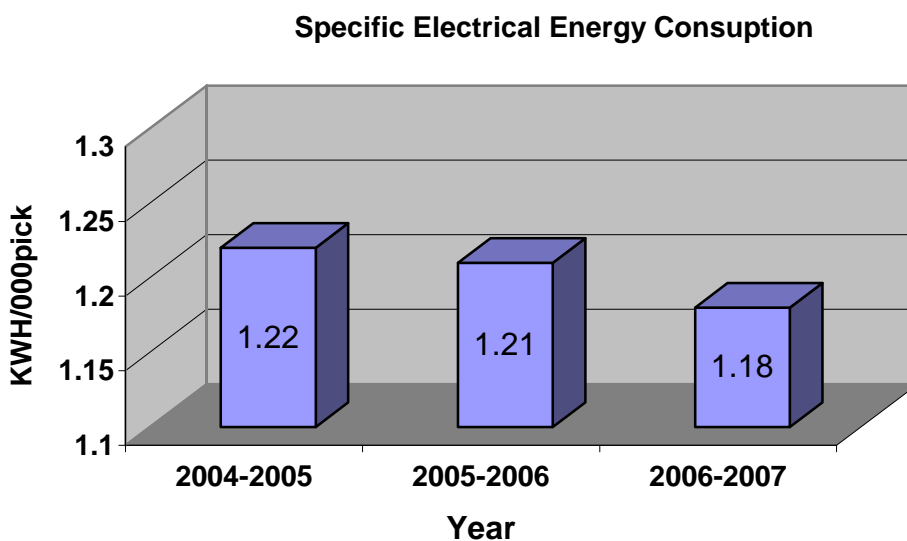
The composite woolen division started its activity at Jalgaon in the year 1986-87.The Woolen division is manufacturing blankets /shawls / blazers / billiard fabric/ Milton fabric in varieties of shades, sizes, colours and blends as per customer requirements. It is a composite unit having latest plant and equipment, various processes like, dyeing, rag-tearing, preparatory, carding, spinning, yarn checking, yarn room, weaving preparatory, weaving, grey mending, dry and wet finishing, finish–perching, folding, warehouse and dispatch to customers. Its raw material is blends of woollen rags, hosiery, nylon, noil etc. We are following KAIZEN – doing autonomous maintenance on many machines.

Total we have eleven quality circles in entire mill. we have received quality circle awards from Nagpur chapter.

We have a team of twenty members for Task Force from various departments to carry out energy saving activities, system improvements and to carry out innovative ideas from different section of the departments. The outskirts area of the factory building, main gate and other available area is decorated with lawns, gardens, flower, trees etc. in order to motivate people and better house keeping and this has improved the total impact of our unit.

The success of our company has improved the quality of life in general. This all round growth is an ongoing process at RAYMOND.

(ii) Energy consumption:



Year	Electrical Energy Consumption			Electrical Energy Savings Achieved			
	Total Electrical Energy Consumption KWh/annum (i)	Energy Cost (Rs. Lakhs/year) (ii)	Specific Energy Consumption KWh/000 picks (iii)	% Reduction in Specific Energy Consumption over 03-04 (iv)	Lakh KWh / annum (v)	Lakh Rs. / annum (vi)	% Savings achieved / Energy Cost of Prev. year (vi)/(ii)x100
2004-05	121.98	424.49	1.22	1.61%	6.79	23.81	--
2005-06	118.98	429.64	1.21	2.41%	8.70	31.42	7.40
2006-07	125.61	518.35	1.18	4.83%	4.30	17.71	4.12

It is evident from above graph and table that specific electrical energy consumption of our unit is showing reducing trend in last three years as a result of continuous efforts in the direction of energy conservation.

As a effect of various energy conservation measures implemented so far we could achieve savings in electrical energy cost of our unit up to 4.12 % for the year 2006-07.

(iii) ENERGY CONSERVATION COMMITMENT, POLICY AND SET-UP.

Section & equipment wise specific consumption is regularly monitored to know how much we are consuming & where. For this we are providing metering equipment in each of the utilities and production departments wherever possible to keep close watch on consumption pattern to avoid inefficiencies. In an unending venture to improve energy efficiency & optimization of all resources study and audits are carried out on every energy consuming equipment on its each aspect for conservation of energy. Different training programmes, seminars, are arranged for plant personnel for making them energy conscious.

A clear-cut strategy has been formulated and full-fledged Energy Conservation Cell has been formed at corporate level & at unit level also. The Energy Conservation Cell is being well equipped with measuring instruments like Digital Load Manager, Flue Gas Analyzer, Hygro Meter, Digital Energy Meter, Lux Meter Digital calibration meter etc. The implementation of energy conservation scheme through Energy Conservation Cell is given the highest priority. Based on the recommendation made by EC Cell and reviewed by various level committees, the decisions are taken for implementation of energy conservation programmes.

The Energy Conservation Cell at Raymond Ltd., Jalgaon is headed by Sr.Manager – Engineering, who is reporting directly to Works Director, to carry out energy audit and find out potential areas where energy can be saved.

