



PAHARPUR 3P
(A Division of Paharpur Cooling Towers Limited)
ORGANISATION PROFILE

Paharpur Group consists of the holding company Paharpur Cooling Towers Limited with its various divisions and subsidiaries. The holding company has been a market leader in process cooling equipment and is closely held with a turnover of over Rs. 8000 million. The group has factories located in and around Kolkota, Gujarat and Delhi and has sales offices throughout the country.

Paharpur-3P, in the business of manufacturing flexible packaging products for over a decade. With state-of-the-art infrastructure, equipment and testing facilities, it manufactures a wide range of products from multilayer coextruded films to laminates and pouches to meet varied requirements of its large group of customers which include Hindustan Lever, Cadburys, Tata Tea, Britannia, Pepsi, Henkel , Perfetti, Godrej, Dabur and ITC.

The quality management system of the organisation is certified as per Quality Management System Standard, ISO 9001: 2000

The food safety management system of the organisation is certified as per Food Safety Management System Standard, ISO 22000:2005.

Paharpur-3P has a large size manufacturing facility situated at Sahibabad and has capacity to produce 8000 MT(150 Million Sq. meters) of flexible laminates per annum. With an eye on the wide domestic and export markets, Paharpur-3P has planned to align its operations and capacity to meet the customers' demands and requirements in quality and delivery and affirm itself a leader in flexible packaging business.



Energy Policy



We believe in and are devoted to continuous improvement in energy management in each of our manufacturing processes, utilities and elsewhere.

The following is our mission to fulfill our vision :

- We believe that energy is among our most precious inputs to our outputs.
- We measure energy consumption by the minute, monitor it with benchmarks .
- We continuously explore, learn and implement energy conservation technologies, techniques and practices.
- We enrich and endeavor our knowledge by actively participating in various energy conservation forums to promote and exchange best practices.
- We promote and propagate awareness among all of our employees, the need conserve energy.
- We review and update annually our energy management system.

Date: 15.04.2007

**Sujit Shome
Director**

Energy Conservation Commitment and Set-up

Energy Conservation is identified as one of the plant goals towards continuous improvement. Every year, several activities are taken up to reduce the consumption of various forms of energy. Several awareness campaigns are carried out to nurture attitude towards Energy Conservation as a day-to-day work practice.

The plant has an Energy policy that is modeled with sustainable development as the basis for resource conservation.

The Energy Committee is the nodal agency for coordinating various Energy Management and Conservation activities. Members are drawn from various sections and all user groups are well represented. The committee evaluates the specific energy consumption trends and identifies tasks towards reduction in energy consumption. Reduction in manufacturing cycle times has been a key benefit due to the involvement of user groups in Energy Management.

STRUCTURE OF ENERGY COMMITTEE



DIRECTOR

HEAD OF MANUFACTURING

GENERAL MANAGER

A G M
UTILITY & SERVICES

DY. MANAGER/ EXECUTIVES
(MECH/ELECT)

OFFICER (MECH/ELECT)

MANAGER
MANUFACTURING

DY. MANAGER/ EXECUTIVES
(MANUFACTURING)

OFFICER MANUFACTURING

Energy Conservation Achievements

- Over the past few years, rapid strides have been made in improving manufacturing operations. Effective energy management drive has been a key component in the continuous improvement process. As part of this drive, several energy conservation initiatives have been implemented.
- Over the years the plant has made significant progress in terms of change in the fuel usages. Gas base generator has been installed for captive power generation to meet 100 % of the power requirement which led to major reduction in emission levels.
- Various other initiatives have been implemented to achieve reduction in specific energy consumption. Further energy conservation initiatives have been planned and actions required are frozen.

