

RALLIS INDIA LIMITED

(Agrochemicals Division)

A TATA Enterprise

Turbhe, New Mumbai - 400703

(i) Unit Profile

Rallis India Limited a "**TATA Group of Company**" is a Multi-location Agro-chemical based company and is one of the major player in the Agrochemical industry in India and its known for its Quality of product and services provided for farming sector. Rallis India limited established its first Production unit at Turbhe, Navi-Mumbai in 1967. Turbhe unit has undergone several transformations during its chequered history and decades of rapid technological advance. Today the Turbhe unit has two production plant for manufacturing Herbicides namely Pendimethalin, Metribuzin Technical and their formulation. Both production plants are equipped with latest technologically advanced Instrumentation & Equipments with enhanced safety features. The Turbhe unit is a ISO:9001:2000, ISO: 14001:2004, ISO:18000 and certified BSC 5-Star unit.

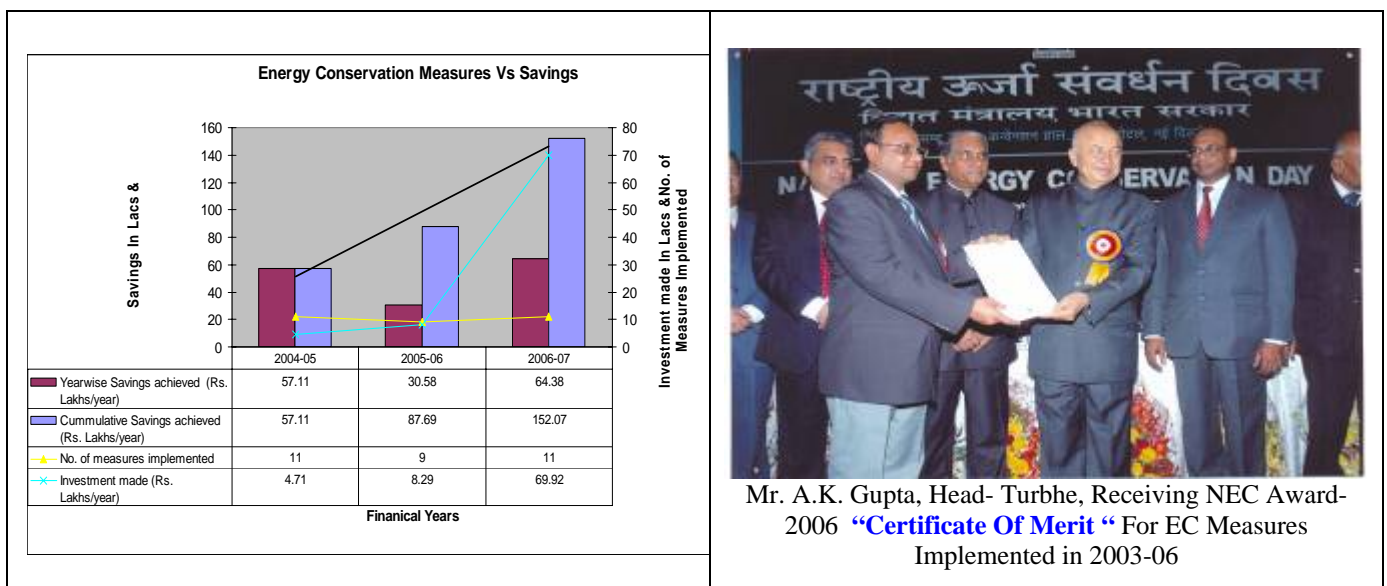
The total combined production capacity of both Pendimethalin & Metribuzin plant is 1500 MT of Technical Products. During 2006-07 Total 1314 MT of Technical product and 958 MT of Formulation of these products manufactured with plant capacity utilization of 87.60%. The Rallis, Turbhe units annual sales turn over was Rs. 71.36 Crores in the same year.

Rallis intends to consciously transforms itself from being agri input company into one that offers end-to-end solutions to the farming community and having success in conquering the substantial portion of Indian agrochemical market and gaining customers faith in its product for several years, the Rallis India Limited, Turbhe unit since last few years has been able to capture its share in the International market and now it is expanding continuously because Rallis vision for customer focus and Energy Management to reduce the operational and energy cost to provide the best packages to the customers.

