




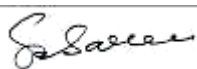


## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Installation of "Low Pressure Drop Efficient Centricleaners in PM 4".</b>	Sector : <i>Paper &amp; Pulp</i>
Year to be filled by BEE		Technology: <i>Imported</i>
<b>Description of the energy conservation measure:</b> <i>Replaced energy consuming Centricleaners with low pressure drop GL&amp;V Centricleaners with optimized pressure drop and higher consistency. Saved considerable power by reducing the BHP of the pumps in line by 22kW.</i>		
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>	
		
Agency that executed the project (with complete address and email): <i>GL&amp;V India Pvt. Ltd. Plot No. 2C, S. No. 162/4A-5A, Off. D.P. Road, Aundh, Pune 411007.</i>		
Total investment, Rs.: <i>28 Lakhs</i>	Year of implementation: <i>2007</i>	
First year energy cost savings, Rs.: <i>6.73 Lakhs</i>		
First year other savings, Rs.:		
On annual basis	kWh 000'	Coal (Tons)
Energy consumption before	<i>371424</i>	
Energy consumption after	<i>161000</i>	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<i>3.20</i>	
Company complete address: <i>ITC Limited, Paper Boards &amp; Specialty Papers Division, Unit-Tribeni,          Chandrahati, Dist: Hooghly, West Bengal - 712504</i>		We authorise Bureau to use this information for dissemination   Signature
Contact person who could be contacted for more information: <i>Mr. Sunil Ghosh – Senior Manager Energy</i>		Date: <i>29.09.08</i>




**Note: A CD containing the above information is enclosed with this booklet.**

## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Fan Pump of Paper Machine No.4 with energy efficient Fan Pump.</b>	Sector : <i>Paper &amp; Pulp</i>
Year to be filled by BEE		Technology: <i>Imported</i>
<b>Description of the energy conservation measure:</b> Replaced old 55MWC rated Fan Pump with 30MWC rated SULZER make Energy Efficient Fan Pump. The reduction in head was linked with replacement of Centricleaners. Running the Fan pump at its best operating point for energy conservation.		
<b>Picture/ sketch/ drawing before modification</b> (if available)		<b>Picture/ sketch/ drawing after modification</b>
		
Agency that executed the project (with complete address and email): <b>Sulzer Pumps India Ltd. 1015-1019 Ansal Tower,38 Nehru Place,110 019 New Delhi.</b>		
Total investment, Rs.: <b>32 Lakhs</b>		Year of implementation: <b>2007</b>
First year energy cost savings, Rs.: <b>4.04 Lakhs</b>		
First year other savings, Rs.:		
On annual basis	kWh 000'	Coal (Tons)
Energy consumption before	<b>805920</b>	
Energy consumption after	<b>679900</b>	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.20</b>	
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504		We authorise Bureau to use this information for dissemination   Signature  Date: 29.09.08
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy		




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Introduction of Third Press Nip in Paper Machine No. 3.</b>	Sector : <i>Paper &amp; Pulp</i>			
Year to be filled by BEE		Technology: <i>Imported</i>			
<b>Description of the energy conservation measure:</b> <i>Added a Third Press Nip in Paper Machine<sup>3</sup> to reduce pre-dryer moisture and steam consumption. This was an outcome from the several brainstorming sessions undergone post ENCON trainings in the UNIT.</i>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <i>Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</i>					
Total investment, Rs.: <i>67.5 Lakhs</i>			Year of implementation: <i>2007</i>		
First year energy cost savings, Rs.: <i>20.66 Lakhs</i>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before		<i>31059</i>			
Energy consumption after		<i>30023</i>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...		<i>1996</i>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit- Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination  <div style="text-align: center;">             Signature         </div>	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				Date: 29.09.08	



