



RUCHI SOYA INDUSTRIES LIMITED. – ELLAPURAM, TAMIL NADU
(A Unit of Ruchi Group- Mumbai)

Ruchi Group Of Industries is a well-known industrial group based in Indore, MP with its various manufacturing units located in all over India. The group has its corporate headquarters in Indore, with offices in Mumbai, New Delhi, Calcutta, Chennai and other major business centers in the country. The Group's business interests vary in different commodities. It has manufacturing and trading facilities of Soyabean products, Agri-business, Oils and Fats, Flat Steel, Galvanized Steel & Cold Rolled Steel etc. The Group also has long exposure in trading of Oil, Pulses and other agriculture crops. The combined business turnover for the year closed on 31st March, 2006 stood at Rs. 11500 Crores. Net worth is around Rs. 1145 corers measure of public confidence in the Group is demonstrated by the presence of over 1,20,000 investors in its various companies.

This plant located at Out skrit of chennai ie in Trivallur district with total capacity of 900TPD of refining edible oils like soya bean, palm, sunflower,etc. The unit started practsing ISO 9001:2000 as well as ISO 22000 (Haccp) standards and having target of getting certification by this financial year.



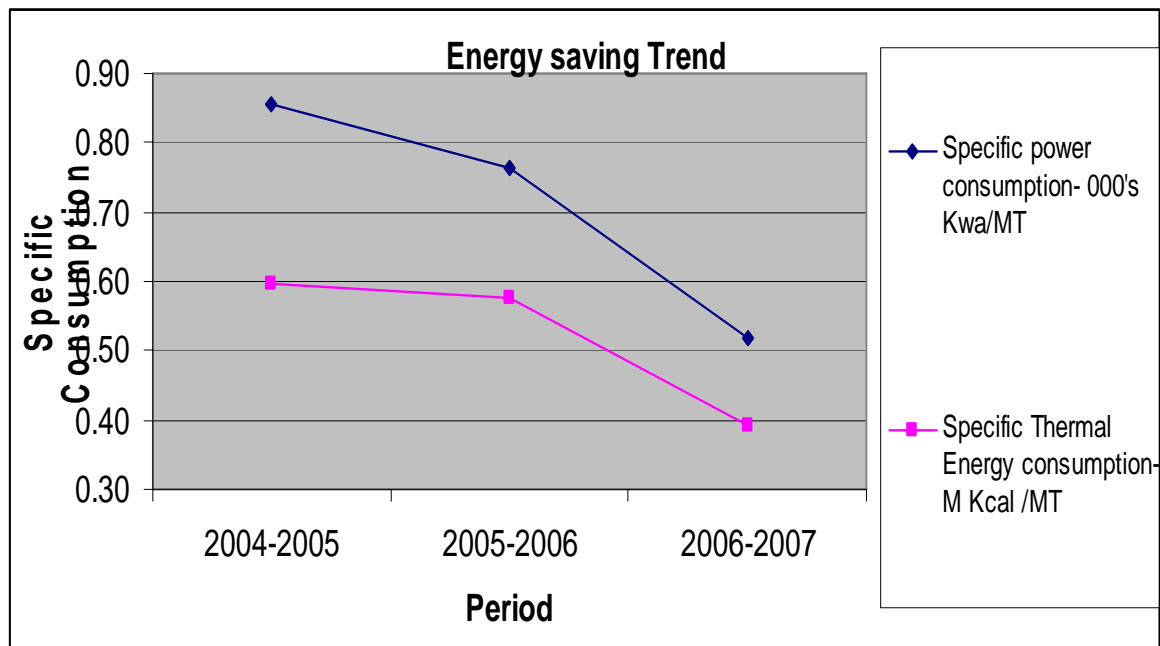
Energy Consumption

Oil is an competitive market and the pricing is very important. As the nature of the industry calls for cost reduction will be the key objective of the plant next to quality. More over the group has multiple plant all over India and therefore monthly performance comparison yields the best manufacturing practice. Last two years HO team also started working closely with individual plant in terms of manufacturing cost reduction thro' various energy conversation measures.

