



Sona Koyo Steering Systems Ltd.

38/6, Delhi Jaipur Road, NH-8 P.Box No. 18 Gurgaon 122001, Haryana
Tel.No. 91-124 5104601 ~ 08 Fax No. 91-124 5104611,621

Company Profile :





Gurgaon Plant



Plant-1



Plant-2



Receipt Store



Power Steering Plant

Sona Koyo Steering Systems

Total Site Area		Production Commenced · 1988	56970 m²
Plant -1	R&P Steering Gear Steering Column		2933 m ²
Plant-2	RBS Steering Gear Axle and Prop Shaft, Diff. Assy		5363 m ²
Plant -3	R&P Power Steering		1265 m ²
Heat Treatment	Carburising, Quenching, Tempering, Straightening, Shot Blasting		446 m ²
Others	Utilities, Stores etc.,		1830 m ²
Manpower		485	
Certification		Deming Prize, QS 9000, ISO 14001, TS16949	



CUSTOMER SEGMENTS



Economy Cars



Premium Cars



MUV



Tractors



LCV

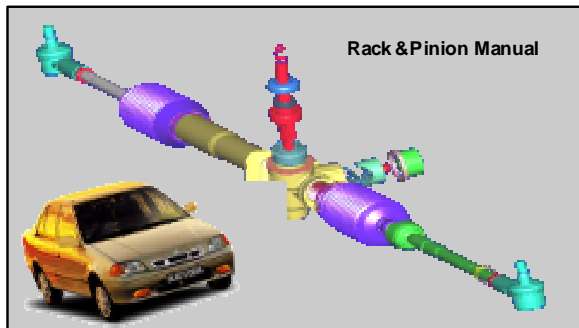
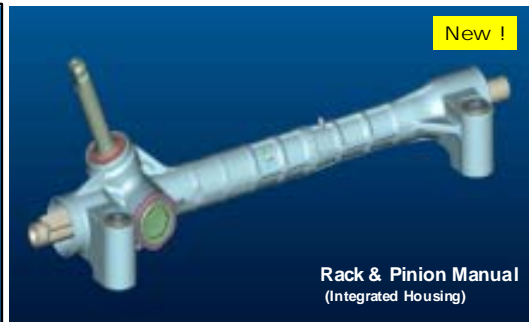
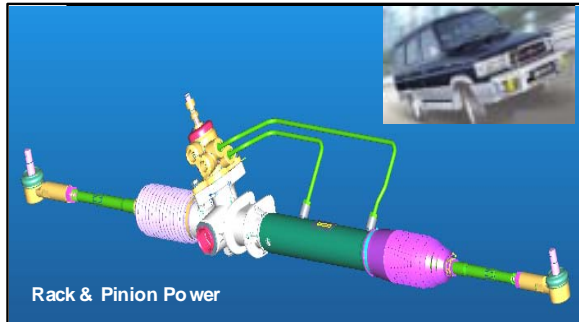


HCV

LCV – Light Commercial Vehicle

HCV – Heavy Commercial Vehicle

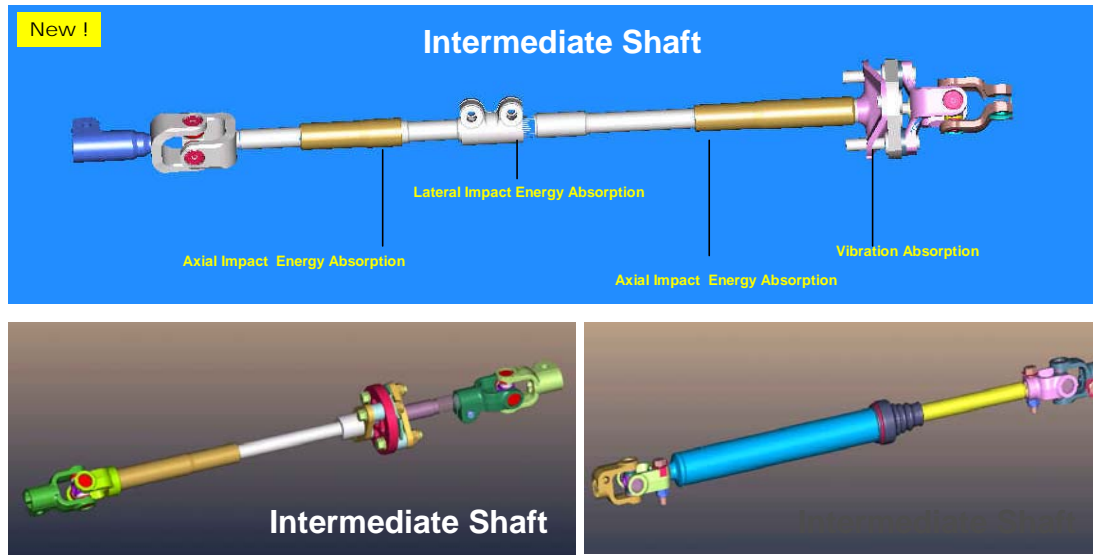
Our Products (Steerings)