(ii) Energy Consumption

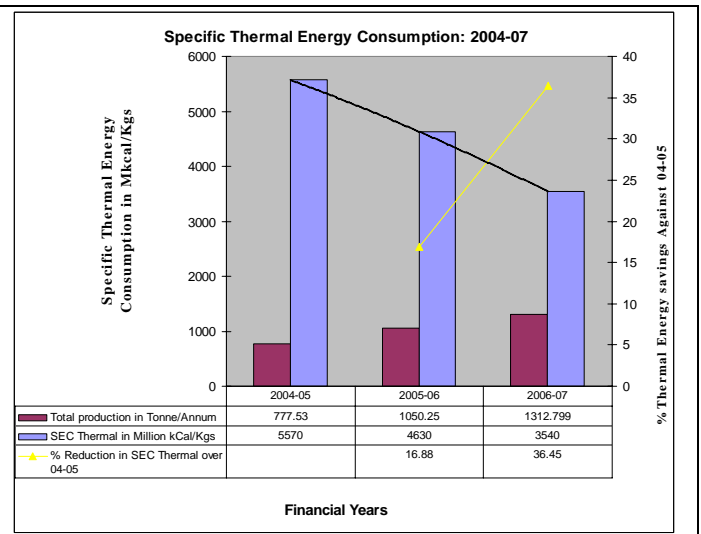
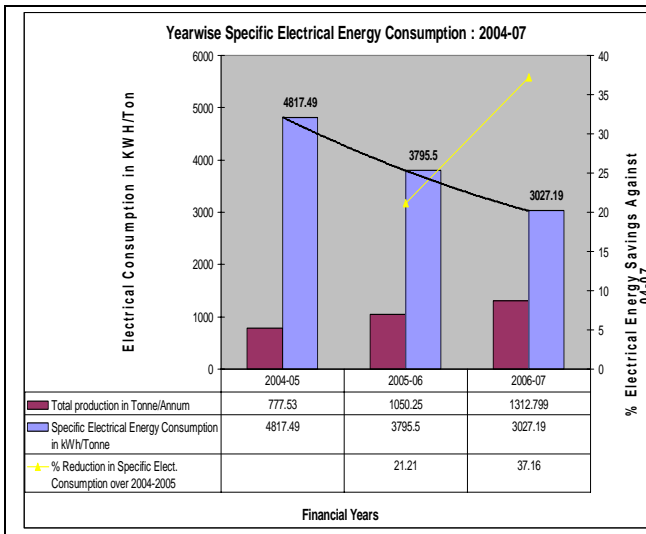
Rallis India Limited has identified various Energy Conservation projects and formed cross-functional Project Team under TPM (Total productive maintenance) -6-Sigma DMAIC concept adopted in 2003. The Energy Conservation Projects through TPM 6-Sigma-DMAIC concept has resulted in both tangible and intangible savings and above all contribution to the nation in preservation of precious recourses of energy. With implementation of various energy conservation measure there is steady decline in specific energy consumption per kgs of product manufactured, which depict continual reduction in Specific energy consumption over last three years. Rallis India Limited, **Turbhe Units has been awarded National Energy Conservation Award -2006 "Certificate of Merit"** for its Energy Conservation Efforts in the chemical **The Energy Conservation projects spearheaded by absolute internal resources has brought in an accrued financial saving of Rs. 152.07 Lakhs from 2004-07.**

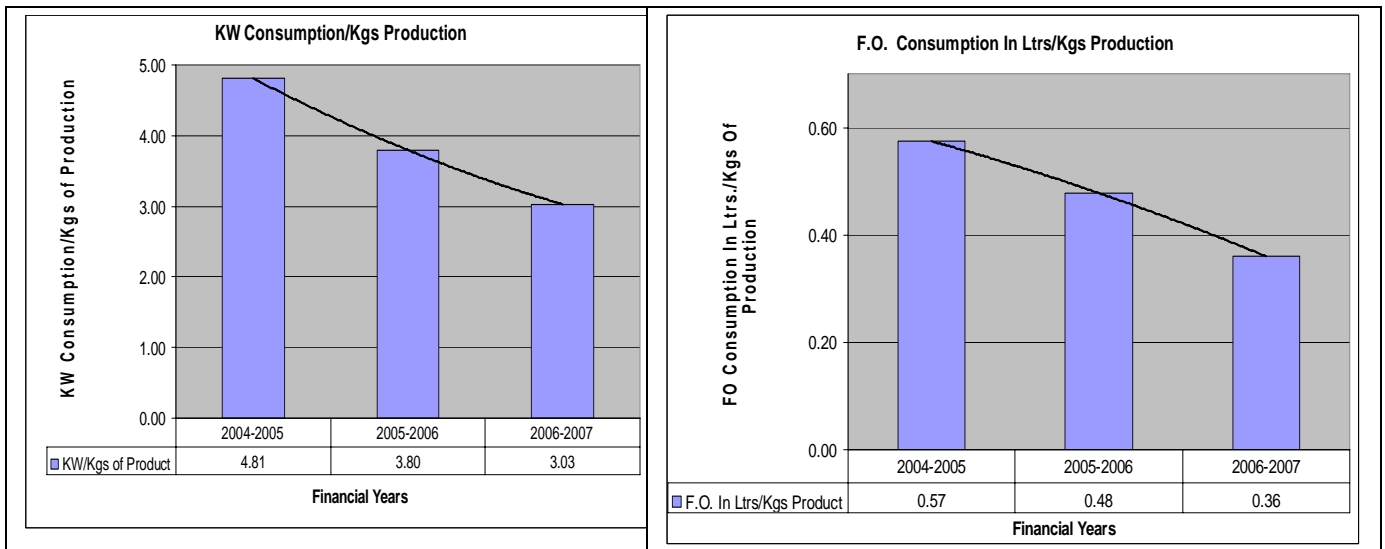
Synopsis of the Tangible Savings By way of Energy Conservation (2004-2007) :



