

20) A brief write up (not more than 3-4 pages) about your unit as per the format given below along with a few photographs depicting specific equipment/locations where energy efficiency activities have been undertaken may please be attached (Please also submit the above matter in a CD with scanned photograph and mark the name of your unit with address). The write-up submitted in the past schemes should not be repeated and also should not be more than 4 pages. The industrial units not adhering to this may lose certain weight age in the evaluation.

Unit Profile

Asian Paints: An Introduction

Asian Paints is India's largest and the third largest paint company in Asia today, with a turnover of Rs 44.01 billion. The existence of Company is in 20 countries & has 28 manufacturing facilities which cater consumers of 65 countries all across globe.

Asian Paints aims to become one of the top five Decorative coatings companies world-wide by leveraging its expertise in the higher growth emerging markets. Simultaneously, the company intends to build long term value in the Industrial coatings business through alliances with established global partners

Asian paints have five strategically placed manufacturing facilities across various locations in India which suffice the high level of Customers demand.

Asian Paints is a dynamic organization which always remains in sync with global issues & matters which can be seen by their commitment towards Environment, Safety & Energy Conservation.

Commitment towards Environment

All the Manufacturing plants have achieved 'zero industrial discharge' capability. This has been achieved by the installation of upgraded effluent treatment facilities and installation of reverse osmosis plants in conjunction with appropriate recycling and reuses schemes. We have also adopted the principles of "green productivity".

Commitment towards Safety

Asian Paints steadfast commitment to safety is reinforced by the fact that four of Asian Paints plants were conferred with the 'Sword of Honor' by the British Safety Council for the second time in quick succession. The British Safety Council is the world's leading occupational health, safety and environmental organizations, working closely with the world's leading companies in developing safe systems for work.

Commitment towards Energy Conservation

Asian Paints always remain in thick of action in burning global issue. One major issue which has been identified is Energy Conservation & Resource minimization. The efforts are being rewarded profusely as three of its manufacturing facility has won various awards by Bureau of Energy Efficiency

Kasna Plant

Established in year 1990 Kasna plant is among the youngest & largest Manufacturing facility of Asian Paints in Northern Region. Spread in area of 79000 sq m in Greater Noida, Uttar Pradesh, the facility employs more than 800 people.

The Manufacturing capacity of Kasna plant has increased substantially from 50000 KL to 77000 KL in year 2007-08 with minimal increase of connected load (i.e from 5500 kW to 5800 kW). The plant has also seen a growth in production figures from 40369 KL in year 2004-05 to 61221 KL in year 2007-08.

To match with the challenges of the upcoming retail centers in India & to accommodate for the ever changing demands of the customer, Asian Paints Kasna has set up its own Distribution centre having substantial storage space to prevent any hiccups in the entire supply chain. The distribution centre involves the usage of the most contemporary technology in the warehousing system, namely Automatic Storage and retrieval system, Bar-coding & warehousing management system.

Kasna Plant has always shown high level of commitment towards the continual improvement through the manufacturing excellence program to help Quality, Environment, and Safety & Energy Conservation. The testimony of the same can be seen by the various awards & accolades Kasna plant has achieved throughout the years. A glimpse of the same is as followed:

- **BSC Sword Of Honor** : 2004 & 2005 (In the area of safety), The British Safety council is the world's leading occupational health, safety and environmental organizations, working closely with the world's leading companies in developing safe systems for work. The 'Sword of Honors', instituted by BSC, is recognized the world over as a pinnacle of achievement in safety management systems.
- **Golden Peacock National Quality Award**: This was awarded in the year 2003 on the account of various initiatives undertaken to Kasna Plant as well its other manufacturing facilities. This is one of the most coveted quality awards in the country.
- **Green-Tech Safety Award**: Conferred for Best Safety Processes & System in Industry to Kasna Plant in the year 2007
- **Green-Tech Environment Award**: Conferred for Best Environment Processes & System in Chemical Industry Sector to Kasna Plant in the year 2008
- **Energy Conservation**: Conducted by Bureau of Energy Efficiency for Best Practice & Focus on Energy Conservation Asian Paints Kasna, has won the 1st prize in Paints & Allied Section in year 2005-06.
- Awarded Certificate in Recognition of Excellence in Environment Management by the **Paryavaran Mitra Samman** at the hands of the Governor Sh Romesh Bhandari
- **ISO 1400: Certification for Environment Management Standards since Past six years**
- **ISO 9000: Consistent award in the field of Quality Management System**