Steering Columns



Intermediate Shafts



Case Differentials



Maruti - F8D & F10D



Maruti - Zen & Esteem



Maruti - Omni



Maruti - Versa

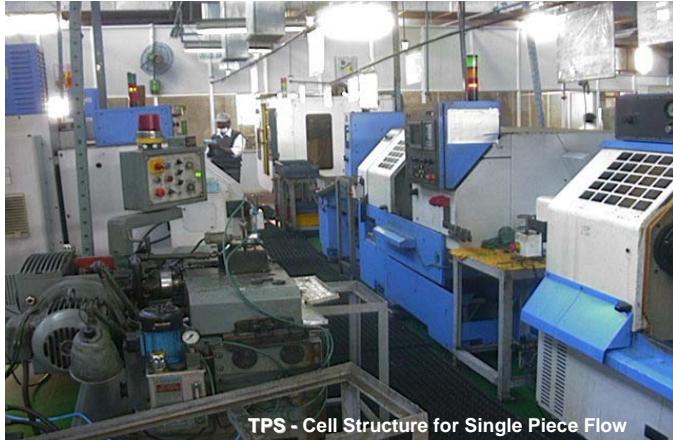


Tata- Indica



Transaxle Manufacturing of USA

Quality Management



- QS 9000
- TS 16949
- TPS
- TQM
- TPM
- ISO 14001

Our Guru's



Prof. Y. Tsuda

- Guidance from Prof. Y. Tsuda
- A Systems approach
- Emphasis on Facts and data
- Customer focus

Started 1998




S. Yamaguchi

- Guidance from S. Yamaguchi - JIPM
- Pursuing production Efficiency to its ultimate limits
- Zero accidents, Zero defects, Zero breakdown, Zero Losses

Started 2000

QUALITY POLICY

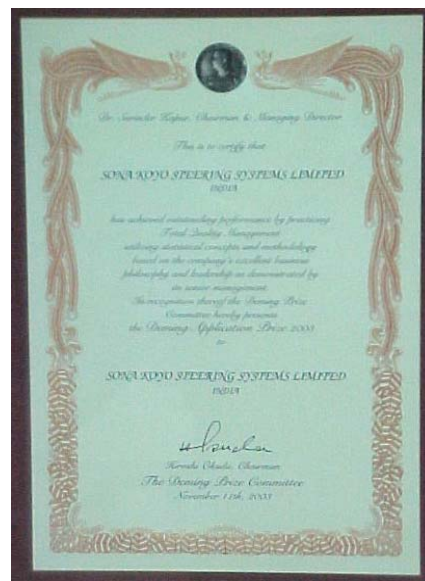
Commitment to defect prevention and continuous improvement while meeting or exceeding customer requirements at all times.



Sona

Dr Surinder Kapur
Chairman and Managing Director

DEMING AWARD – Nov 2003



Environmental Policy

Sona Koyo Steering Systems Ltd., engaged in the business of manufacturing Steering Systems and driveline products, is committed to demonstrate excellence in environmental performance on continual basis through:

- Elimination or minimization of environmental impacts of processes, activities and services.
- Meeting or exceeding the compliance with legal requirements.
- Conservation of resources like oil, water, electrical energy, packing material, and paper.
- Instilling awareness to the employees for maintaining a pollution free environment.
- Enhancement of environmental awareness to our group companies, business associates, suppliers and contractors.

Date: May 29, 2001
Place: New Delhi

Dr. Surinder Kapur
(Chairman & Managing Director)



Energy Conservation Philosophy

Sona Koyo Steering System Ltd engaged in the manufacturing of steering systems is committed to demonstrate excellence in conserving natural resources like high speed Diesel, light diesel oil, kerosene oil, propane gas and water by using multi disciplinary approach. Budget provision are made for energy conservation projects and plans are reviewed periodically