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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Introduction of Additional felt Suction roll before 3rd Nip in Paper Machine No. 3.</b>		Sector : <i>Paper &amp; Pulp</i>		
Year to be filled by BEE			Technology: <i>Imported</i>		
<b>Description of the energy conservation measure:</b> <i>Added an additional Press Suction Roll Prior 3<sup>rd</sup> Press Nip to increase the efficacy of the moisture removal and also improve productivity.</i>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <i>Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</i>					
Total investment, Rs.: <i>26.97 Lakhs</i>			Year of implementation: <i>2007</i>		
First year energy cost savings, Rs.: <i>10.33 Lakhs</i>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before		<i>30023</i>			
Energy consumption after		<i>29506</i>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...		<i>1996</i>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
				Date: 29.09.08	




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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Complete Automation of Paper Machine No.3 with DCS.</b>	Sector : <b>Paper &amp; Pulp</b>			
Year to be filled by BEE		Technology: <b>Imported</b>			
<b>Description of the energy conservation measure: Complete Automation of Paper Machine No.3 with state of the Art DCS technology ACS800xA from ABB. Multiple interlocks and most optimum control logics were used to save energy and steam consumption. In the process, various process control valves were also replaced to ensure finer controls and hence improve upon the objective of energy conservation.</b>					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
No DCS, manual controls with PID controllers in individual circuits.					
Agency that executed the project (with complete address and email): <b>ABB Peenya, Bangalore. India</b>					
Total investment, Rs.: <b>52.00 Lakhs</b>	Year of implementation: <b>2007</b>				
First year energy cost savings, Rs.: <b>18.51 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>15012500</b>	<b>29506</b>			
Energy consumption after	<b>14676500</b>	<b>29117</b>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>	<b>1996</b>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature  Date: 29.09.08	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					


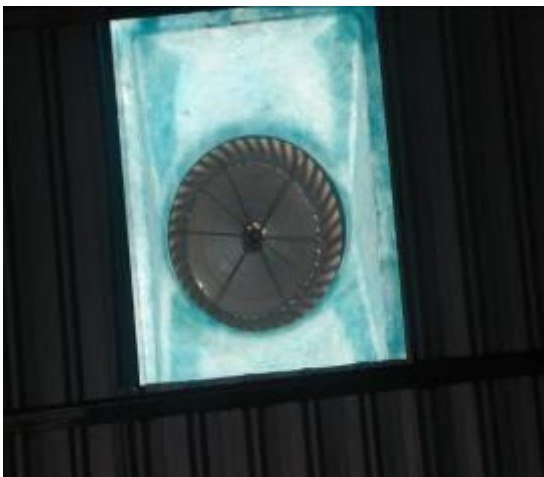
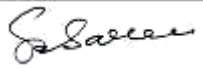
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Install translucent sheet and switchoff the lights in daytime in PM3 hall</b>		Sector : <i>Paper &amp; Pulp</i>		
Year to be filled by BEE			Technology: <i>Indigenous</i>		
<b>Description of the energy conservation measure:</b> This is a renewable energy usage project. The Entire floor of Paper Machine No.3 has been highlighted during daytime with only natural lighting, switching off all other Medium Bay 400W fittings. Thirty such translucent sheets has been utilized as a base frame for the New Turbo Blowers as explained in separate project. This was the TEAM outcome of a JH TPM team from PM3.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <i>Syuru.</i>					
Total investment, Rs.: <i>0.35 Lakhs</i>			Year of implementation: <i>2007</i>		
First year energy cost savings, Rs.: <i>1.01 Lakhs</i>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<i>32000</i>				
Energy consumption after	<i>0</i>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<i>3.2</i>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit- Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Install 30 Nos. of Wind Turbine Exhaust Fans to shut 18 nos. of Room Exhaust Fans in PM3&amp;4 Building.</b>		Sector : <i>Paper &amp; Pulp</i>		
Year to be filled by BEE			Technology: <i>Indigenous</i>		
Description of the energy conservation measure: <b>This is a renewable energy project. Extensive usage of 30Nos, <u>EV 31 S" Eco Ventilator of Syguru make Wind Turbo Blowers</u> were additionally provided supported on Translucent Fiber Base. This resulted in stoppage of 18 Nos. Exhaust Fans from PM3&amp;4 Floor. Outcome of TPM groups concerned with PM4 Team.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <a href="#">Syguru</a>					
Total investment, Rs.: <b>2.40 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>5.53 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>173000</b>				
Energy consumption after	<b>0</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Utmal 10E Vacuum Foil Box Pump replaced with energy efficient KVL300 Vacuum Pump in Paper Machine No.3</b>	Sector : <i>Paper &amp; Pulp</i>			
Year to be filled by BEE		Technology: <i>Indigenous</i>			
<b>Description of the energy conservation measure:</b> This is an outcome of a stretched energy conservation target by PM3 team. The 10E Vacuum Pump running for the Flat Boxes of PM3 was found to be consuming higher energy with respect to the norms. The same was replaced with a Kakati KVM 300 vacuum pump after a detailed study undertaken by the OEM. The selection of the vacuum pump was done on existing process requirements and operation at its best operating zone.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <a href="#">Kakati Kashyap.</a>					
Total investment, Rs.: <b>4.00 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>2.69 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>252289</b>				
Energy consumption after	<b>168194</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	