Specific Energy Consumption Reduction 2004-07:

| Description | Unit | 2004-05 | 2005-06 | 2006-07 |
|---|------------------|----------------|----------------|-----------------|
| Total Electrical Energy Consumption | Lakhs KWH | 37.46 | 39.86 | 39.74 |
| Total Thermal (Furnace Oil) Energy Consumption | KL | 447 | 502 | 480 |
| Total Energy Cost (Electrical + Thermal) | Rs. Lakhs | 186.30 | 222.36 | 269.86 |
| Total Product Manufacturing Cost | Rs. Lakhs | 1001.34 | 1152.61 | 959.36 |
| Energy cost as % of Manufacturing cost | % | 7.53% | 6.19% | 6.44% |
| Weighted average Utility cost/Kgs of product manufactured.* Pendimethalin , ** Metribuzin | Rs./ Kgs | *22.29 | *20.88 | *19.03 |
| | | **39.93 | **38.04 | **30.12 |
| Total Technical Production | Tonne | 777.53 | 1050.25 | 1312.799 |
| Total Formulation Production | Tonne | 914.40 | 1180.00 | 957.42 |
| Specific Electrical Energy Consumption | kWh/Tonne | 4817.49 | 3795.5 | 3027.19 |
| SEC Electrical for per kgs of Product Manufactured | KWH/Kgs | 4.82 | 3.80 | 3.03 |
| % Reduction in SEC Elect. over 2004-2005 | % | --- | 21.21% | 37.16% |
| Specific Thermal Energy Consumption | mKcal/Kgs | 5570 | 4630 | 3540 |
| SEC Thermal for per Kgs of Product Manufactured | F.O. In Ltrs/Kgs | 0.48 | 0.41 | 0.36 |
| % Reduction SEC Thermal over 2003-2004 | | | 16.88% | 36.45% |