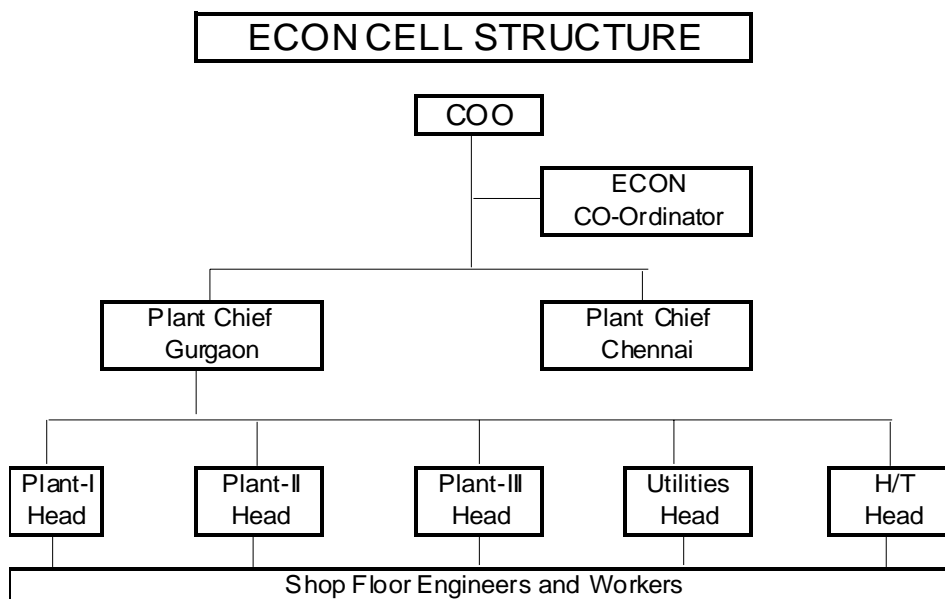
Energy conservation projects are planned based on following.

- Reduce growth of energy consumption
- Increase Productivity by technological process up gradation.
- Reduce energy Consumption without affecting output, comforts, quality and productivity.

Energy Management Policy

- Promote Energy saving and conservation of resources
- Use of non conventional resources like solar light, Bio gas, solar heating and wind energy.
- Comply with the legal requirements and energy legislation.
- Promote use of energy efficient alternates and use of alternate fuels.
- Encourage employees involvement for energy conservation through training and participation
- Create awareness among all employees for innovative ideas towards energy conservation.
- Reuse/ Recycling of process waste in environment friendly Manner
- Make efforts to reduce energy cost continuously by adopting effective “Energy management system.”.

Organisational Setup for Energy Conservation



Detail of Energy Audits

Ist Energy Audit :-

Audit was carried out in the year 1999 by Oncer Engineers.

IInd Energy Audit :-

Second Energy audit was carried out by CII Hydrabad.
Called as "Green Audit" on 4th Aug 04.

Case Studies

Methods Of Energy Conservation

- By reducing energy consumption
- By improving power generation efficiency.

A. Actions Taken To Reduce Energy Consumption

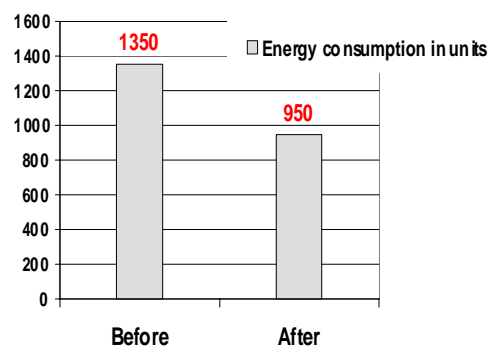
- Installed variable frequency drive on 125 Hp on air compressor.
- Installed variable frequency drive on SQF furnace for oil agitator.

1. 125 HP Variable Frequency drive installed on Air Compressor

125 HP Variable frequency drive data

Sr.No	Description	Before	After
1	Actual power drawn	83Kw	48 Kw
2	Actual Current drawn	120 A	80 A
3	Comp.Unloading time	28 %	0 %
4	Plant air Pressure	5.5 Kg Km ²	5.75 Kg/km ²
5	Average Daily energy consumption	1350 Units	950 Units
6	Working frequency	50 Hz	30Hz to 40Hz
7	Motor speed	Fixed	Variable

Daily Energy Consumption



Total Saving =7.7 Lacs

Investment =Rs. 6.5 Lacs

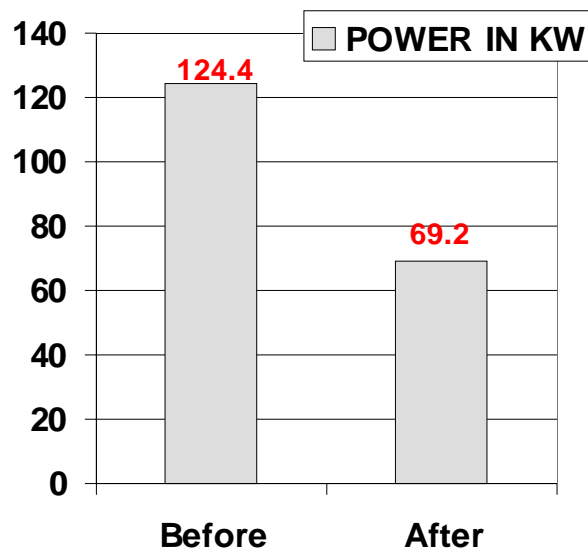
Pay back period = 10 Months

2. Heaters eliminated in Washing M/cs

Heaters stopped in washing M/cs by using Techniclean –SF (Castrol) additive, which works on

