



Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure	Sector <u>TEXTILE</u>
Year to be filled by BEE	<i>Replacement of Magma Pump by optimizing capacity in Spin bath in T.C. Plant (Scheme 1)</i>	Technology Energy Efficient Pump

Description of the energy conservation measure:

The Magma pump is used in Calcination Plant for pumping of concentrated Sodium Sulphate slurry for Receiver to the Settler tank. From the Settler the slurry is fed to Centrifuges & Rotary dryer to obtain anhydrous sodium sulphate. The capacity of Magma pump is 36 m³/hr and average power consumption is about 6.5 KW / Hr. The capacity of Magma pump is based on the 36 TPD Calcinations plant. However due to reduction in the Tyre yarn machines the present Calcined salt production is only about 17.5 TPD.

The existing Magma pump of 36 m³/hr was replaced with a smaller capacity and energy efficient pump of 20 m³/hr capacity.

Picture before modification	Picture after modification
 <p>Conventional Pump</p>	 <p>Energy Efficient Pump</p>

Agency that executed the project (with complete address and email): *In - house*

Total investment, Rs.: 0.65 Lakhs

Year of implementation: 2006-07

First year energy cost savings

Rs.: 0.50 Lakhs

First year other savings, Rs.: Nil

On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	51.480	-	-	-	-
Energy consumption after	37.224	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	3.48	-	-	-	-

Company complete address:

CENTURY RAYON
P. B. No. 22, Murbad Road
Shahad – 421 103, Dist.:Thane (Maharashtra)

Contact person who could be contacted for more information:



V.K. Kasliwal - Energy Manager

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Energy Conservation Measure implemented in 2006-2007



ID to be filled by BEE	Title of the measure <i>Installation of Plate cooler for dissolver lye cooling in T. C. Plant. (Scheme 2)</i>	Sector <u>TEXTILE</u>			
Year to be filled by BEE		Technology Plate Coolers			
Description of the energy conservation measure:					
<p><i>Dissolver lye is prepared in caustic room & pumped to dissolver lye cooling tank. In dissolver lye cooling tank it is circulated through plate coolers to bring down it's temperature from 31^oC to 20^oC with the circulation pump for 24 Hrs. Now dissolver lye is pumped to dissolver lye cooling tank by passing through a plate cooler to bring down it's temperature from 31^oC to 11^oC. Due to this circulation pumps in both cooling tank 1 & tank 2 were stopped. Due to this circulation pumps which were running continuously for 24 Hrs were stopped & hence resulted in power saving. Also low temperature of dissolver lye was achieved for better dissolving of xanthate in dissolver lye & less process variation during to high dissolver end temperature.</i></p>					
Picture before modification			Picture after modification		
					
Agency that executed the project (with complete address and email): <i>In - house</i>					
Total investment, Rs.: 4.0 Lakhs			Year of implementation: 2006-07		
First year energy cost savings			Rs.: 1.02 Lakhs		
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	31.098	-	-	-	-
Energy consumption after	00000	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	3.48	-	-	-	-
Company complete address:				We authorise Bureau to use this information for dissemination Signature Date	
CENTURY RAYON P. B. No. 22, Murbad Road Shahad – 421 103, Dist.:Thane (Maharashtra)					
Contact person who could be contacted for more information:					
V.K. Kasliwal - Energy Manager					

Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <i>Replacement of old booster & ejector system in FD by energy efficient system in T C. Plant (Scheme 3)</i>	Sector <u>TEXTILE</u>
Year to be filled by BEE		Technology Energy Efficient System

Description of the energy conservation measure:

*In Tyre Cord viscose department FD is used for removing dissolved air and also partial evaporation of water from viscose. The existing system was old and developed problems during operation. It was decided to replace the system with an energy efficient system. The system was replaced with an energy efficient system designed with revised process conditions
Resulted in lower steam consumption.*

Picture before modification	Picture after modification
	

Agency that executed the project (with complete address and email): *In - house*

Total investment, Rs.: 5.00 Lakhs

Year of implementation: 2006-07

First year energy cost savings

Rs.: 4.50 Lakhs

First year other savings, Rs.: Nil

On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	-	77141	-	-	-
Energy consumption after	-	76677	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	-	3693	-	-	-

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Contact person who could be contacted for more information:
V.K. Kasliwal - Energy Manager

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Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <i>Stoppage of settler tank agitator in Spin bath 20 meters. (Scheme 4)</i>	Sector <u>TEXTILE</u>
Year to be filled by BEE		Technology

Description of the energy conservation measure:

*The Magma pump is used in calcination plant for pumping of concentrated sodium sulphate from receiver to the settler tank. In the settler tank the slurry crystals are allowed to settle and the concentrated slurry is fed to centrifuge and rotary dryer to obtain anhydrous sodium sulphate. The settler tank is provided with slow speed agitator to prevent deposition of sodium sulphate particles on the vessel wall. The average power consumption is about 2.7 kW/ hr. The settler agitator was kept stopped for two months in Feb & Mar 07 to observe any change in deposition pattern of sodium sulphate to note any other problem faced. However no significant problems were observed. Hence the settler agitator has been disconnected and kept out of use.
Resulted in reduction in power consumption.*

Picture before modification	Picture after modification
	

Agency that executed the project (with complete address and email): *In - house*

Total investment, Rs.: Nil	Year of implementation: 2006-07
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First year energy cost savings	Rs.: 0.74 Lakhs
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First year other savings, Rs.: Nil