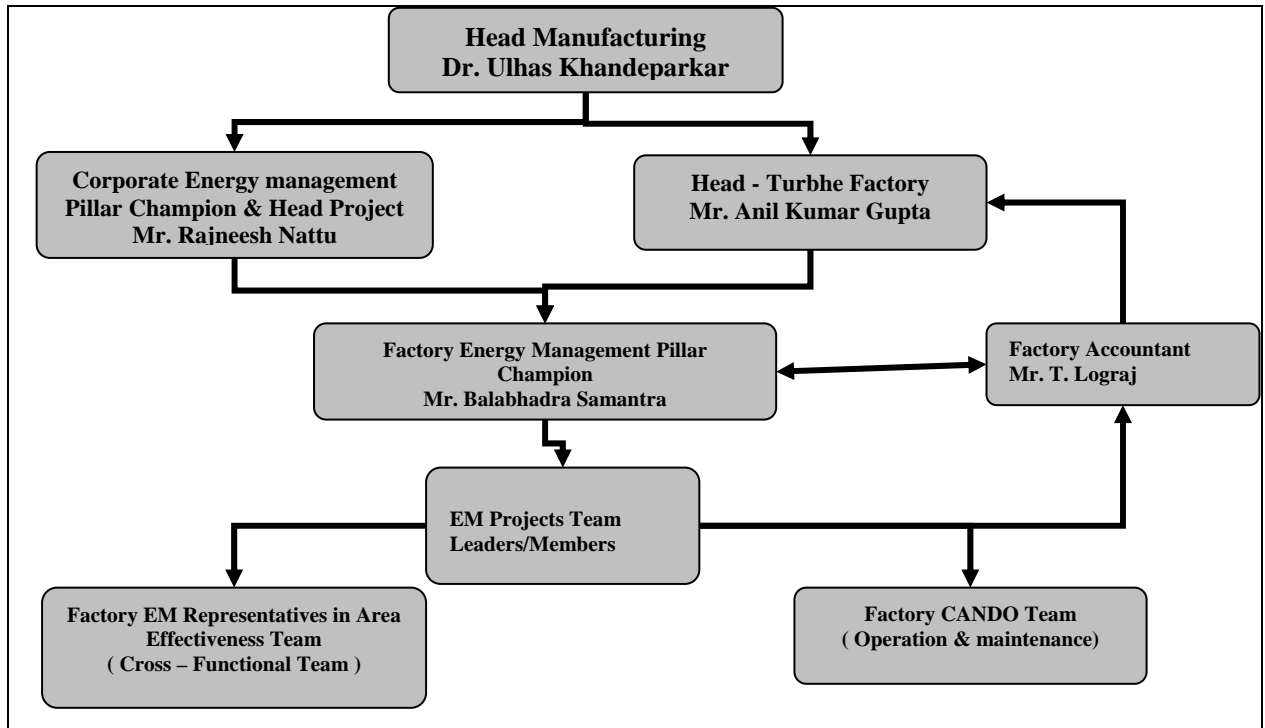


(iii) Energy Conservation Commitment, Policy and Set up :

Rallis India limited, Turbhe unit considers the Energy Saving as a multi disciplinary approach. Even smallest reduction in Energy cost add directly to its profit and above all contribution to the nation in preservation of precious resource of energy. Units energy profile consists of electricity, furnace oil, diesel and water. Even though Rallis India Limited do not have separate "Energy Management Policy" the company has committed itself for energy conservation and the same is reflected in all its Policies like ISO:9001, ISO:14001 and also the targets and objectives under taken in ISO systems. The company has adopted Total Productive Maintenance (TPM) concept in 2003 under which company has appointed Corporate Energy Management Pillar Champion and Factory Energy management Pillar Champion specifically for Energy Conservation Activities. Company has arranged both internal and external training programmers on energy conservation for its employees also Energy saving slogans, posters are displayed at various locations in the unit of employees awareness. The company's top management has provided all required tools and help to drive the energy conservation.

Company has provided its employees the costly MINITAB software for quick and precise analysis of problems provided training to them for MINITAB Software and other statistical tools usage and raised their skill level to become TPM 6-Sigma BLACK & GREEN belt champions. The company has formed cross-functional teams for energy conservation projects, the top management closely monitors the progress of the projects and provide all necessary budgetary and moral help. The team members of successful projects are appreciated by Company's MD by way of Recognition Letter and cash award to motivate them further.

Energy Management Structural Flow Diagram



(iv) Energy Conservation Achievements :

During the period 2004-07 Rallis India Limited, Turbhe unit implemented various energy conservation projects through periodic brainstorming sessions, TPM methodology, engineering initiatives and workmen's suggestions etc. which has resulted in **savings of Rs.152.07 Lakhs with investment of Rs. 82.92 Lakhs**. The ratio of capital investment to savings realized was Rs. 0.83 : 1.00 Lakhs. This has resulted in reduction of 37.16% in Specific Electrical Energy Consumption and 36.45% reduction in Specific Thermal Energy Consumption during the above period as shown bellow.

| Description | Unit | 2004-05 | 2005-06 | 2006-07 |
|--|------------------|---------|---------|---------|
| Specific Electrical Energy Consumption | kWh/Tonne | 4817.49 | 3795.5 | 3027.19 |
| SEC Electrical for per kgs of Product Manufactured | KWH/Kgs | 4.82 | 3.80 | 3.03 |
| % Reduction in SEC Elect. over 2004-2005 | % | --- | 21.21% | 37.16% |
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| SEC Thermal for per Kgs of Product Manufactured | F.O. In Ltrs/Kgs | 0.48 | 0.41 | 0.36 |
| % Reduction SEC Thermal over 2003-2004 | | | 16.88% | 36.45% |

(iv) Major Energy Conservation Initiatives Implemented during 2004-07:

** Procurement & Installation of New Air Compressor with VFD.



New Air Compressor With VFD System

Procured & Installed new air compressor of 578 CFM capacity attached with 150 HP motor & VFD system for auto loading/unloading , Thus with commissioning of this new air compressor we stopped maximum usage old 628 CFM capacity attached with 150HP motor and mechanical pressure switch type loading/unloading mechanism. The savings in comparison with old air compressor are as follow...