3. Energy Saving By Modification Of Delta Connections to Star Connections.

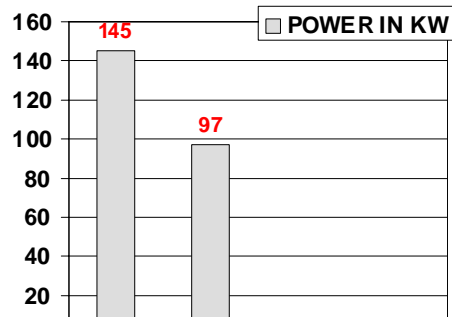
Change Delta Connection to Star Connections for motors which are working in under load (< 36%) conditions.



Total Nos of machines=22
Yearly Saving =Rs. 4.50 Lac

4. Installation of Energy Efficient tube lights

Sr. No	Description	Conventional tube lights	Energy efficient tube light
1	Energy	58 Wt	39 Wt
2	Starting	Delayed	instant.
3	Tube Life	5000 Hrs	15000 Hrs.
4	Light out put	2200 lumens	3200 Lumens.
5	Light quality	-	Better.



Total No of tube lights =2500

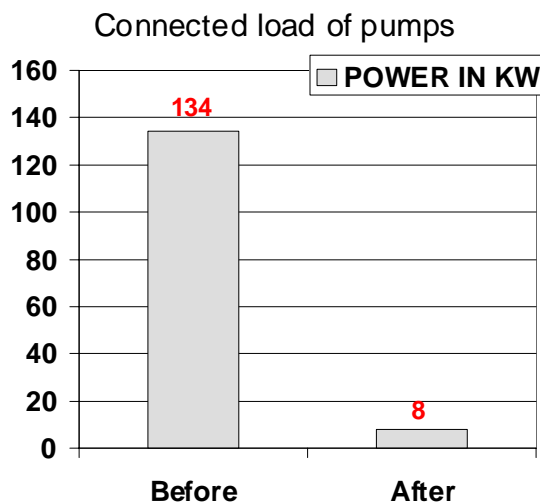
Cost Saving =Rs. 9.86 Lac

Investment = Rs.11.25 Lac

Pay back period= 13 Months.

5. Redesigning of forced draft ventilation system

Replaced Conventional spray system with celdec spray system



Energy Saving =Rs. 6 Lac

Investment = Rs.20 Lac

Pay back period = 3.3 Years.

6. Initiative taken for Energy Conservation in Heat Treatment

1. Variable speed drive systems introduced for oil agitation in SQF Ist & IInd

2. Inter lock provided in dust collector and chat

7. Electricity saving in Heat treatment

Root Cause A : Pre-Heating furnace was continuously ON during idle period

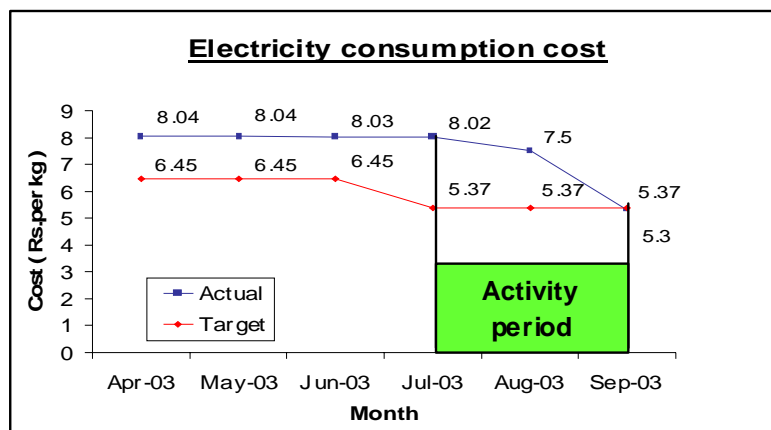
Countermeasure : Switch OFF furnaces In idle condition & restart 15 Minutes before next loading

Root cause B : Exhaust blower running throughout the process cycle

Countermeasure : Exhaust blowers interlocked electrically with Pre-Heating process cycle (as required)

Root Cause C : Quench agitator was running continuously during complete process cycle

