First Prize ***General Category***

REYNOLDS PENS INDIA PRIVATE LIMITED

Sriperumbudur Taluk, Distt. Kancheepuram (Tamil Nadu)

Unit Profile

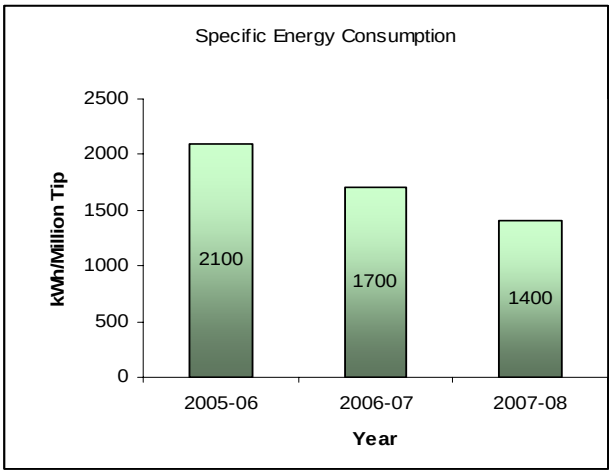
The history of Reynolds dates back to 1927 when it was established by Edmond Regnault. In 1945, the Company shifted base to Valence in southern France and took over the Reynolds brand from Milton Reynolds with the name, manufacturing and selling rights. The Regnault family then sold the unit in 1993 to a group of investors who christened themselves as Reynolds in 1995 under the same management.
Reynolds France belonged to the Marine Wendel Group who were the majority shareholders in Reynolds France before being acquired by the Newell Rubbermaid Group in late 1999.
In India, Reynolds Pens India Private Limited has been promoted as a wholly owned subsidiary of Reynolds France, which is part of the office equipments division of Newell Rubbermaid Group of the US. The factory has been commissioned at Sipcot Industrial Park at Irungattukottai near Chennai for the manufacture of high technology metallic tips. They are used in the manufacture of ball pens to ensure smooth writing pleasure throughout its life. Commercial production began in Mar-2000. Investments upto USD 10 million has envisaged in the Indian factory. The staff strength of 250 persons handles the production of tips in the state of the art factory.

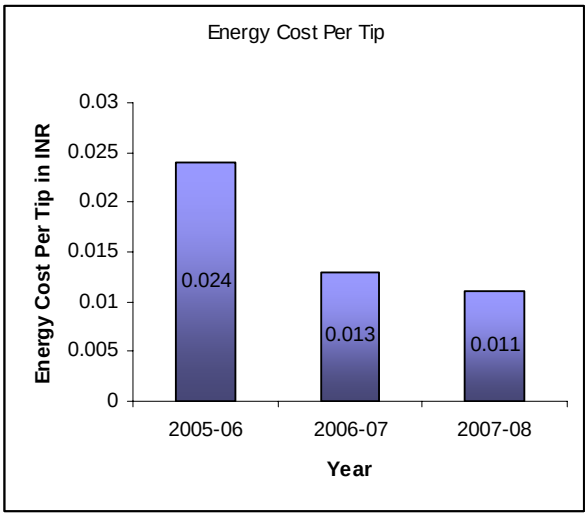
Energy Consumption

By the Energy conservative Initiates taken for the last three years an eminent decline in power consumption has been visualized throughout the organizational activities.

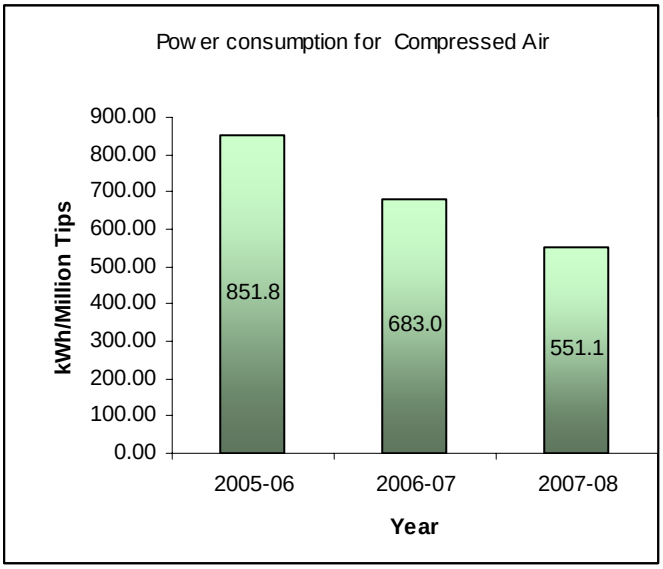
Description	Units	2005-06	2006-07	2007-08
Annual Production(Metallic Ball Point Tips)	Numbers in Million	455.4	984.8	1,297.5
Total Energy Consumption per annum	Lakhs kWh	14.28	28.31	30.46
Specific Energy Consumption - Electrical	kWh/Million	2100	1700	1400
Energy Cost per tip	Percentage	0.024	0.013	0.011

