

Energy Conservation achievements

During the period between 2007-2008, Hindustan Latex Ltd has implemented around 150 proposals through engineering initiatives, workmen's suggestion scheme, auditor's recommendations and TPM Methodology resulting into total **saving of Rs.118.3428 lakhs with an investment of Rs.229.21 lakhs**. This has resulted in a reduction of 9% in specific electrical consumption and 6.7% in specific thermal consumption.

ELECTRICAL

1) Installation of energy efficient Industrial UPS.



Before:- All major loads were fed directly from EB supply

Energy Consumption:-33.6 lakhs units



After:- Installed Industrial UPS

Energy Consumption:- 32.34 lakhs units

Savings:- Rs 5.35 lakhs

Other Savings:-Rs .15 lakhs

2) Maintaining better power factor at the sub station including the additional load and there by achieving annual incentive from KSEB



Before:-PF at MSB was below 0.9 before the installation of APFC panel.



After:- Installed capacitor panel at the substation and improved PF to 0.99

Received Rs.2.77 lakhs as power factor incentive from state Electricity Board.



Hindustan Latex Limited

Innovating for Healthy Generations

3. FRP cooling tower fan introduced in 4 nos of Cooling Towers - Savings in Power by 36.8 %



Before: Cooling Tower fan with metallic Blades
Electrical Consumption:-67200 KWh/Year



After :- Cooling Tower Fan with FRP Blades
Electrical Consumption:-38200 KWh/Year

Savings:- Rs:- 1.17 Lakhs

4. Replacement of electrically heated dehumidifier with steam heated in Moulding at Plant A



Before:- Dehumidifier was fitted with Electrical heater for Air drying
Electrical Consumption:-3.36 lakhs units



After:- Dehumidifier converted to steam heated Coils for Air Drying.

Electrical Consumption:-1.7 Lakhs units

Savings :- Rs.6.6 Lakhs

5. Replacement of electrically heated tumblers with steam heated tumblers in RRT moulding vulcanizing in plant B.



Before:-Electrically heated tumblers for vulcanizing for RRT machines
Energy Consumption:-2 lakhs unit



After:- Electrically Heated Tumblers replaced with Steam heated Type

Energy Consumption:- Nil

Thermal Consumption:-16.8 KL

Savings:- Rs:-4.68 lakhs

6.VFD and centralized monitoring and control through touch screen in all mail drives of moulding machines.



Before:- Moulding machine Chain Driven by motors

Energy Consumption:- 3.78 Lakhs units



After:- V.S motors replaced with VFD control Pannel

Energy Consumption:- 2.68 lakhs units

Savings:- Rs.4.1 Lakhs

7. Replaced 36 Number of 40W florescent tube by 18 W CFL in the primary plants A,B and C.



Before:- 36 Number of 20W florescent tube

Electrical Consumption:- 16934 year

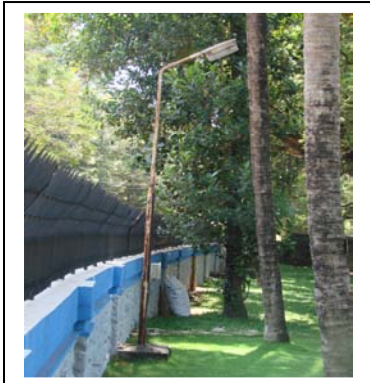


After:- 36 Number of 20W florescent tube replaced with 18 W CFL

Electrical Consumption:- 5443 units

Savings:- Rs.48262/-

8. Replaced 4 Number of 250W sodium vapour lamps by 4 sets of 144W CFL in the packing section, Electrical section and main gate.



Before:- 4 Number of 250W sodium vapour lamps

Electrical Consumption:-6022 units



After:- Replaced with sets of 144W CFL

Electrical Consumption:-3285 units

Savings:- Rs.11632/-

9. De-rating of 1 Number of 30 KW motor of the dust collector by 15KW motor in plant B.



Before:- 1 Number of 30 HP motor

Electrical Consumption:- 2.1 lakhs units



After:- Replaced with 15 HP motor

Electrical Consumption:-1.26 lakhs units

Savings:- Rs.3.57 lakhs

10. Replacement of silica gel drier with refrigerator type efficient air drier in compressors.



Before:- Silica gel drier for compressor

Electrical Consumption:-3.15 lakhs units



After:- refrigerator type efficient air
drier in compressors

Electrical Consumption:-2.991 lakhs units

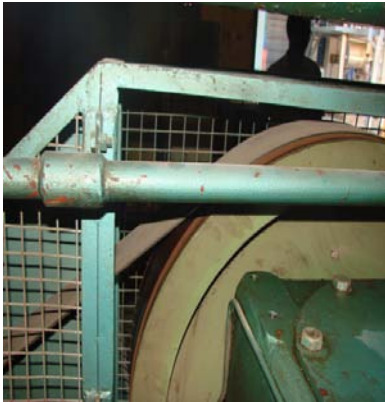
Savings:-Rs.0.67 lakhs

11. Conversion of V belt to Energy saving Flat belt.



Before:- V belt for motor drives

Electrical Consumption:- 4.2 lakhs units



After:- Converted V-belts to flat belts

Electrical Consumption:- 3.85 lakhs units

Savings:- Rs 1.5 Lakhs

12. Replacement of conventional 40W florescent tube by 28W T5 Tube.



Before:- Conventional 40W florescent tube

Electrical Consumption:-2226 units



After:-Replaced with 28W T5 Tubes

Electrical Consumption:-1176 units

Savings:- Rs.0.05 lakhs

13..Replacement of inefficient reciprocating chiller with energy efficient screw chiller(160TR).