Countermeasure : Switch ON agitator 10 minute before quenching & switch OFF after 60 minutes of quenching time

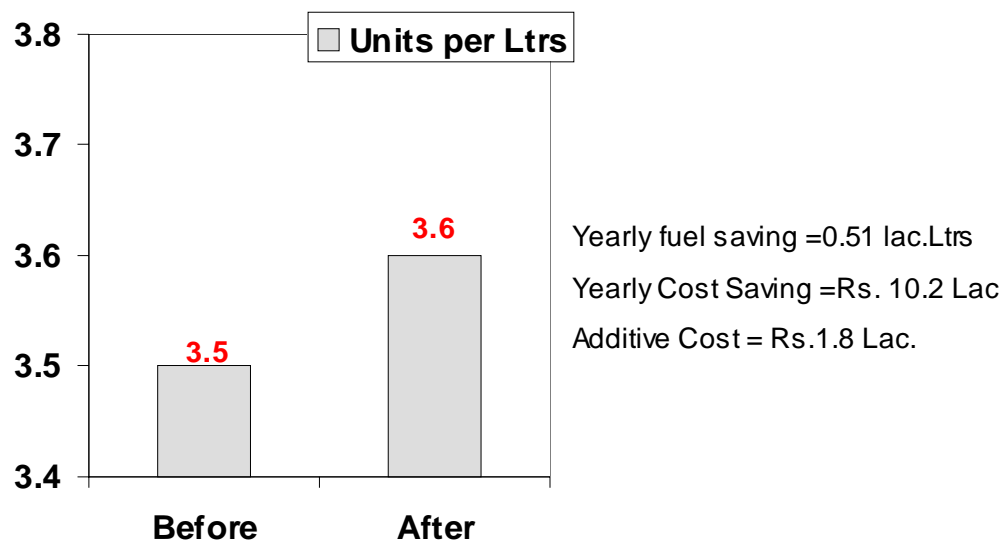


B. Actions Taken To Improve Power Generation Efficiency.

1. Installed double loop air intake cooling kit on 1000 KVA DG set.

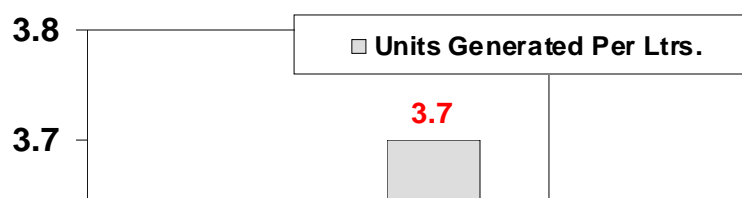
1. ADD FUEL ADDITIVE IN FUEL TO IMPROVE FUEL EFFICIENCY

Fuel additive is added to improve cetane number and lubricating properties of fuel. which results into better combustion and less wear and tear of engine.



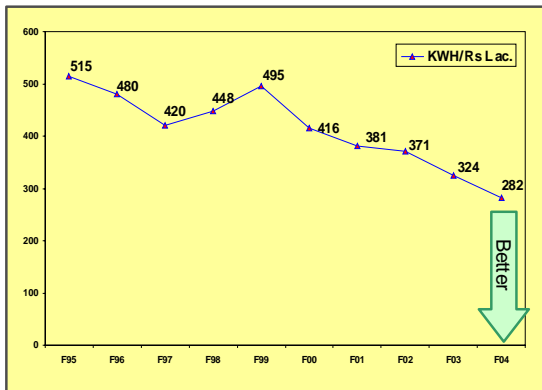
2. Installed Double Loop Air Cooling Kit On 1000 KVA DG Set.

Intake air is cooled by double loop cooling system which improves combustion efficiency