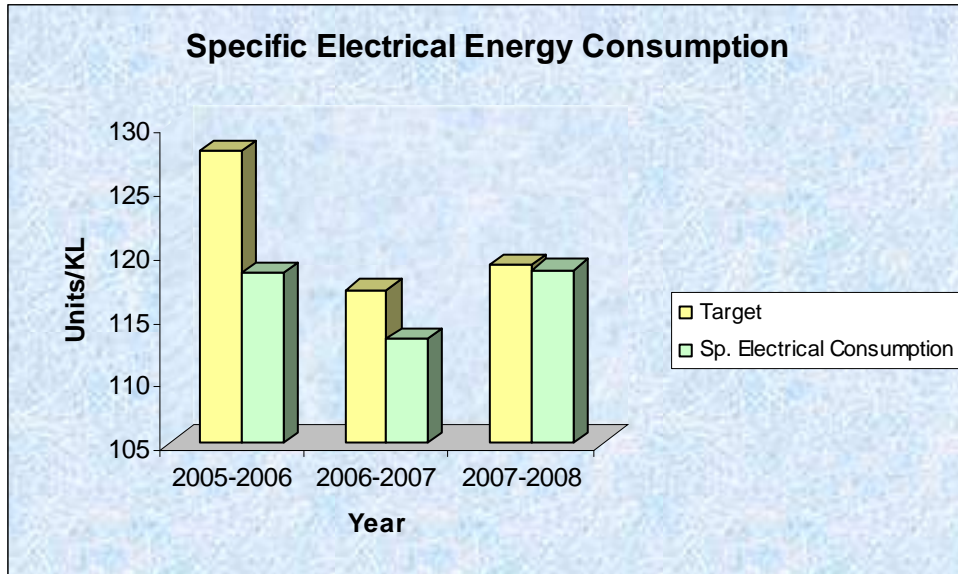
Energy Consumption

With Energy Conservation Act-2001 coming into picture it has become imperative for Industries to conserve Energy as Industries accounts for half of the total global energy consumption. And with continuously depleting Conventional Energy Source it is the need of an hour to optimize our Energy Consumption so as to elongate the supply of Energy Sources for future Human Civilization.

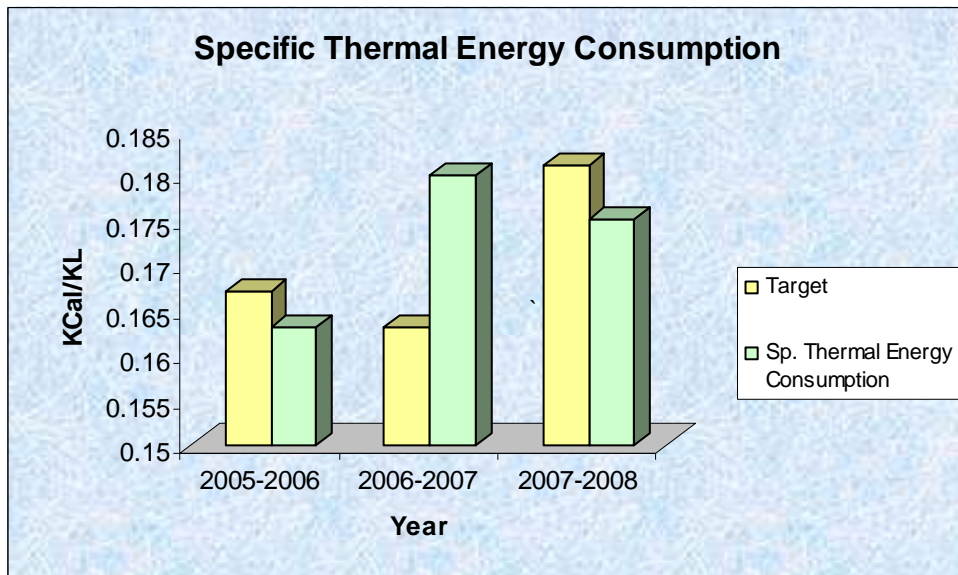
Kasna plant has always remained front runner in implementing best manufacturing practices across Industries & sustaining the existing initiative for resource minimization & Energy conservation. Energy Consumption by Industries across the globe accounts for half of the total world's energy consumption. To optimize the energy consumption requirements is the only way out to meet future growth demands of Human Civilization with the ever decreasing energy resources. Keeping this in mind, Kasna Plant has always remain the Torch Bearer for the Energy Conservation & resource minimization, which can be seen through rigorous efforts put in for Implementing new Ideas or sustenance of existing initiatives.