First Year saving Period from Date of Commissioning: : **Rs.7.43 Lakhs (From Twelve Months)**

Savings On Year Basis...

Electrical Energy Savings : **1.70 Lakhs KWH/Annum**
 Savings : **Rs. 7.43 Lakhs/Annum**
 Investment : **Rs. 22.00 Lakhs**

Highlights : Motor controlled by VFD thus consumes @ 40% less energy than old air compressor, Easy operation, Reduced noise level, Enhanced safety feature, Automatic loading/un-loading , PLC based Programmable Logic controller

**** Modification of Old Hydrogenation Reactor.**



New Hydrogenation Reactor With Inside/Outside Limpet Coil

Replacement of existing 4 KL SS Hydrogenation reactor having outside limpet coil for cooling with modified 5.5 KL SS old spare Hydrogenation reactor with modified agitator & having both inside and outside limpet coil for cooling. With this new arrangement batch time cycle reduced drastically also with increased cooling surface chilled water was replaced with process cooling water. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.19.16 Lakhs (From Nine & Half Months)**

Savings On Year Basis ...

| | |
|----------------------------------|--------------------------------|
| Electrical Energy Savings | : 5.52 Lakhs KWH/Annum |
| Savings | : Rs. 24.19 Lakhs/Annum |
| Investment | : Rs. 21.50 Lakhs |

Highlights : Increased reactor capacity thus increased batch throughput, Both inside & outside limpet coil for fast and effective cooling thus drastically reduction in batch time cycle and energy consumption, able to produce one batch/day, Easy operation, Enhanced safety features

**** Procurement & Installation of New Mechanical Booster.**



New Mechanical Booster Vacuum Pump

For vacuum application in EDC recovery system restricted usage of 2- stage steam jet ejector vacuum system coupled with 15 HP motor of water ejector pump by replacing it with one new mechanical booster attached with 12.5 & 15 HP motors of booster & water ejector pump respectively. With this new arrangement steam consumption reduced drastically. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.1.03 Lakhs (From One & Half Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.19 Lakhs KWH/Annum |
| Thermal Energy Savings | : 509.31 Mkal/Annum |
| Savings | : Rs. 9.39 Lakhs/Annum |
| Investment | : Rs. 5.50 Lakhs |

Highlights : Drastic reduction in Furnace oil consumption, Reduced batch time cycle, increased and consistent vacuum for EDC recovery reduced solvent losses.

Procurement & Installation of Delta-T Controller for Cooling Towers.



Delta-T Controller For Cooling Tower Fans

Procured and installed Delta-T controller for Automatic operation of both refrigeration and process cooling tower fans which were earlier manually controlled and were running continuously. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.96 Lakhs (From Eight Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.33 Lakhs KWH/Annum |
| Savings | : Rs. 1.44 Lakhs/Annum |
| Investment | : Rs. 0.30 Lakhs |

Highlights Reduced power consumption, eliminated power losses occurring due to idle running, easy operation and better control on cooling tower water temperature.

Procurement & Installation of New Nitrogen Generation plant.



New Nitrogen Generation Plant

Procured and installed new technology Nitrogen generation plant which consumes almost 30CFM/Hrs less compressed air for nitrogen generation compared to our old plant. Both new & old nitrogen plants automation done in such a way that the highly efficient new nitrogen plant would run continuously & generate 5.0 kg/cm² nitrogen pressure & the old nitrogen plant will intermittently start/stop automatically to maintain the Nitrogen pressure only. Thus with this new Nitrogen plant the Nitrogen Generation cost reduced. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.83 Lakhs (From Eleven Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.21 Lakhs KWH/Annum |
| Savings | : Rs. 0.91 Lakhs/Annum |
| Investment | : Rs. 11.00 Lakhs |

Highlights Increased nitrogen generation capacity, improved efficiency, easy automated operation, meeting process requirements, reduced air compressor load thus reducing power consumption.