Description	Unit	2004-2005	2005-2006	2006-2007
Annual turn over	Rs: in Lakhs	27,972.65	28,866.32	48,191.48
Total manufacturing cost	Rs: in Lakhs	26,471.51	28,380.51	48,120.00
Electrical energy	Lk KWA / Year	77.11	92.40	66.39
Thermal energy	M K Cal / Year	53,649.03	69,697.42	50,152.41
Total energy Cost	Rs: in Lakhs	892.09	1,121.03	793.98
Energy Cost as % of manufacturing cost	Percentage	3.37	3.95	1.65
Specific power consumption	000'KWA / Tonne	0.86	0.76	0.52
Specific Thermal Energy consumption	M K cal / Tonne	0.60	0.58	0.39

Bench marking is done internally based on internal as well as external figures. Apart from monitoring HO team also gives timely input as well as supports in achieving the same. The following figures will depicts the out come of these efforts.

Note:-Out of all the efforts taken area where datas are captured are alone taken for this whole presentation. Remaining small on going projects are not included in this booklet.

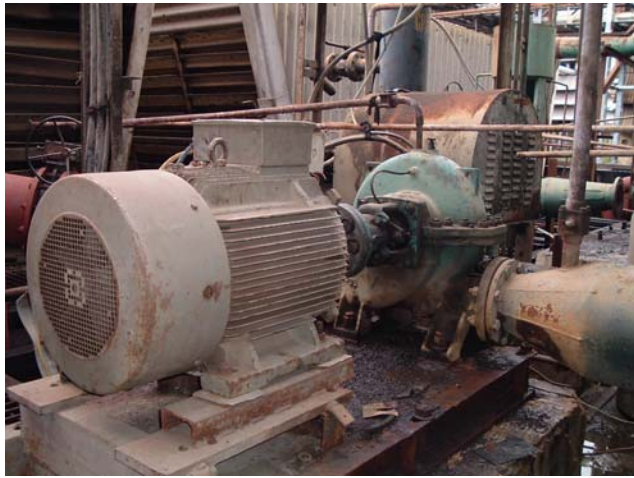


Energy Conservation Achievements in 2005-2007

Following table will describe the number of implementation with details of the outcome on energy conservation.

Year of Commissioning of the projects	Project description	Achievement of energy savings per year basis					Total savings in (Rs. Lakhs)	Investment incurred on the project (Rs. Lakhs)	
		Electricity	Fuels*			Total (fuel) in Mkcal)			
		(Lakhs (kWh)	Coal (tonnes)	Diesel (KL)	F.Oil (KL)				
2005-2006	One motor pump (100HP) in the Colling tower circuit was replaced by 60hp motor pump	1.05					4.83	1.75	
	As above another set was replaced from 100hp by 50 hp	1.60					4.83	1.40	
	Sub Total	2.65					9.66	3.15	
2006-2007	One motor pump each (60 hp & 25hp) in the Colling tower circuit was removed by introducing a balance tanks at high altitude their by the pumping back was avoided	2.49					11.45	4.75	
	30 Hp Motors in the crystalizers were replaced by 15 hp & 10 hp respectively- 3 sets	4.20					19.32	2.85	
	25Hp water pumps in the crystalizer repalced by 10HP pumps- 6sets	2.88					13.25	1.80	
	Compressor which was running with 125hp motor was replaced by 100 HP (motor taken out from colling tower)	0.77					3.54	0.20	
	Acid oil pump repalced from 20 hp to 15 hp	0.19					0.87	0.45	
	Speed reduction in Boiler ID fans are converted thro" VFD introduction instead of conventional reduction.	0.15					0.69	9.00	
	VFD introduced in oil feed pump as well as in votataor pumps	0.23					1.06	3.00	
	Old type drum filter (with 230 hp motors and pumps) replaced by new netszh filter (with 37.5 hp pupms & motors)which is 20% more productive also.	7.44	1000.00			5250.00	86.72	125.00	
	Aluminium Cooling tower fan blades are replaced by light weight FRP blades	1.08					4.97	2.40	
	Temperature controller introduced in the colling tower fan motor.	0.04					0.18	0.18	
	Appropriate pipe line connections were made to use the existing VAM system as a replacement of conventional refrigration system in vanaspathy plant	7.60	-100.00			-525.00	29.92	1.20	
	For thermic fluid boiler Burners as well as eletrifications were changed to use Furnce oil instead of Diesel				681.94	-463.43	2594.26	100.43	12.50
	By doing all the above variation the nett power demand has come down there by 500KVA was surrendered back to Electricity Board	500 on demand						15.00	
	Sub Total	27.07	900.00	681.94	-463.43	7319.26	287.41	163.33	
	Grant total of 3 years	29.72	900.00	681.94	-463.43	7319.26	297.07	166.48	