	2005-2006	2006-2007	2007-2008
Total Paint production (KL)	51929	58035	61221
Total Electrical energy consumption (Lakhs KWH)	61.52	65.65	72.6
Total Electrical energy consumption (Lakh Rupees)	335.44	344.82	364.63
Total Thermal energy consumption units (M Kcal)	8461.84	10400.23	10733.65
Total Thermal energy consumption units (Lakh Rupees)	139.04	201.5	250.5
Specific Electrical energy consumption (KWH/KL)	118.47	113.2	118.6
Specific Thermal energy consumption (KCal/KL)	0.163	0.18	0.175
% Reduction in Sp.Electrical energy consumption -	8.7	4.44	-4.8
% Reduction in Sp.Thermal energy consumption -	11.4	-10.42	2.8
Energy cost as % of mfg cost			

Specific Energy Consumption

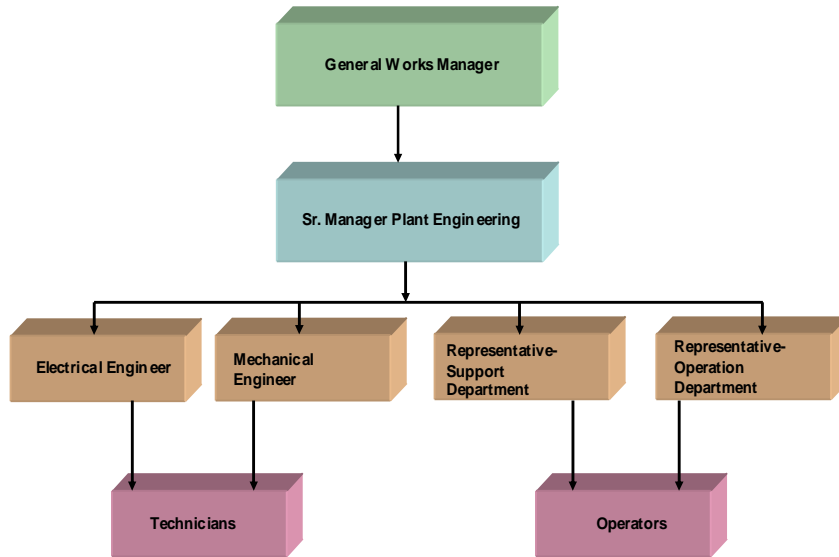


Specific Electrical Energy Consumption



Specific Thermal Energy Consumption

Energy Conservation Cell Structure



Hierarchy of Energy Conservation Cell

ENERGY CONSERVATION COMMITMENT, POLICY AND ORGANIZATIONAL SETUPEnergy Policy

We are committed to continuously improve energy efficiencies in all our manufacturing processes:

To achieve our goal we shall

- Treat energy as one of the very vital inputs to our manufacturing processes.
- Measure energy consumption, benchmark and monitor against entitlements.
- Review and update entitlements at least once in a year.
- Continuously explore and implement energy conservation technologies and Practices. This will include opportunities to use renewable energy.
- Enrich our experience and knowledge by actively participating in energy conservation forums to promote and exchange best practices.
- Promote awareness among all our employees and their families about the need for energy conservation.

Vikram Jaisinghani

G.M-Manufacturing

Dated 29th August 2005

Energy Conservation Achievements:

1. Auto Cut Off timers in Twin Shaft Dispersion machine:

Before Installation

Earlier the TSD machines were operated manually:

Total Motor capacity = 55 KW
Running cost = 2.01 lacs/ annum

After Installation

Installed Auto Cut off timers in TSD machines:

Total Motor capacity = 55 KW
Running cost = 1.2 lacs/ annum

Saving/annum = 0.81 lacs/annum
Total no of machines = 10
Total Saving/annum = 8.1 lacs/annum
Total Investment Incurred = 1.0 lacs



2.Heat Tracing in Medium Tank Yard

Before Installation

Earlier in winter season the viscosity of the material was Remain high due to which transferring of material took lot of time:

Total power consumption = 0.19 lacs KW/annum
Running cost = 0.79 lacs/ annum

After Installation

Heat tracing system has been installed in medium tank yard to avoid high viscosity of material in winter season:

Total Power consumption = 0.11 lacs KW/annum
Running cost = 0.47 lacs/ annum

Saving/annum = 0.31 lacs/annum
Total Investment Incurred = 4.0 lacs



3. Modification in Chilling plant of IPU

Before Installation

Earlier we were using Tank & coil system chiller with R12 refrigerant:

Total Motor capacity = 23.1 KW
Running cost = 2.5 lacs/ annum

After Installation

Old chiller is now converted into Shell & tube system with R134A refrigerant:

Total Motor capacity = 23.1 KW
Running cost = 1.4 lacs/ annum

Total saving/annum = 1.05 lacs/annum

Total Investment Incurred = 1.0 lacs



4. Replacement of Chilling Line

Before Installation

Earlier the chilling line was corroded & leaking from various points:

Total Power consumption = 4.9 lacs KW/annum
Running cost = 20.3 lacs/ annum

After Installation

Now, after replacing the corroded & leaking Chilling line with the new one:

Total Power consumption = 4.7 lacs KW/annum
Running cost = 19.4 lacs/ annum

Saving/annum = 0.91 lacs/annum

Total Investment Incurred = 4.6 lacs



5. Replacement of Low Capacity Pumps with Higher Capacity Pumps:

Before Installation

Earlier the capacity & flow rate of cooling tower pumps low:

Total Motor capacity = 45 KW
Running cost = 24.7 lacs/ annum

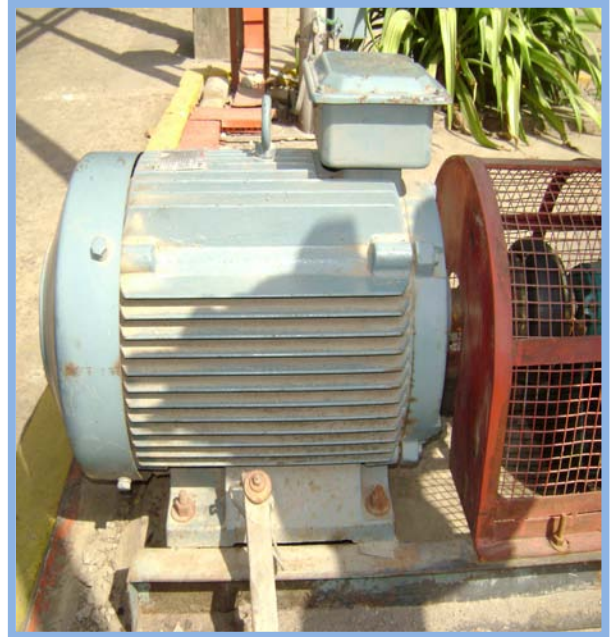
After Installation

Replaced all the low capacity pumps with the high capacity pumps:

Total Motor capacity = 37.5 KW
Running cost = 20.5 lacs/ annum

Total saving/annum = 4.2 lacs/annum

Total Investment Incurred = 1.6 lacs



6. Replacement of Low Energy Efficient Motors with High Energy Efficient Motor

Before Installation

Earlier we were using low energy efficient motors in DG cooling towers :

Total Motor capacity = 15 KW
Running cost = 4.94 lacs/ annum

After Installation

Now we have replaced the low efficient motors with high efficient motors:

Total Motor capacity = 13.5 KW
Running cost = 4.44 lacs/ annum

Total saving/annum = 0.494 lacs/annum

Total Investment Incurred = 2.1 lacs



7. Installation of Variable Frequency Drive in TSD machine

Before Installation

Earlier the TSD machine was running without VFD:

Total Motor capacity = 55 KW
Running cost = 7.04 lacs/ annum

After Installation

Installed Auto Cut off timers in TSD machines:

Total Motor capacity = 55 KW
Running cost = 6.14 lacs/ annum

Saving/annum = 0.89 lacs/annum

Total Investment Incurred = 1.0 lacs



8. Installation of Energy Efficient Lighting Transformer in MLDB

Before Installation

Earlier main lighting distribution board was operating without lighting transformer:

Total Power consumption = 6.9 lacs KW/annum
Running cost = 28.4 lacs/ annum

After Installation

Installed energy efficient lighting transformer in main lighting distribution board:

Total Power consumption = 5.84 lacs KW/annum
Running cost = 23.94 lacs/ annum

Saving/annum = 4.5 lacs/annum

Total Investment Incurred = 2.0 lacs



9.Modification in Air Compressed line of IPU

Before Installation

Earlier the air compressor line were having lots of bends due to which there was a high pressure drop at receiving end:

Total Power consumption = 0.13 lacs KW/annum
Running cost = 0.54 lacs/ annum

After Installation

Now, after removing the no of bends from air compressor line:

Total Power consumption = 0.11 lacs KW/annum
Running cost = 0.48 lacs/ annum

Saving/annum = 0.058 lacs/annum
Total Investment Incurred = 0.03 lacs



10.Surface area enhancement of cooling coil of Reactors

Before Installation

Earlier the surface area of cooling coil of reactors were small :

Total Motor capacity = 37.5 KW
Running cost = 6.8 lacs/ annum

After Installation

Now after enhancing the cooling coil area:

Total Motor capacity = 37.5 KW
Running cost = 3.43 lacs/ annum

Total saving/annum = 3.43 lacs/annum
Total Investment Incurred = 4.0 lacs



11. Replacement of Gear pump with Diaphragm Pump in IPU

Before Installation

Earlier we were using gear pump in Dynamill in IPU section:

Total Motor capacity = 2.2 KW
Running cost = 0.27 lacs/ annum



After Installation

Replaced the gear pump with diaphragm pump:

Total saving/annum = 0.27 lacs/annum
Total Investment Incurred = 0.5 lacs