Installation of Temperature Controller for Chilled Water Plant Compressor



Temperature Controller for Chilled Water Compressor

Earlier Chilled water Temperature was controlled through manual compressor loading/unloading toggle switches, hence many times due to timely action by operator compressor would run idle or Vice- versa so we procured & installed temperature controller for both chilled water compressor and set the temperature controller such that compressor would run in Full, Partial, Low and trip automatically depending upon the set parameters and the parameters achieved, thus reduced the delays in manual actions for the same. With this arrangement we are now not only able to maintain consistently the required chilled water temperature but also reduce the power consumption by compressor drastically. The savings are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.97 Lakhs (From Seven Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.38 Lakhs KWH/Annum |
| Savings | : Rs. 1.66 Lakhs/Annum |
| Investment | : Rs. 0.50 Lakhs |

Highlights Reduce Power consumption, Easy operation, Ease in controlling chilled water temperature, Enhanced safety for operating chilled water plant, Eliminated risk of chocking of chiller.

** Optimization of Chilled Water Plant Circulation Pumps.



New Mega-G-80/160 Pumps with 30 HP (EFF1) Motors

Procured & replaced both chilled water plant existing circulation pumps Mega-G-80/200 (Capacity- 200m³/Hrs & Head- 55Mtrs.) attached with **50 Hp (EFF2)** primary pumps with new high efficient Mega-G-80/160 pumps (Capacity- 200m³/Hrs & Head- 35Mtrs.) attached with **30 HP (EFF1)** motor, with this modification without effecting the performance of chilled water plant we were able to drastically reduce the power consumption. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.2.98 Lakhs (From Seven Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 1.17 Lakhs KWH/Annum |
| Savings | : Rs. 5.11 Lakhs/Annum |
| Investment | : Rs. 0.80 Lakhs |

Highlights: No change in chilled water flow rate, Improved motor efficiency (EFF1) level , Drastic reduction in power consumption due to small 30 HP EFF1 level motors

** Optimization of Refrigeration Cooling Tower Circulation Pumps.



New High Efficiency Grundfos Pump with EFF1 20 HP Motor

Procured & replaced refrigeration cooling tower one existing pump Mega-G-80/160 (Capacity- 200m³/Hrs & Head- 35Mtrs.) attached with **30 Hp (EFF1)** refrigeration cooling tower circulation pumps with new high efficient Grundfos make pumps (Capacity- 170m³/Hrs & Head- 20Mtrs.) attached with **20 HP (EFF1)** motor. And Trimmed the impellor of second refrigeration cooling tower circulation pump G-80/160 to reduce its flow rate& head from existing 200m³/Hrs & Head- 35Mtrs. to 170m³/Hrs & Head- 20Mtrs and then replaced its existing **30 HP (EFF1)** motor with **25HP (EFF1)** Motor. Thus with this new arrangement we were able to reduce the power consumption without effecting the refrigeration cooling tower water circulation requirement of utilities equipments The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.78 Lakhs (From Five Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.43 Lakhs KWH/Annum |
| Savings | : Rs. 1.87 Lakhs/Annum |
| Investment | : Rs. 0.85 Lakhs |

Highlights: Ideal optimization of refrigeration cooling tower pumps, Improved motor efficiency (EFF1) level , Drastic reduction in power consumption due to small 20 & 25 HP EFF1 level motors

** Improvement of Illumination System.



New 70 W Energy efficient Sodium Vapor Lamps

Procured and replaced 65 Nos out of total 95 Nos conventional 250W sodium vapor lamps with 70W energy efficient sodium vapor lamps in 06-07. Thus with out effecting illumination system required lux level we were able to reduce the power consumption. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.1.99 Lakhs (From Twelve Months)**

Savings On Year Basis ...

| | |
|----------------------------------|-------------------------------|
| Electrical Energy Savings | : 0.45 Lakhs KWH/Annum |
| Savings | : Rs. 1.99 Lakhs/Annum |
| Investment | : Rs. 1.77 Lakhs |

Highlights: Reduced power consumption by Street lighting system, No change in illumination lux level.

**** Optimization of Process Cooling Tower Circulation Pumps.**



New High Efficiency Mega-G-65/160 Pump with EFF1 20 HP Motor

Procured & replaced process cooling tower one existing pump Mega-G-80/160 (Capacity- 200m³/Hrs & Head- 35Mtrs.) attached with **30 Hp (EFF1)** with new high efficient pumps Mega-G-65/160 (Capacity- 130m³/Hrs & Head- 30Mtrs.) attached with **20 HP (EFF1)** motor. And Trimmed the impellor of second refrigeration cooling tower circulation pump G-80/160 to reduce its flow rate& head from existing 200m³/Hrs & Head- 35Mtrs. to 130m³/Hrs & Head- 30Mtrs and than replaced its existing **30 HP (EFF1)** motor with **25HP (EFF1)** Motor. Thus with this new arrangement we were able to reduce the power consumption without effecting the refrigeration cooling tower water circulation requirement of utilities equipments. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.62 Lakhs (From Four Months)**

Savings On Year Basis ...