Before:- Inefficient reciprocating chiller

Electrical Consumption:-11.52 lakhs units



After:- Energy efficient screw chiller(160TR).

Electrical Consumption:- 6.5 lakhs units

Savings:-Rs.21lakhs

14) Installation of Solid State relays in place of Air Break contactor for packing machine



Before:- Air Break contactor for the heaters of
Packing machine

Electricity Consumption:-12960 units



After:- Replaced Air Break contactor with
Solid State relays

Electricity Consumption:-259.2 units

Savings:-Rs.0.54 lakhs



THERMAL

15. Reduction in SFC to 2930Litres / Mpcs by installation of condensate recovery system



Before:- Thermodynamic trap without condensate recovery system

Specific Fuel Consumption:-3.147 KL/Mpcs



After:- Replaced TD trap with Ball float module, Flash vessel, Pressure Power Pump etc.



Specific Fuel Consumption:-2.930 KL/Mpcs

Savings:- Rs.31.86 lakhs

16. Install online monitoring system (Effimax 2000) in kessl pack Boiler provides all valid information-efficiency, temperature, steam flow, fuel temperature etc, Stack temperature etc on online through a PC. Every day effective updation , control and monitoring of Boiler.

Not Available

Before:- No online stack monitoring system

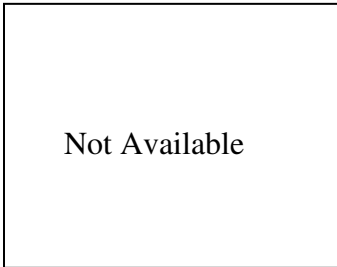
After:- Installed online stack monitoring system

Other Savings:-Rs.2 Lakhs

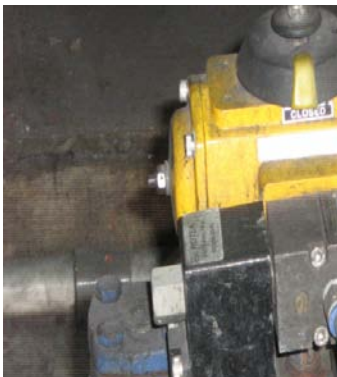




17. Installation of automatic blow down control system to avoid blow down loss-15.80KL/Annual



Before:- Blow down was done manually
Furnace oil Consumption:-2630.42 KL



After:- Online TDS monitoring and
automatic blowdown.
Furnace oil Consumption: 2614.629 KL

Savings:-Rs. 3.5 lakhs

18. Replacement of existing single pass heat Exchanger with multipass heat Exchanger in moulding machine.



Before:- Single pass heat Exchanger for
moulding machine.
Furnace oil Consumption:-38 KL



After:- Replaced with multipass Heat
exchanger.

Furnace oil consumption:-37.24 KL

Savings:-Rs.0.17 Lakhs



19. Installation of the PRV's at low temperature areas



Before:- Steam was directly given for the process without Pressure reduction

Furnace Oil Consumption:-17.5 KL



After:- Installed PRV s

Furnace oil Consumption:-13.3 KL

Savings:-Rs. 1 lakhs

20. Replacement of DG set with new energy efficient 500 KVA DG set.



Before:- Old low efficient Diesel Generator.

Diesel Consumption:-4.8 KL



After:- New efficient 500 KVA DG set

Diesel Consumption:-4.27 KL

Savings:- Rs. 20Lakhs

RENEWABLE ENERGY

21. Installed and commissioned 87 nos of Turbine Air Ventilators in Plant



Investment:- Rs.7 lakhs

Savings :-1.05 lakhs units

Savings :- Rs.4.9 lakhs

22. Installation of solar traffic signaling system with LED operator solar blinking system in the Company premises area near to road.



Investments:-Rs.0.26 lakhs

Savings:-0.028 lakhs units

Savings:- Rs.0.117 lakhs

23. Installed a Bio-gas plant by using Kitchen wastes.

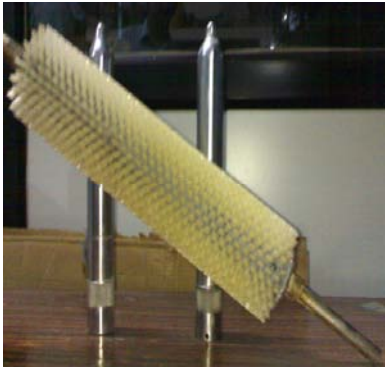


Investments:-Rs.3 lakhs

Savings:- Rs.1.5 lakhs

OTHERS

24. Designed and installed rubber roller unit instead of Nylon brush in ETD machines in order to improve rolling -



Before modification



After modification

Investment:-0.81 lakhs

Savings: - Rs. 6.05 lakhs