Year	Volume	Energy Cost per tip	% Reduction over 2005-06
2005-06	455.4	.024	0
2006-07	984.8	.013	45.83
2007-08	1297.5	.011	54.17

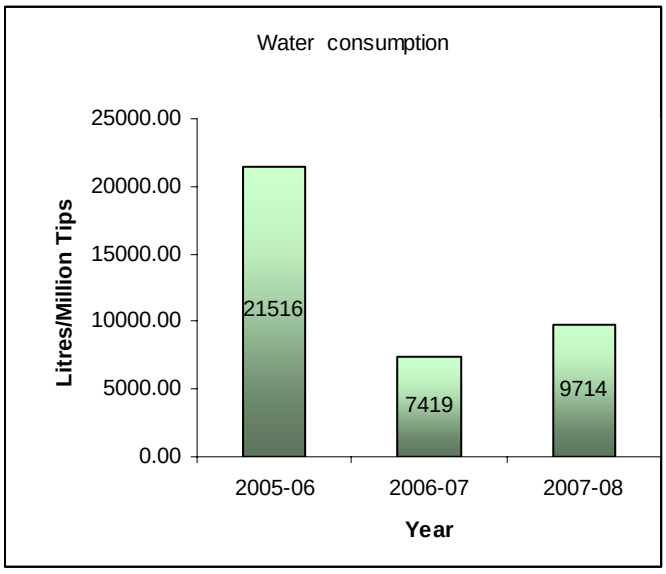




Year	Volume in million	Power consumption for Compressed Air	% Reduction over 2005-06
2005-06	455.4	851.78	-
2006-07	984.8	683.21	19.8
2007-08	1297.5	551.2	35.30



Year	Volume in million	Water Consumption per Million	% Reduction over 2005-06
2005-06	455.4	21516	-
2006-07	984.8	7419	65.82
2007-08	1297.5	9714	54.85



Organizational Setup

Reynolds Maintenance	INTEGRATED MANAGEMENT SYSTEM POLICY		
	Organization Chart	DOC NO.	: IDM/5.1
		Issue No	:1
		Rev No	:1
		DATE	: 28.08.07

Plant Manager

- Review and Approval of Projects

ENERGY CONSERVATION TEAM

- Identify and Quantify Energy Losses
- Data Collection
- Brain Storming
- Investment and Pay Back Period Analysis
- Project Allocation and Monitoring

Engineer – Energy Conservation

- Planning of Energy Saving Projects
- Project allocation and Execution
- Review of Progress
- Monitoring Day to Day Consumption

Junior Engineer

- Work Allocation
- Supervisory support
- Collection of Consumption details

SENIOR TECHNICIAN Machines		TECHNICIANS Utilities
Execution of Projects		Execution of Projects

Environment and Safety

Plant Converted to Orange Category from Red Category due to processes change certificate received from TNPCB
Fresh consent applied for AIR AND WATER for the altered processes activity and is in effect from 28/03/2008
Newell Rubbermaid Corporate Environmental and Sustainability
Policies and Principles are followed. The Key performance indicators are monitored and corrective actions taken regularly.
The plant is currently preparing itself for a Integrated Management System comprising of ISO 9001, 14001 and 18001.

Safety

1) Shop floor temperature was more, due to insufficient blower outlet air. Blower converted to exhaust system.

2) Oil mist in the shop floor is collected through Oil Mist collector.

3) The shop floor temperature is reduced considerably.

4) Reduced number of exhaust fans.

5) Inter lock system provided for Both DG SET Diesel tank, to avoid Diesel overflow while Diesel filling.

6) All tip making machine door safety sensors not available provided. Now all machine circuit modified and provide door safety relay.