Electrical Energy Savings : 0.43 Lakhs KWH/Annum
Savings : Rs. 1.87 Lakhs/Annum
Investment : Rs. 0.80 Lakhs

Highlights: Ideal optimization of refrigeration cooling tower pumps, Improved motor efficiency (EFF1) level , Drastic reduction in power consumption due to small 20 & 25 HP EFF1 level motors.

**** Installation of New Refrigeration Type Drying System for Compressed Air.**



New Refrigerated Air Dryer

Procured and installed new Refrigerated type drying system for compressed air, taken this new system on-line by keeping the old system in stand by mode. Thus with this new system we were able to almost eliminate the air losses to the tune of 10-12 % of total compressed air generated by air compressor which reduced load of air compressor and also the moisture content in dry air reduced drastically which helped in consistently maintaining low oxygen content in Nitrogen generated by Nitrogen plant as the this dry compressed air is used by nitrogen plant as input to generate nitrogen.. The savings from this are as follows....

First Year saving Period from Date of Commissioning: : **Rs.0.35 Lakhs (From Four Months)**

Savings On Year Basis ...

Electrical Energy Savings : 0.24 Lakhs KWH/Annum
Savings : Rs. 1.07 Lakhs/Annum
Investment : Rs. 5.50 Lakhs

Highlights: Reduced moisture in dry air resulted in low oxygen in nitrogen generation, elimination of air losses by way of venting by old heatless air dryer, reduced load on air compressor resulted in power consumption, reduced noise level, enhanced safety features.

Summary of Energy Conservation Measures Implemented during 2004-07:

| Description | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|--|---------|---------|---------|---------|
| Year wise Savings achieved (Rs. Lakhs/year) | 72.14 | 57.11 | 30.58 | 64.38 |
| Cumulative Savings achieved (Rs. Lakhs/year) | 72.14 | 57.11 | 87.69 | 152.07 |
| No. of measures implemented | 4 | 11 | 9 | 11 |
| Investment made (Rs. Lakhs/year) | 1.16 | 4.71 | 8.29 | 69.92 |

(v)Energy Conservation Plans and Targets :

| Energy Conservation Measures (Planned) | Anticipated savings In | | Approx. investment (Rs. lakhs) | Project Commencement & Completion year |
|---|--|--------------|--|--|
| | KWH/Annum | Rs. Lakhs | | |
| Installation of De-super heater for recovering heat from chilled water plant and using it for feed water heating, this will also reduce chilled water plant condenser load | 0.30 Lakhs KWM/Annum & Furnace oil saving 38.69 KL/Annum | 8.35 | 6.50 | 2007-2008 |
| Replacement of street lighting conventional 250W sodium vapor lamps with 70 Watt energy efficient lamp fittings (Total 45 Nos) | 0.34 | 1.47 | 0.81 | 2007-2008 |
| Replacement of continuously running conventional (EFF3) motors with best efficient pumps and motors (EFF1) available in market (Total pumps with motors - 15 Nos) | 1.26 | 5.52 | 6..0 | 2007-2008 |
| Replacement of existing Incandescent lamp (5 Watt) with light emission Diode (0.5 w) total 1000 indication lamp replacement | 0.11 | 0.52 | 0.57 | 2007-2008 |
| Installation of Auto Voltage Regulator for Plant lightings | 0.24 | 1.08 | 2.50 | 2007-2008 |
| Installation of VFD for chilled water Primary Pumps | 0.44 | 2.00 | 2.35 | 2007-2008 |
| Installation of VFD for chilled water compressor with flat belt for drives. | 1.16 | 5.20 | 8.50 | 2007-2008 |
| Replacement of existing surfaced aeration system with more efficient defused air aeration system for ETP. | 4.08 | 17.85 | 19.50 | 2007-2008 |
| Boiler MR-12046 Fuel change over from existing Furnace oil to Briquettes (Bagasse system) | 1.1 Lakhs Ltrs FO/Annum | 15.00 | 18.00 | 2007-2008 |
| Expected Savings and Investment Cost In Lakhs | | 56.99 | 58.73 | |
| EC Measures Implemented | | | EC Measure Under Implementation | |

By adopting the above energy conservation measures, Rallis India Limited will be able to reduce the more that 10% electrical and 15% thermal energy consumption against 2006-07 at the end of 2008 and will be able to achieve the set target of 2.72 kw/kg of product and 0.30 Ltrs/kg of product by 2008. By this Rallis will be able to save energy cost by Rs. 56.99 Lakhs at the end of 2008.