On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	21.384	-	-	-	-
Energy consumption after	0	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	3.48	-	-	-	-

<p>Company complete address:</p> <p>CENTURY RAYON P. B. No. 22, Murbad Road Shahad – 421 103, Dist.:Thane (Maharashtra)</p> <p>Contact person who could be contacted for more information: V.K. Kasliwal - Energy Manager</p>	<p>We authorise Bureau to use this information for dissemination</p> <p>Signature</p> <p>Date</p>
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Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure	Sector <u>TEXTILE</u>			
Year to be filled by BEE	<i>Replacement of Bleach station pumps by energy efficient pumps in After Treatment Section in Rayon Plant (Scheme 5)</i>	Technology Energy Efficient Pump			
Description of the energy conservation measure:					
<p><i>New A.T., 10 mtr level, Kishore C.I. Rubber lined pumps are installed for bleach wash. They are of low efficiency pumps (54% effy) due to rubber lining. Also because of lining, failure rate of these pumps is high. Slightly damage or removal of rubber lining expose the metallic parts and the bleach solution starts eating them resulting in pump breakdowns. Except bleach stations, all other washing stations have S.S. Pumps (KSB Make). These are energy efficient pumps. We have already installed 3 S. S. Pumps on stations no. 12 of all 3 lines and they are found to be suitable for pumping of bleach solution. Since efficiency of this S. S. Pump is 82 % (other specifications of both type pumps are same except Motor HP) there will be saving in power consumption. These pumps & motors were replaced by energy efficient pumps & motors. Resulted in reduction in power cons.</i></p>					
Picture before modification			Picture after modification		
					
Conventional Pump			Energy Efficient Pump		
Agency that executed the project (with complete address and email): <i>In - house</i>					
Total investment, Rs.: 1.80			Year of implementation: 2006-07		
First year energy cost savings			Rs.: 1.85 Lakhs		
First year other savings, Rs.: 0.15 Lakhs					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	149.100	-	-	-	-
Energy consumption after	127.8	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	3.48	-	-	-	-
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CENTURY RAYON P. B. No. 22, Murbad Road Shahad – 421 103, Dist.:Thane (Maharashtra)					
Contact person who could be contacted for more information:					
V.K. Kasliwal - Energy Manager					

Energy Conservation Measure implemented in 2006-2007


ID to be filled by BEE	Title of the measure <i>Replacement of old boiler feed pump 01 no. AUX Plant. (Scheme 6)</i>	Sector <u>TEXTILE</u>			
Year to be filled by BEE		Technology : Energy Efficient Pumps & Motor			
Description of the energy conservation measure:					
<p><i>Boiler feed pump is used to feed the hot water to 4 nos. boilers in acid plant no. 1 & 2. Three nos. boiler feed pump are available, out of which one is running and other two pumps are standby. These pumps are multistage KSB make pumps. The capacity of each pump is 13.6 m³/hr having 170 meter head and power consumption 12.9 kW. In view of high consumption of power, one pump has been replaced with energy efficient "Grundfos" make pump having capacity 15 m³/hr & head 167 meter. This pump consumed 9.88 kW power only (Efficiency of 64.6 %). The Pump having high efficiency hence low power consumption</i></p>					
Picture before modification			Picture after modification		
					
Horizontal Pump			Vertical High Efficiency Pump		
Agency that executed the project (with complete address and email): <i>In - house</i>					
Total investment, Rs.: 1.25 Lakhs			Year of implementation: 2006-07		
First year energy cost savings			Rs.: 0.92 Lakhs		
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	113.004	-	-	-	-
Energy consumption after	86.549	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	3.48	-	-	-	-
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Contact person who could be contacted for more information:					
V.K. Kasliwal - Energy Manager					

Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure	Sector <u>TEXTILE</u>
Year to be filled by BEE	<i>Installed VFD to control the H₂ compressor speed to compress the excess H₂ gas which is venting to open air in Chemical Plant.(Scheme 7)</i>	Technology VFD

Description of the energy conservation measure:

Presently we are getting H₂ gas production about 15000 to 16000 m³/ day and about 800 to 1000 m³/ day is venting in open air. We have taken 2 Nos. VFD from Tyre cord and installed on compressor no. 1(A & B) and we analyzed that by reducing the RPM of Motor we are able to maintain the plant pressure normal as well as we are getting additional Hydrogen gas 800 to 1000 m³/ day. Initially installed VFD for Compressor no. 1 and after successful running we will install for no. 2 as a standby to compress the excess hydrogen which will vent to open air during any abnormality with compressor no. 1. This has resulted in additional Hydrogen gas by 800 m³/ day

Picture before modification	Picture after modification
<p>NO INSTALLATION OF VFD IN H₂ COMPRESSORS</p>	 <p>VARIABLE FREQUENCY DRIVE</p>

Agency that executed the project (with complete address and email): *In - house*

Total investment, Rs.: 10.00 Lakhs

Year of implementation: 2006-07

First year energy cost savings :- Saving realized in increased production

First year other savings, Rs.: 43.8 Lakhs

On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	-	-	-	-	-
Energy consumption after	-	-	-	-	-
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	Recovery of Hydrogen Gas in Rs Lakhs				43.80

Company complete address:

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