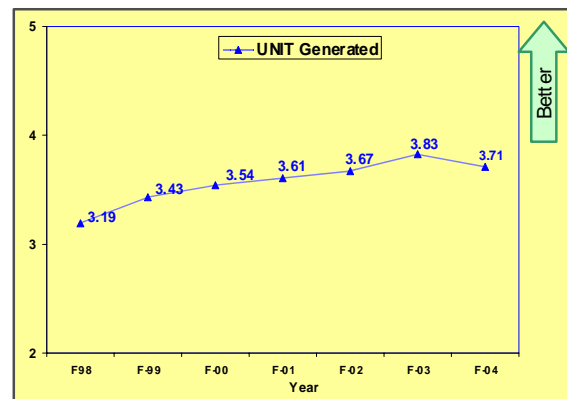


Energy Conservation Results

Energy Conservation Results

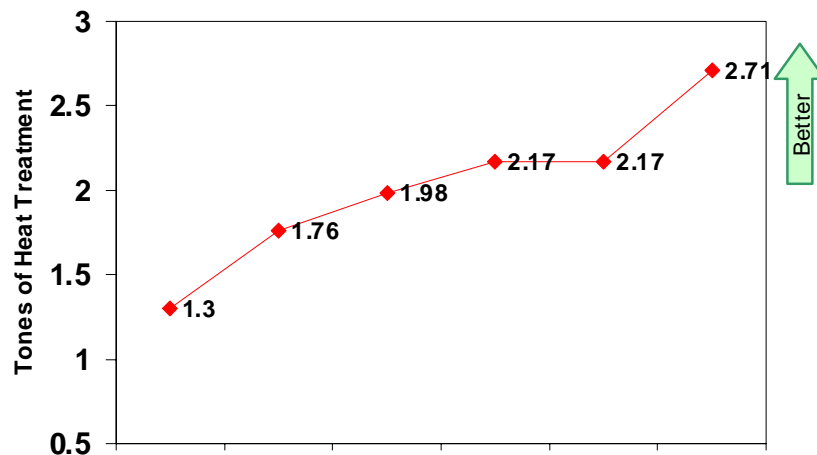


Power consumed per lac of net sales

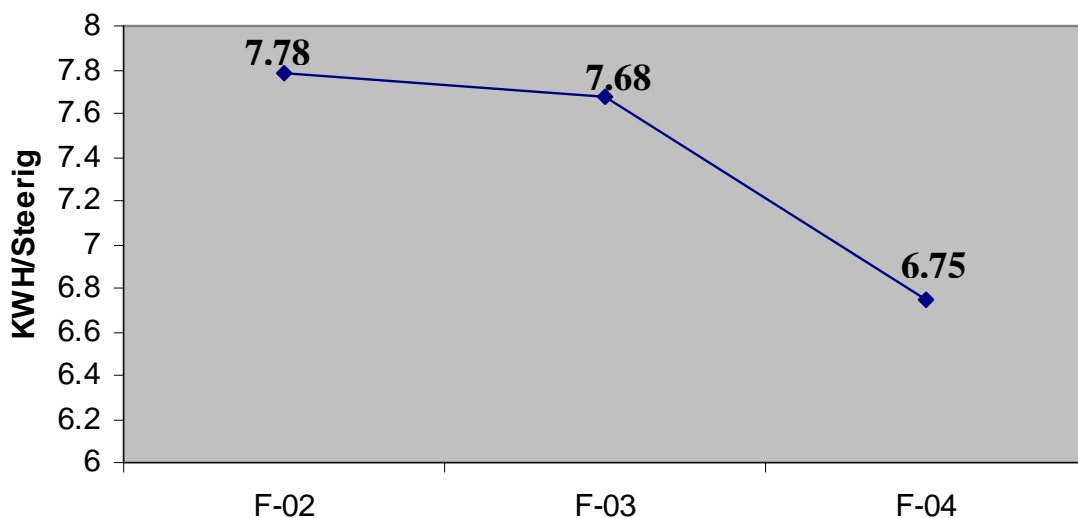


Units generated per liter of fuel

Tonage per Ton of LPG / Propane in H/T

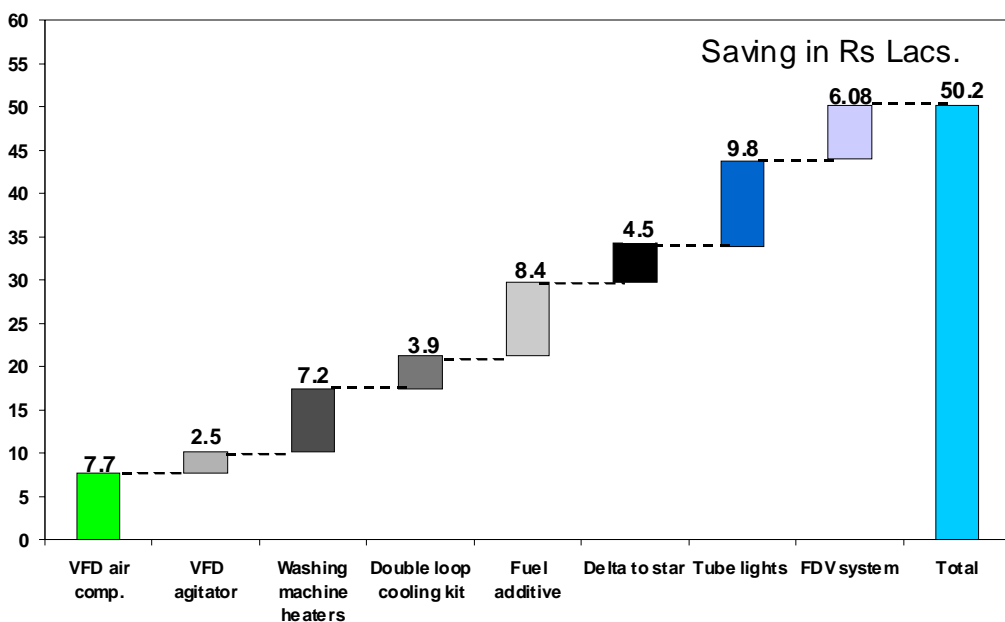


Energy consumed per Steering Equivalent



Overall Saving Achieved

(From Jan.2000 to Oct. 2003)