Planned Specific Energy Consumption Target for the year 2007-08 & 2008-09:

| Year | Electrical (KW/Kgs of Product) | Thermal (Furnace oil in Ltrs./kgs of Product) | Reduction over the year 2006-07 | |
|---------------------|--------------------------------|---|---------------------------------|-----------|
| | | | Electrical % | Thermal % |
| 2006-07 (Base year) | 3.03 | 0.36 | - | - |
| 2007 - 08 | 2.72 | 0.30 | 10.23% | 16.67% |
| 2008 - 2009 | 2.5 | 0.25 | 17.49% | 30.56% |

(vi) Environment and Safety :

To bring in awareness among employees Rallis India Limited, Turbhe Unit has taken various initiatives including safety audits, risk analysis, On-site emergency response plan, responsible care, HAZOP study, monitoring and measurement, health check-up for all employees including contract employees, Safety slogan / Posters suggestion & safety quiz competition etc are arranged during Safety Week. Also the EHS policy is displayed at various locations in the factory in both English and local languages.

Safety :

"Safety First" is the slogan of the company and so the unit and the same is reflected in the EHS policy. EHS audits are carried out periodically both by internal and certified agencies and corrective actions are taken as per the outcome of the audits to minimize the potential risks in the factory. For enhancing the Health and safety performance we have adopted OHSAS : 18001 along with EMS ISO 14001:2004 standards for ensuring good safety, health and environment management standard. The Hazards Identification and Risk Assessment (HIRA) for each and every activity done in plant is carried out, which has resulted in identifying potential risk to its employees, equipments and environment in better way. This has intern resulted in providing better control systems like safety interlocks to the potential risks involving equipment or activity. In-line with our EHS policy for continual enhancement of safety standards, the unit has taken various initiatives to avoid fire hazards like installation of new Diesel generator operated fire hydrant system with sprinkler, Gas leakage detector, Smoke detectors etc.

Environment :

In-line with our EHS policy, Turbhe plant is committed for preserving precious energy resource, social responsibility and protecting Environment. For achieving the same, unit has adopted EMS ISO : 14001:2004 system. External environment audits through certifying agencies are conducted and various environment initiatives including environmental monitoring are implemented to maintain the ecological balance in and around company premises .All requirements relating to various environment protection and EHS legislation are being duly complied with by the company. Also all other statutory requirements under Factory Act are being complied by the company.

Attached on Next Page : Environment, Health & Safety Policy

(21) Whether any dispute pertaining to statutory requirements of safety and pollution control is pending with any Government Agency. If Yes, give details:

NO, There is no dispute pertaining to statutory requirement of safety & pollution control is pending with any Government Agency.



RALLIS INDIA LIMITED
A TATA Enterprise

ENVIRONMENT, HEALTH & SAFETY POLICY

We are committed to provide a safe and healthy working environment and to follow operating practices that will safeguard people and protect the environment and natural resources.

Accordingly, we have set the following objectives with respect to environment, health and safety (EHS) which also address the requirements of Responsible Care initiative to which we are signatory:

- ◊ Integrate safety in all our business areas and take actions to prevent injuries and occupational illnesses to people and damage to property at the workplace.
- ◊ Enhance awareness on EHS amongst our employees through effective communication, consultation and training.
- ◊ Comply with the applicable laws and regulations pertaining to EHS and take any additional measures we consider necessary.
- ◊ Maintain and continually upgrade EHS management systems to relevant standards and best practices.
- ◊ Prevent / minimize adverse environmental impacts, occupational health and safety risks, so far as is reasonably practicable, through continuous improvements in process and practices, effective risk management and mitigation process.
- ◊ Respond sensitively to the environmental concerns of the neighbourhood community and take measures for implementing product stewardship practices.
- ◊ Commit resources and enhance visibility of top management in EHS matters.

Each employee has the responsibility to give environment, health and safety top priority and proactively contribute to establish a safety culture in our company.

Mumbai
14.07.2007



V. SHANKAR
Chief Executive Officer