Few of the photographs are also shown below



13 sets of motors / pumps were replaced with lower rating motors.

Investment Rs: 5,30,000/=

Saving in first year itself
Rs: 36,98,000/=

One motor pump each (60 hp & 25hp) in the Cooling tower circuit was removed by introducing a balance tanks at high altitude their by the pumping back was avoided.

Investment Rs;4,75,000/=

Saving in first year itself
Rs:11,45,000/=



Introduction of VFD instead of belt / gear power transmission/ reduction at 8 places.

Investment Rs;12,00,000/=

Saving in first year Rs;1,75,000/=

Based on the load calculation, existing VAM was connected with the system which was originally catered / cooled by ordinary refrigeration system.

Investment Rs;2,40,000/=
Savings in first year
 Rs;4,97,000/=



Cooling tower fan blades made of Aluminum were replaced by light weight FRP

Investment : Rs:2,40,000/=

Saving in first year
 Rs:4,97,000/=

Energy Conservation Plan & Targets for the year 2007-2008

Following table brief the action plan for the current financial year. The list is only comprehensive

Energy Conservation Measures (Planned)	Anticipated savings in		Approx. investment (Rs.lakhs)
	<u>Energy Value</u> (specify units)	<u>Rs. Lakhs</u>	
APFC panel for power factor improvement.	0.72 lk KWH	3.34	1.50
15 motors at different places are planned to replace with lower rating	3.3 lk KWH	1.54	8.75
Cooling tower blade to be replaced with FRP- 6 sets	2.48 lk KWH	11.38	2.50
integration of cooling tower pump with pipe lines	3.20 lk KWH	0.40	0.30
Pipe line alteration for bleacher heating	0.24 lk KWH	1.10	0.30
sepaerate priming vessel for all cooling tower pumps	0.24 lk KWH	1.10	0.25
Thermic fluid boiler to run on husk / coal ie replacement for f.oil fired boiler	fuel replacement	99.00	125.00
Timer for street light	0.04 lk KWH	0.16	0.15
Condensate recovery from the plant	15750 M Kcal	81.00	20.50

and will get added on move.

Environment and safety

RSIL has committed for plant safety. The unit has the plan of Implementing and get certified on ISO 14001 & OSHAS , immediately after streamlining ISO 9001;2000 standards.

OSHAS

On Occupational health and safety the unit has its own team guided by external experts organised by HO. The experts makes periodical audit and also give suggestions for improvement..

Water Effluent:-

The unit has full fledged waste water treatment plant which is well approved by Pollution control board. Copies of certificates are enclosed.

Air:

All boiler chimneys are of appropriate height and as well approved by Pollution control board. Copies of certificates are enclosed.

Solid Waste;-

All solid waste are all appropriately disposed for reusing by the purchaser. Appropriate places also identified for storing and disposal there by avoiding unwanted hazards.