(iv) Energy Conservation Achievement of 2006-2007:

1) Power saving at Air-conditioning plants by installation of 3 no. of auto sensor doors to eliminate chilled air leakages from production departments and by optimum utilization of A.C. plants.

Saving – 8.84 Lakh Rs , Investment- 4.5 Lakh Rs



2) Power saving by removing 3 no. of Air Curtain units after installation of auto sensor sliding door.

Saving – Rs. 0.76 lakh, Investment – Nil.

3) Power saving by replacing conventional Indication lamp with Led type Lamps.

Saving – Rs. 0.12 lakh, Investment – Rs. 0.05 lakh.



4) Power saving by replacing 40 w double fitting with energy efficient Asian make 28 w single fitting with reflector & electronic ballast.

Saving – 7.63 Lakh Rs , Investment -- 2.75 Lakh Rs

5) Power saving by replacing 6 no. of inefficient window A.C.s with energy efficient ones.

Saving – 0.36 Lakh Rs, Investment – 1.08 Lakh Rs.

(v) ENERGY CONSERVATION PLAN AND TARGETS

Srl	Energy Conservation Measures (Planned)	Anticipated Energy Savings per annum		Approx. Investment (Rs. Lacs)
		Lacs kwh	Rs. Lacs	
1	To Install Solar Water Heater Systems for Mill Guest House and Staff Colony	0.08	0.30	2.50
2	To carry out Rainwater Harvesting by collecting roof water from various factory buildings and recharging of Dry bores in Mill premises thus reducing load on water pumps	0.00	1.00	1.50
3	To Install Variable Frequency Drives on Blowers and Pumps (11 Nos.) of Air Conditioning Plants	2.00	7.00	8.00
4	To replace 5 HP to 120 HP motors having efficiency less than 75% with energy efficient motors having efficiency of 93 %	1.14	4.00	5.00
5	To replace high power consumption window ACs with new energy efficient Acs	0.17	0.60	2.00
6	To install Luwa make vacuum cleaning system in Spinning and Weaving departments in order to reduce compressed air requirement	0.34	1.20	3.00
7	To replace M.S. Exhaust Fan with F.R.P. Fans at various locations	0.17	0.60	0.70
8	To replace "Fenner" make special energy saving belts on TFO Spinning machines	0.17	0.60	0.40
9	To replace V-Belt drive on TFO Spinning machines by Invertors and Flat belt combination drives	1.14	4.00	5.00
Total		5.21	19.30	28.10

(VI) ENVIRONMENT AND SAFETY

We have identified major accident hazards and taken adequate step for Prevention and Control and provided to the persons working on the site; information, training, and equipment including antidotes. We have information safety data sheets. We are encouraging personal to use protective equipment like earplugs, safety goggles, safety shoes etc.

Steps taken for environment up gradation (in 2004– 2007)

- We have installed various types of guards on production machines, water tanks, and open tanks. All ladders have pipe railings.
- We were treating industrial and domestic effluent by primary, secondary and tertiary treatment. Primary treatment includes lime, ferrous sulfate and flocculants dosing. In secondary treatment, activated sludge process is used as a biological treatment. In tertiary treatment, dual media sand filter and Activated carbon filters are used for S.S., Co lour etc. removal.
- In the process, we have eliminated dyes and chemicals which were not Eco-friendly
- We have installed Exhaust Ducting with Exhaust Fan on Mach-coner and Steaming Machine for healthy environment.
- In Raymond Staff Colony we have implemented “Effective Microorganism Technology” for the treatment of Septic Tank and Soak Pit thereby the bad odour is reduced and the treated effluent is re-cycled / reused for gardening.

- **“We Firmly Believe in Co-Existence of Man, Machine and Environment”**
“Clean Raymond – Green Raymond”

Energy Conservation Measure Compendium

ID to be filled by BEE	<p style="text-align: center;">Title of the measure</p> <p>Installation of 3 no. of auto sensor doors to eliminate chilled air leakages from production departments and optimum utilization of A.C. plants.</p>	Sector Textile
Year to be filled by BEE		Technology Innovative
<p style="text-align: center;">Description of the energy conservation measure:</p> <p>It was observed that heavy cold air leakages are there from wall openings inside production departments. Also hot and humid air from adjacent department gets mixed in air-conditioned department in spite of installation of air curtain units. Due to this load of A.C. plant increases, causing more running of compressors and high power consumption. To overcome this problem installed 3 no. Of auto sensor doors in both spinning departments, at 5700 R/F, 5700 Preparatory & Elgi steaming m/c. wall openings. Due to this cold air leakages reduced to great extend also air mixing problem got solved and could achieve faster and better conditions of temperature and humidity inside production departments.</p> <p>Also awareness is created among A.C. plant operators to unload or switch off A.C. plant compressors, blowers & spray pumps as and when not required due to atmospheric conditions.</p>		
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification	
Agency that executed the project (with complete address and email):M/S. Texnocrate, Mumbai		
Total investment, Rs.:4.5 Lakh	Year of implementation:2006-2007	