7) In Ultrasound machines more TCE Evaporation on the exhaust line. Chilled water line is connected to the machine to avoid evaporation. TCE is condensed and collected to the main tank. TCE. Consumption of TCE also less (TRI CHLORO ETYLINE)

8) 500 KVA DG SET AVR gets burnt due to over current. Electrical relay less reliable. Digital relay provided if over current taken, immediately tripped the DG set.

SEAL – Safety Excellence and Leadership – The corporate OHSAS requirements are met through Safety committee.

Second Prize *General Category*

KIRLOSKAR PNEUMATICS CO. LIMITED

Hadpsar, Pune (Maharashtra)

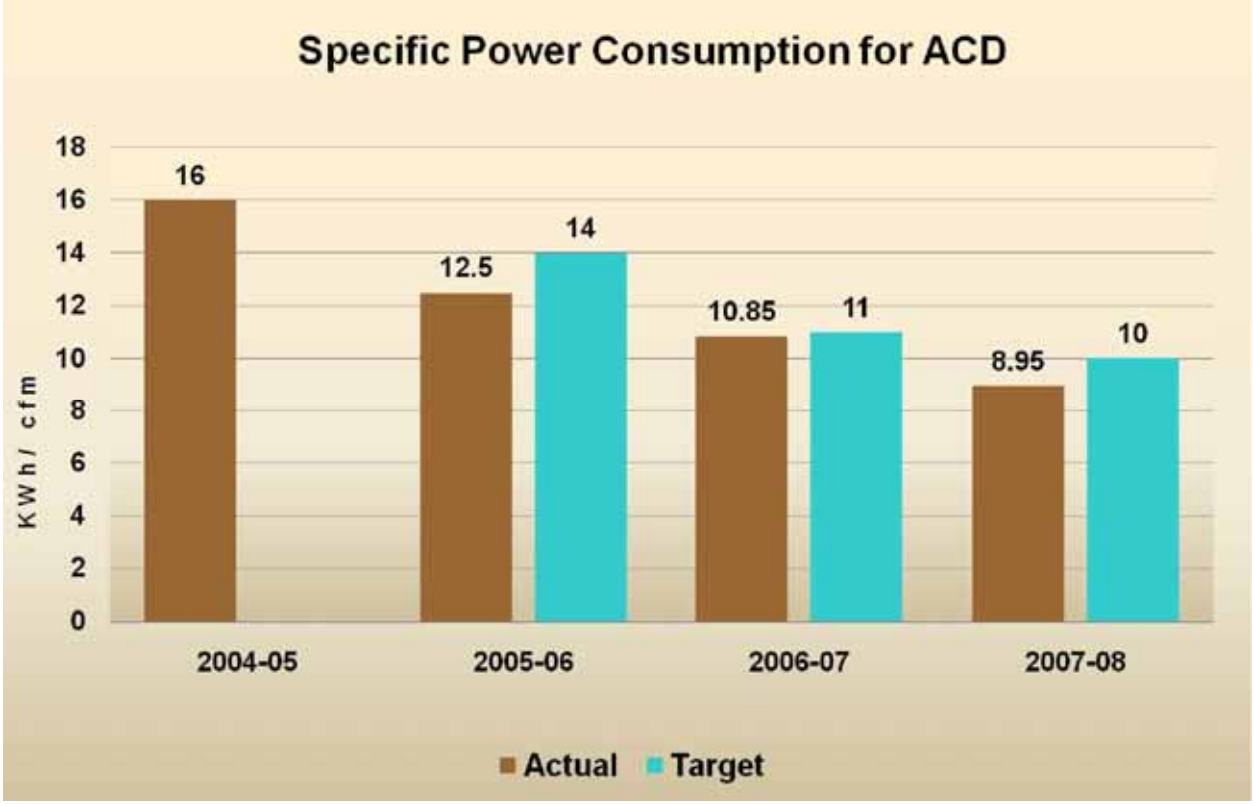
Unit Profile

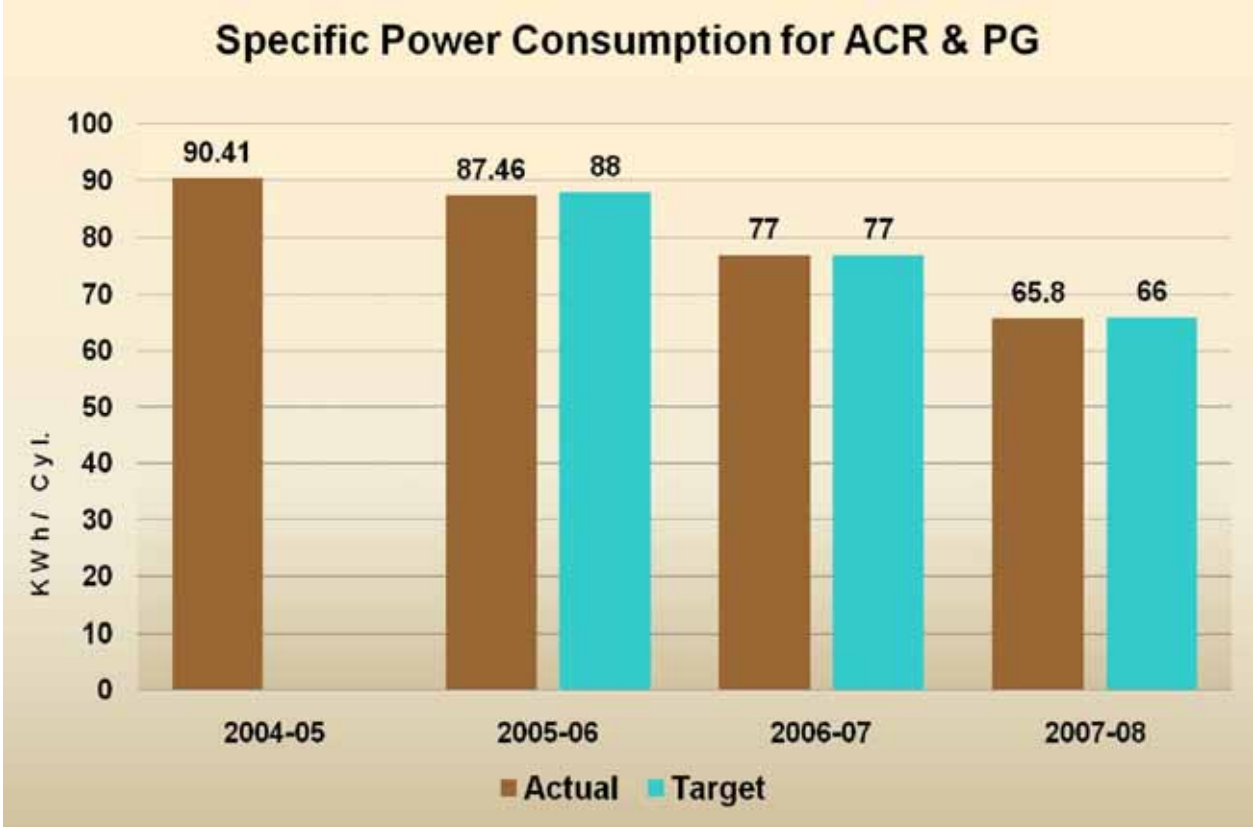
KPCL was one of the first companies in India to adopt ISO:9001 system, way back in 1994. The plant received CE Certification for their Air-conditioning & refrigeration compressors and equipments in 2007. With this strong foundation, the plant was able to effortlessly adopt the CII – Exim Bank Business Excellence Model. To meet the expectation of the Society, the plant was embraced the Environment Management Systems as per ISO 14001 and are under process of getting certified.

Divisions

- AIR COMPRESSOR DIVISION (ACD) { Including Foundry }
- TRANSMISSION (TRM)
- AIR CONDITIONING REFRIGERATION & PROCESS GAS DIVISION (ACR & PG)

Energy Savings





Management Support to E C

Senior Management actively participates in Energy Efficiency projects by providing budgetary support, motivating the employees for Ingenious initiatives through reorganization & reward. Energy Policy is framed, updated and displayed In the organization. There is a separate Annual Plan for Energy Conservation activities of each SBU. There is a core energy conservation team comprising of 4 Energy Auditors and 3 Energy Managers, which drives encon activities.