Specific Energy Consumption Details

Specific Energy consumption	Units	2004-2005	2005-2006	2006-2007
Annual Production	MT	3856	4687	5426
Total Energy Consumption/ annum	Kwh	5195302	6702716	7941361
Total Manufacturing Cost	Lakhs	6548	7244	8688
Total Energy Cost	Lakhs	402	439	316
Total energy cost as % of Manufacturing cost	%	6.14	6.06	3.64
Electrical (Kwh) per Ton of Production	Kwh/ Ton	1347	1430	1463

Write up on Major projects done in 2006-07 A.C drive for

A) Thermic Oil centrifugal Pump Old Printing machine

This is provided with Variable frequency drive, there by leading to power saving

Energy savings per annum : 131328 KWh

Savings in Rs. per annum : 4.13 Lakhs

Investment made : 1.5 Lakhs

Pay back : 3 months



B) A.C drive for Thermic Oil centrifugal Pump New Printing machine

This is provided with Variable frequency drive, there by leading to power saving

Energy savings per annum	:	109148 KWh
Savings in Rs. per annum	:	3.43 Lakhs
Investment made	:	1.0 Lakhs
Pay back	:	3 months



C) A.C drive for Thermic Oil Centrifugal pump Lamination machine

This is provided with Variable frequency drive, there by leading to power saving

Energy savings per annum : 33707KWh

Savings in Rs. per annum : 1.06 Lakhs

Investment made : 0.40 Lakhs

Pay back : 2&1/2 months



D) A.C drive for Printing and Lamination (old) Supply Blowers

This is provided with Variable frequency drive, there by leading to power saving

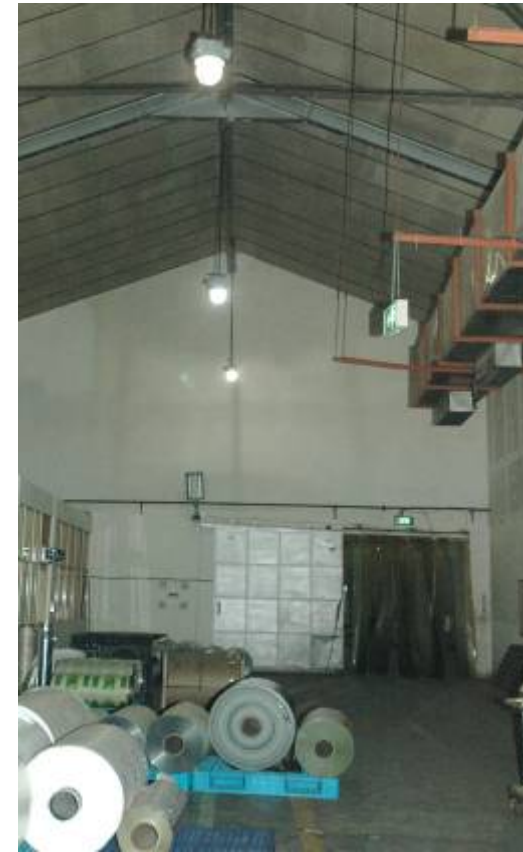
Energy savings per annum	:	259737 KWh
Savings in Rs. per annum	:	8.18 Lakhs
Investment made	:	7.5 Lakhs
Pay back	:	12 months



Replacement of HPMV & HPSV lamps with Energy efficient & CDM lamps in Production Hall, Boundary & street lighting

The plant was having mostly MPMV (Mercury vapor lamps) & HPSV (High pressure sodium vapor lamps) which used to consume lot of energy. Without compromising on the LUX levels they have been replaced with Metal halide lamps, Energy Efficient lights, dome lights at various blocks & street lights

Energy savings per annum	:	42221 KWh
Savings in Rs. per annum	:	1.33 Lakhs
Investment made	:	1.53 Lakhs
Pay back	:	14 months



Installation of Mechanical seals in Various pumps

The circulation pumps were having gland packing's in them & these glands are to be tightened for reducing the leakage during this process lot of friction is exerted onto the shaft of the pump leading to higher power consumption. These pumps (32) are fitted with Mechanical seals there by leading to both power saving & zero leakages

Energy savings per annum : 51480KWh

Savings in Rs. per annum : 1.93 Lakhs

Investment made : 0.80 Lakhs

Pay back : 3 months



Turbine ventilators in place of electrical exhaust fans in Engineering stores & Raw material store and Main Production Hall

In the Main Production hall of Printing /lamination/slitting and pouching & Engineering & R M stores roof top exhaust fans were used for air circulation. It was found that electrical exhaust fans were consuming lot of power and It was proposed to install turbine ventilator which doesn't require electrical energy for its operation but instead they run due to wind power .