First year energy cost savings, Rs. 8.84 Lakh					
First year other savings, Rs. Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	3242.79	---	---	---	---
Energy consumption after	3028.18	---	---	---	---
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.12	---	---	---	---
Company complete address: Raymond Ltd, E-1, M.I.D.C. Area , Jalgaon-3				We authorize Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. G.B.Pandit Sr. Mgr. Engineering				Signature	
				Date 17/10/2007	

Energy Conservation Measure Compendium

ID to be filled by BEE	Removing 3 no. of Air Curtain units after installation of auto sensor sliding doors.	Sector Textile
Year to be filled by BEE		Technology Innovative
Description of the energy conservation measure: It was observed that heavy cold air leakages are there from wall openings inside production departments. Also hot and humid air from adjacent Department gets mixed in air-conditioned department in spite of installation of air curtain units. Due to this load of A.C. plant increase, causing more running of compressors and high power consumption. To overcome this problem installed 3 no. Of auto sensor doors in spinning and weaving department. Due to this cold air leakages reduced to great extend also air mixing problem got solved and could achieve faster and better conditions of temperature and humidity inside production departments. After installation of auto doors air curtain units were of no use at that locations, so removed 3 no. of air curtains		
Picture/ sketch/ drawing before modification (if available)		Picture/ sketch/ drawing after modification
Agency that executed the project (with complete address and email):In-house		
Total investment, Rs.:Nil		Year of implementation:2006-2007

First year energy cost savings, Rs: 0.76 Lakh					
First year other savings, Rs: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	18.61	---	---	---	---
Energy consumption after	Nil	---	---	---	---
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.12	---	---	---	---
Company complete address: Raymond Ltd, E-1, M.I.D.C. Area , Jalgaon-3				We authorize Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. G.B.Pandit Sr. Mgr. Engineering				Signature	
				Date 17/10/2007	

Energy Conservation Measure Compendium

ID to be filled by BEE	Title of the measure	Sector Textile
	Replacing conventional Indication lamp with Led type Lamps on electrical panels.
Year to be filled by BEE		Technology Innovative
	
Description of the energy conservation measure:		
It was observed that conventional indication lamp consumes 4 watt power while LED lamp power consumption is just 0.5 watts. These indication lamps are lighted for 24 hours and 357 days / annum. So decided to go for replacement of such 100 no. of conventional lamps with LED type lamps.		
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification	
Agency that executed the project (with complete address and email): In house		
Total investment, Rs:0.05 Lakh	Year of implementation:2006-2007	

First year energy cost savings, Rs: 0.12 Lakh					
First year other savings, Rs: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	3.427	---	---	---	---
Energy consumption after	0.428	---	---	---	---
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.12	---	---	---	---
Company complete address: Raymond Ltd, E-1, M.I.D.C. Area , Jalgaon-3				We authorize Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. G.B.Pandit Sr. Mgr. Engineering				Signature	
				Date 17/10/2007	

Energy Conservation Measure Compendium

ID to be filled by BEE	Title of the measure	Sector Textile
Year to be filled by BEE	Replacing 40 w double fitting with energy efficient Asian make 28 w single fitting with reflector & electronic ballast	Technology Innovative
<p>Description of the energy conservation measure: We took successful trail of replacing 40w double tube fitting with single 28 w fitting with reflector and electronic ballast. It was observed that we got improved illumination level with reduction in power consumption up to 1/3 rd.</p>		
Picture/ sketch/ drawing before modification (if available)		Picture/ sketch/ drawing after modification
Agency that executed the project (with complete address and email):Asian-make		
Total investment, Rs.:2.75 Lakh		Year of implementation:2006-2007

First year energy cost savings, Rs: 7.63 Lakh					
First year other savings, Rs: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	297.65	---	---	---	---
Energy consumption after	112.44	---	---	---	---
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.12	---	---	---	---
Company complete address: Raymond Ltd, E-1, M.I.D.C. Area , Jalgaon-3 Contact person who could be contacted for more information: Mr. G.B.Pandit Sr. Mgr. Engineering				We authorize Bureau to use this information for dissemination Signature Date 17/10/2007	

Energy Conservation Measure Compendium

ID to be filled by BEE	Title of the measure	Sector Textile
Year to be filled by BEE	Replacing 6 no. of inefficient window A.C.s with energy efficient ones	Technology Innovative
Description of the energy conservation measure: There were 6 no. of window A.C.s which were inefficient consuming 12 to13 Amps power and 10 to 12 years old. So decided to replace this A.C.s with energy efficient ones which consumes 8 to 9 Amps.		
Picture/ sketch/ drawing before modification (if available)		Picture/ sketch/ drawing after modification
Agency that executed the project (with complete address and email):In house		
Total investment, Rs.:1.08 Lakh		Year of implementation: 2006-2007

First year energy cost savings, Rs: 0.36 Lakh					
First year other savings, Rs: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	28.576	---	---	---	---
Energy consumption after	19.686	---	---	---	---
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.12	---	---	---	---
Company complete address: Raymond Ltd, E-1, M.I.D.C. Area , Jalgaon-3 Contact person who could be contacted for more information: Mr. G.B.Pandit Sr. Mgr. Engineering				We authorize Bureau to use this information for dissemination Signature Date 17/10/2007	