Energy Conservation Achievements

1. **Wireless Remote Control system for Maximum Demand Control -** Wireless Remote System for MD Controller for switching OFF non critical loads during Peak Demand in power house is installed. It gives warning siren in 18 minute and cuts of non critical loads automatically in 28 minutes if not attended.
   Annual Savings achieved in 2007-*08* - Rs. 16.71 Lakhs

2. **Energy Efficient Stress Reliving Furnace-** Energy Efficient Electrical Furnace used to operate only during Zone 'A'(Discounted Tariff)Full load consumption 500 Kw/ heat & part load 220 Kw/ heat. Fully automatic (Un-Manned). Part load operation possible
   Annual Savings achieved in 2007-*08*- Rs 14.9 lakhs

3. ***Optimum Utilization of Heat Treatment Furnace***

Annual Savings achieved in 2007-*08*- *Rs. 2.07 lakhs*

4. **Saving Energy by reducing set up & adjustment time loss in Face milling** Reducing the set up & adjustment time loss in the Face milling operation of Intermediate bearing bottom housing & Cap, for KC-Compressor
Annual Savings achieved in 2007-*08*- Rs.1.24 lakhs

New Energy Saving Devices & Equipments

- T-5 Lighting For shops (Centrifugal Test Bed).
- Evaporative Cooling in place of Central Air Conditioning in Screw Assembly.
- Heat Retardant coating & Insulation of Furnace in Heat Treatment shop.
- Welding Machine Energy Savers.
- Energy Efficient Blowers.
- CFL Street Lights.
- Micro Processor Based Panel for Balancing Machine.
- Occupancy sensor in Compressor Rooms and Toilets.
- Usage of Electric tools replacing Pneumatic tools
- Servo Stabilizers For Lighting Control.
- Energy Efficient pumps in pump house.
- VFD for Test Bed.

Use of Renewable Energy Source & Energy Saving

- Solar steam Cooking system for canteen.
- Solar street Light for Company premises
- Transparent Roof Sheet for Day lighting.
- Powerless Wind Ventilators in shops.
- Rain water harvesting in Company Premises
- Fan-less Cooling Towers
- Biogas from Canteen Waste

Energy Management Initiatives

1. Compressed air leakage test is carried out quarterly.
2. Illumination survey is carried out yearly &corrective action taken.
3. Buffer receivers are installed to control Artificial demand of compressed air.
4. Auto drain traps installed in all buffer receivers to remove moisture.
5. Monthly surprise checkup of shops are done during Lunch break and shift change to trace the idle running of machines, machine lamps and air circulators, and awareness about the cost of idle running is created among operators.
6. Monthly up date of Cell wise power consumption displayed in cells.
7. Information about NO LOAD (idle) operating power consumption is displayed on Major power consuming machines.
8. Quarterly water tap leakage survey carried out to control water wastages.
9. Metering & recording consumption of each division and relating with the out put/ production.
10. New Cellular layout - Machines re-organized making it easy to measure the consumption of each cell.
11. 75 numbers of Digital energy meters are installed to monitor energy consumption.
12. Load Manager 'Quiser' (L & T make) installed at power house.
13. Monthly Load study and consumption patterns are monitored reports are generated, analyzed and appropriate actions taken.

Energy Conservation In New Equipment / Plant / Expansion Projects

Clear directive from management on following:

- To procure products having Low Life Cost (LLC Concept)
- Using Energy Efficient equipments for all new installations and replacements.
- Procurement of Energy Star labeled Products.
- Follow guidelines of Energy Conservation Building Code for all new building / major renovations (Green Building Concept).

Green Building Measures followed in New building

Sr	Type of Material	Location for Application	Advantages of Green Interior
1	One Way Reflective Glass,Clear & Tinted Float	Windows, Partitions	Solar Protection, Anti-glare, Fire Proof
2	False Ceiling Tiles & Sheets	False ceiling in conference and local areas	Thermal insualtion, sound insulation, use of recycled material.
3	Flooring Tiles and Dado Tiles	Flooring in office area, dado in toilet area.	Use of recycled material, thermal insulation and antiskied.
4	Carpet Tiles	Carpet in conference and audio-visual rooms.	Sound absorption, sound insulation, use of recycled material and non-hazardous.
5	Electrical Fittings (Pl tubes and antiglare mirror optic fittings,and switches)	False ceiling concealed and wall mounted fittings.Switches in office area	30 % energy saving, use of recycled material.
6	Air Conditioning/HVAC System		Low temperature refrigeration,indoor air quality system,duct cleaning facility, energy saving.