Future Energy Conservation Plan
Based on CII Hyderabad Green Audit
(Carried out on 4 Aug. 04)

LIST OF ENERGY SAVING PROPOSALS

Sr.No	Area of Improvement	Energy Saving Proposal	Responsibility	Annual Saving	Investment Required	Payback Period	Target Date
1	Paint Shop	Avoid hot air escape/cold air infiltration in paint curing oven		3.50	0.50	2	Completed.
2	DG Sets	Optimise DG set operating frequency at 49 Hz	N.Ahmad	4.48			10.01.05
3	Thermopac Paint shop	Improve combustion efficiency of identified radiant burners & in Thermopac of Paint booth	Mr.Sudhir Sharma	0.81	0.70	10	Completed.
4	Heat Treatment	Install Timer control for dust collection blower of shot blasting M/C	Mr.D.S.Sugwekar.	0.65	0.10	2	Completed.
5	Paint Shop	Install next lower size impeller for circulating pumps in paint booth	Sudhir Sharma	0.46	0.50	13	15.06.05
6	Utilities	Avoid compressed air leakages by rigorous maintenance	N.Ahmad	1.52	0.50	4	15.06.05
7	Utilities	Install transvector nozzle for all cleaning points	N.Ahmad	1.20	1.95	20	20.08.05
8	Utilities	Avoid cooling water flow through stand by DG sets and optimise operation of pumps	N.Ahmad	10.70	2.50	3	10.08.05
9	Utilities	Avoid operation of hot well pump at compressor cooling tower and reduce flow of cooling water	N.Ahmad	1.76	1.00	7	Completed
10	Pump House	Install correct size pump for plant I cooling water pumps	N.Ahmad	1.76	0.60	4	Completed.
11	Axle Cooling	Install correct size pump for Test room cooling water	N.Ahmad	1.06	0.40	5	Completed.
12	Lower Power Steering	Reset operating temp of package air conditioners in gear assembly area of plant 3		1.41			15.012.04
13		Replace faulty capacitor banks in DG house	N.Ahmad	1.50	0.50	4	Completed.
14	Administration	Avoid Day time lighting in identified areas	Vikas Gemini	0.66	0.20	4	30.0405
15	Utilities	Reduce voltage from 440 V to 420 V in DG 1	N.Ahmad	0.08			30.04.05
16	Utilities	Avoid excess lighting in identified areas	N.Ahmad	0.60			Completed.
17	FDV Room	Avoid day time lighting in FDV	N.Ahmad	0.63			Completed.
18	Utilities	Install T - 5 lamps	N.Ahmad	3.49	4.03	14	15.10.04
19	Utilities	Install energy saver for window A/C	N.Ahmad	0.56	0.75	16	15.03.05
20	Administration	Install electronic water taps	Vikas Gemini	2.77	4.00	17	Completed.
21	Paint Shop	DM water in phosphate section	Sudhir Sharma	0.10			10.06.05
22	Paint Shop	Segregate coolant waste	Sudhir Sharma	0.70			15.12.04