Total Ventilator installed : 32 nos
Energy savings per annum: 504299 KWh
Savings in Rs. per annum : 1.5 Lakhs
Investment made : 2.2 Lakhs
Pay back : 16Months



Savings in energy due to change of pipe line & arresting of air leakages

It has been observed that there were lots of air leakages taking place in the entire plant resulting in higher power consumption. Through a systematic approach all the identified leakages have been plugged resulting in lower specific air consumption (power consumption) per KG of laminate produced.

Energy savings per annum: 185090 KWh

Savings in Rs. per annum : 6.94Lakhs

Investment made : 0.26 Lakhs

Pay back : 0.5 months



SWITCHING OVER FROM DIESEL GEN SET TO NATURAL GAS GEN SET

This Gen set offers high reliability, durability and fuel flexibility to burn fuels from the low energy landfill gas or bio-gas to pipeline natural gas to field gases. The flue gases coming out from the engine are having less CO and Other toxic gases to the atmosphere, resulting less pollution.

Saving in Rs. Per annum : 2.16 Crore

Investment made : 1.89 Crore

Payback: 1 Year

Eco friendly, High output,
low emissions



SWITCHING OVER FROM FURNACE OIL FIRED BOILER TO NATURAL GAS BOILER

Saving in Rs. Per annum : 40 Lakhs

Investment made : 7.0 Lakhs

Payback: 6 Months

Eco friendly – No pollution



Waste Heat Recovered From Gas Exhaust



Waste Heat Recovery System is provided with bypass facility on gas side by three way electrically operated diverter valve. This is in result of lesser flue gas temperature in environment and thus helping to Global Warming.

Saving in Rs. Per annum : 78 Lakhs

Investment made : 15 Lakhs

Payback: 6 Months

Eco friendly



Major Energy Conservation Projects Implemented



Sr. No	Description	Saving in Kwh/ Annum	Saving (Rs. In Lakhs)	Investment (Rs. In Lakhs)
1	Installation of VFD in Old Printing machine circulation thermic oil pump	131328	4.13	1.5
2	Installation of VFD in New Printing machine circulation thermic oil pump	109148	3.43	1.0
3	Installation of VFD in Printing & Lamination machines (Supply Blowers)	259737	8.18	7.5
4	Change of HPMV / HPSV / CDMH lamps , Asian E+ lights	42221	1.33	1.53
5	Installation of turbine Ventilators instead of electrical exhaust fans (32 nos)	504299	1.5	2.2
6	Changes of compressed air pipe lines and arresting of compressed air leakages	185090	6.94	0.26
7	Operation of 50 HP motor in place of 100 HP motors in Cooling towers, Generators and chilled water pumps	328320	10.34	.50
8	Installation of VFD in Lamination machine circulation thermic oil pump	33707	1.0	0.40
9	Installation of Mechanical seals in various pumps	51480	1.93	0.80
10	Installation of VFD in blown film plant-1 with new cooling blowers	49978	1.57	3.5
11	Upgradation of Pouch machines	256423	8.0	23
12	Change of single layer to 3 layer film in blown film plant-2	303893	9.5	54
	TOTAL	2255624	58	96

Energy Conservation Plans and Targets

Several initiatives have been identified to reduce the specific energy consumption. These initiatives will result into total annual estimated savings of Rs. 47 Lakhs against an investment of Rs. 50 Lakhs. A list these initiatives is given below:

Energy Conservation Plan and Targets



Sr. No	Description	Saving in Kwh/ Annum	Saving (Rs. In Lakhs)	Investment (Rs. In Lakhs)
1	Replacement of Old Shredding machine	105719	3.3	3.5
2	A C Drives in Printing & lamination Exhaust Blowers	167443	5.24	3
3	Hot Water Vapor Absorption machine with Gas gen Set water	657000	20.75	25
4	Mechanical Seal in 7 nos Pumps	91926	2.92	0.56
5	New Version Air Washers in Gas Gen Set Room	138332	4.35	3
6	Change of Electrical heating system with Thermic Oil heating System	48737	1.55	2
7	Change of Sodium vapor lamps in Utility Area	1698	0.535	0.88
8	Modification in the design of impeller to reduce the power from 50 HP to 25HP	121478	3.82	2
9	Replacement of DC drives with AC drives in Printing, Lamination and Titan Slitter	150589	4.7	9.5
	TOTAL	1482922	47	50

Socio-economic Environment

The study of socio economic component of environment incorporating various facet has been considered.

Paharpur- 3P strives to make a difference to the society, particularly around their manufacturing facilities. Started around 6 years ago in a structured manner, their Corporate Social Responsibility (CSR) activities have gained pace and slowly but surely has made a difference.

The study of these parameters helps in identifying, predicting and evaluating the likely impacts due to the proposed project activity in that region.

A) Rain Water Harvesting

Our site has a total land area of size 28 acres ,of which only about a third is built-up ,

To prevent the monsoon rain water going waste through storm drains, a Rain Water Harvesting system is in place whereunder rain water is collected and fed into the sub-soil so as to raise the ground water level.



b) Solvent less Lamination Machine: Solvent less lamination process does not require hot air as it is 100% solid adhesive and adhesive does not contain any solvent. This process applies in NIP roller with pressure only. This is energy efficient process as compared to conventional lamination and also reduces emissions of solvent vapors.

Load require to run with conventional is 1/3 and hence saving of 273337 Kwh per annum .



Management System Certifications :

Paharpur - 3P have following certifications

- 1) Quality Management System , **ISO 9001:2000**
- 2) Food Safety Management System , **ISO 22000:2005**

Awards for Excellence in Packaging :

1. **IndiaStar 2006 – 4 Awards**
2. **AsiaStar 2006 - 2 Awards**
3. **WorldStar 2007- 1 Award**

BUREAU VERITAS
Certification



Certification
Awarded to

PAHARPUR-3P

(A DIVISION OF PAHARPUR COOLING TOWERS LIMITED)

PLOT NO. 19, SITE IV, INDUSTRIAL AREA, SAHIBABAD - 201 010, UTTAR PRADESH, INDIA.

MANUFACTURING SITE: PLOT NO. 19, SITE IV, INDUSTRIAL AREA, SAHIBABAD - 201 010, UTTAR PRADESH, INDIA.

SITE 2: PAHARPUR HOUSE, 41-CUNNINGHAM ROAD CROSS, BANGALORE - 560 052, KARNATAKA, INDIA.

SITE 3: SA, 4th FLOOR, PARK VIEW COMPLEX, 85 G. N. CHETTY ROAD, T. NAGAR, CHENNAI - 600 017, TAMILNADU, INDIA.

SITE 4: PAHARPUR HOUSE, 81/10B, DIAMOND HARBOUR ROAD, KOLKATA - 700 027, WEST BENGAL, INDIA.

SITE 5: 722, MIDAS, SAHAR PLAZA, J. B. NAGAR, ANDHERI-KURLA ROAD, ANDHERI (E), MUMBAI - 400 059, MAHARASHTRA, INDIA.

SITE 6: PLOT NO. 19, SITE IV, INDUSTRIAL AREA, SAHIBABAD - 201 010, UTTAR PRADESH, INDIA.

Bureau Veritas Certification (India) Private Limited certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the standard detailed below.

STANDARD

ISO 9001:2000

SCOPE OF SUPPLY

SCOPE FOR MANUFACTURING SITE:
MANUFACTURING & SUPPLY OF FLEXIBLE PACKAGING.

SCOPE FOR SUPPORT SITES 2, 3, 4, 5 & 6:
MARKETING OF FLEXIBLE PACKAGING.

Original Approval Date: 21 July 2001

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until:

20 July 2010

To check this certificate validity please call: +91 22 6696 6300

Further clarifications regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by consulting the organisation.