LIST OF ENERGY SAVING PROPOSALS

Sr.No	Area of Improvement	Energy Saving Proposal	Responsibility	Annual Saving	Investment Required	Payback Period	Target Date
23	Paint Shop	Install VFD for Thermic fluid circulation pump	Sudhir Sharma	0.36	0.40	13	15.11.04
24	Utilities	Install new correct size high efficiency fan for FDV in GMX line	N.Ahmad	0.75	1.00	16	15.11.04
25	Pump House	Avoid operation of return DM water pump by shifting DM water tank at ground	N.Ahmad	0.31	0.20	8	15.03.05
26	Mainto	Install VFD for identified hydraulic power pack		1.04	4.00	46	Completed
27	Utilities	Install lighting voltage stabilizer for all main feeders	N.Ahmad	0.93	1.20	15	Completed.
28	ETP	Treatment of phosphate waste water	N.Ahmad	0.20			20.10.04
29	Paint Shop	Convert diesel to propane in Thermopac.	Sudhir Sharma	1.26	0.50	5	20.10.04
30	Heat Treatment	Minimise radiation loss in identified furnaces	Mr.D.S.Sugwekar.	1.68	2.50	18	Completed
31	Heat Treatment	Replace brick lined insulation in pre heating furnace with ceramic fibre	Mr.D.S.Sugwekar.	1.54	1.00	8	Completed
32	Heat Treatment	improve loading of componensts which are treated in both SOF I & III	Mr.D.S.Sugwekar.	0.96	0.75	9	Completed
33	Heat Treatment	Decrease fixture weight and improve loading for identified components	Mr.D.S.Sugwekar.	1.91	0.75	5	Completed.
34	Heat Treatment	Install WHR system for radiant recuperative burnres	Mr.D.S.Sugwekar.	7.10	10.00	17	Completed
35	Paint Shop	Increase heat exchanger area of oven in paint booth & isolate baking oven from drying ovens	Sudhir Sharma	4.38	5.00	14	20.02.05
36	Utilities	Replace all FDV fans in axle plant with new correct size high efficiency fans	N.Ahmad	13.21	8.00	7	15.10.04
37	Utilities	Replace existing FDV fans in steering plant with new energy efficient fans	N.Ahmad	5.35	3.00	7	Completed
38	Utilities	Replace existing compressor with new energy efficient compressor	N.Ahmad	16.00	7.50	6	Completed
39	Utilities	Install air cooled fluid cooler	N.Ahmad				Completed
40	Heat Treatment	Install variable frequency drive for SQF combustion air blower	Mr.D.S.Sugwekar.	0.28	1.00	43	15.05.05
41	Heat Treatment	Install radiant recuperative heaters for preheating furnace	Mr.D.S.Sugwekar.	10.94	20.00	22	15.03.05
		Grand Total		108.60	85.03	12	

SAFETY, HEALTH AND ENVIRONMENT

Environment

Sona Koyo Steering is committed to the protection of Environment by prevention of pollution and continual improvement in the environment performance. Environment Management System (ISO 14001) has been successfully implemented since May-2002.

Sona Koyo promotes the Environment conservation activities by higher efficiency, reduction in consumption of electricity, LPG, HSD, LDO and water, reducing wastages, recycling of packing material, paperless office management. Environment awareness is given to the employees by distributing newsletters, on the job training, class room training and by observing environment day.

Health and Safety

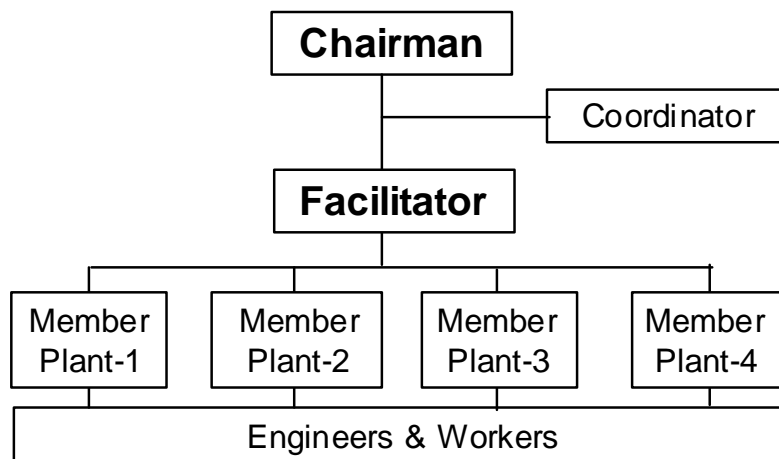
Ensuring employees health and safety is the basis of all our corporate activities. We are striving to create a work Environment in which all employees are safe and can perform their duties with vitality. Employees are encouraged to identify and eliminate unsafe conditions & unsafe actions. Also we are assertively making efforts to make cheerful work place environment.

Safety Education

Safety is made up of “knowledge” “Awareness” and “Environment” . To ensure safety of our employees we have been conducting trainings of all the employees related to knowledge & awareness of safety. Safety, health and Environment training calendar is made in the beginning of the year and its effectiveness is reviewed vis-à-vis safety performance.

Efforts to achieve Zero accidents

A SHE sub-committee has been formed under TPM implementation program chaired by Group Chief Supply Chain Management. It consists of 6 members and Cross Functional Team supported by engineers from each function.



The following activities are done to achieve zero accidents in the company by the safety pillar.

1. Monthly occupier safety round of the entire premises
2. Weekly safety round of departmental heads.
3. Identification of unsafe condition and unsafe acts.
4. Elimination of unsafe conditions.
5. Education and training of employees on Safety, Health & Environment.