Certificate Number: 218069

Date: 07 August 2007

R. K. SHARMA
Director

Bureau Veritas Certification
using the accreditation
certificate number 038



008

*Certification Authority / Managing Office Address: "Marwah Centre" 6th Floor, Krishnald Marwah Marg,
Opp. Ansa Industrial Estate, Off Saki Vihar Road, Andheri (East), Mumbai - 400 072, India.*

BUREAU VERITAS
Certification



Certification
Awarded to

PAHARPUR-3P

(A DIVISION OF PAHARPUR COOLING TOWERS LTD.)

PLOT NO. 19, SITE IV, INDUSTRIAL AREA,
SAHIBABAD - 201 010, UTTAR PRADESH, INDIA.

Bureau Veritas Certification (India) Private Limited certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the standard detailed below.

STANDARD

ISO 22000:2005

SCOPE OF SUPPLY

MANUFACTURE AND SUPPLY OF FLEXIBLE PACKAGING.

Original Approval Date: 18 July 2007

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until:

18 July 2010

To check this certificate validity please call: +91 22 6696 6300

Further clarifications regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by consulting the organisation.

Certificate Number: 212866

Date: 03 August 2007

R. K. SHARMA
Director

Bureau Veritas Certification
using the accreditation
certificate number 008



008

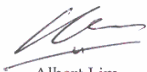
*Certification Authority / Managing Office Address: "Marwah Centre" 6th Floor, Krishnald Marwah Marg,
Opp. Ansa Industrial Estate, Off Saki Vihar Road, Andheri (East), Mumbai - 400 072, India.*

Award for Packaging Excellence

AsiaStar 2006

Awarded to: **Paharpur 3P**

For: *"Tata Tea Premium 1 Kg"*



Albert Lim
APF President



Rajiv Dhar
APF Secretary General



The Asian Packaging Federation

Australia, Bangladesh, China, India, Indonesia, Japan, Korea, Malaysia
Philippines, Russia, Singapore, Sri Lanka, Thailand, Vietnam

Award for Packaging Excellence

AsiaStar 2006

Awarded to: **Paharpur 3P**

For: *"Ashirwad Select Atta 5 kg"*



Albert Lim
APF President



Rajiv Dhar
APF Secretary General



The Asian Packaging Federation

Australia, Bangladesh, China, India, Indonesia, Japan, Korea, Malaysia
Philippines, Russia, Singapore, Sri Lanka, Thailand, Vietnam



*The Chairman, the Members
of the Governing Body
and the Director of the
Indian Institute of Packaging
are pleased to certify that*

Tata Tea premium - 1 kg New Format

entered by Paharpur 3P - Ghaziabad

*has been awarded the
INDIASTAR 2006
the highest recognition
for excellence in
Packaging in India for 2006*

AR Shetty
Chairman of the Jury

RDhas
Director, I.I.P.



*The Chairman, the Members
of the Governing Body
and the Director of the
Indian Institute of Packaging
are pleased to certify that*

Annapurna Atta Relaunch

entered by Paharpur 3P - Ghaziabad

*has been awarded the
INDIASTAR 2006
the highest recognition
for excellence in
Packaging in India for 2006*

AR Shetty
Chairman of the Jury

RDhas
Director, I.I.P.



*The Chairman, the Members
of the Governing Body
and the Director of the
Indian Institute of Packaging
are pleased to certify that*

India Gate - Basmati Rice

entered by Paharpur 3P - Ghaziabad

*has been awarded the
INDIASTAR 2006
the highest recognition
for excellence in
Packaging in India for 2006*

A.R. Shetty
Chairman of the Jury

P. Shas
Director, I.I.P.



*The Chairman, the Members
of the Governing Body
and the Director of the
Indian Institute of Packaging
are pleased to certify that*

Ashirwad select Atta - 5 kg

entered by Paharpur 3P - Ghaziabad

*has been awarded the
INDIASTAR 2006
the highest recognition
for excellence in
Packaging in India for 2006*

A.R. Shetty
Chairman of the Jury

P. Shas
Director, I.I.P.