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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Suction Pick up cum press Zone 1, KVM1800 Vacuum Pump replaced with K202L in Paper Machine No.3.</b>		Sector : <i>Paper &amp; Pulp</i>		
Year to be filled by BEE			Technology: <i>Indigenous</i>		
Description of the energy conservation measure: This is an outcome of a stretched energy conservation target by PM3 team. The KVM1800 Vacuum Pump running for the Suction Pickup cum Press Zone1 of PM3 was found to be consuming higher energy with respect to the norms. The same was replaced with a Kakati K202L vacuum pump after a detailed study undertaken by the OEM. The selection of the vacuum pump was done on existing process requirements and operation at its best operating zone. The change from a M Cone to L Cone type vacuum pump was an outcome of the detailed study.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <a href="#">Kakati Kashyap.</a>					
Total investment, Rs.: <b>11.00 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>4.04 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>1261440</b>				
Energy consumption after	<b>1135296</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Introduction of Induction Profiler System in Paper Machine No.3.</b>	Sector : <b>Paper &amp; Pulp</b>			
Year to be filled by BEE		Technology: <b>Imported</b>			
<b>Description of the energy conservation measure:</b> <b>Designed by the inventor of Induction Calendering ABB's Induction Profiler uses AC Induction technology to deliver very efficient localized heating to a calender roll providing superior CD Control and roll heating. IGBT electronics provide continuous wave output and very high reliability. Advanced work coil design delivers a smooth, even heating pattern. Advantages: Up to 90% reduction in CD Caliper profile variation &amp; Fast recovery from sheet break, grade change and start-up conditions. The quality rejections have been reduced by more than 5% thus enhancing productivity and consuming reduced specific electrical and thermal energy.</b>					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
No CD Caliper Control over Soft Compact Calendar.					
Agency that executed the project (with complete address and email): <b>ABB</b>					
Total investment, Rs.: <b>190 Lakhs</b>	Year of implementation: <b>2007</b>				
First year energy cost savings, Rs.: <b>12.03 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>14676500</b>	<b>29117</b>			
Energy consumption after	<b>14457960</b>	<b>28865</b>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>	<b>1996</b>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Automatic Tail Threading Device installed after 2nd Nip and Third Nip to reduce paper reeling time in Paper Machine No.3.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
<b>Description of the energy conservation measure:</b> Paper reeling at a high machine speed was becoming difficult with each break and each grade change. The time taken for reeling tail in press section was more than 30minutes prior installation of Automatic tail feeding technology installed after 2 <sup>nd</sup> Press Nip and one prior Dryer Section. This has considerably improved the paper to paper time thus improving productivity over and above the idle power and steam consumption in Paper Machine.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <a href="#">Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</a>					
Total investment, Rs.: 18 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 5.27 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	14457960	28865			
Energy consumption after	14373890	28735			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	3.2	1996			
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>New Head Box in Paper Machine No.1</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
<b>Description of the energy conservation measure:</b> A detailed study undertaken by Allimand France suggested replacing the PM1 HeadBox to attain productivity heights with enhanced quality and lower quality rejections. This was also focused to improve overall energy efficiency of the Approach flow and Wire Part of Paper Machine1.					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
					
Agency that executed the project (with complete address and email): <a href="#">Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</a>					
Total investment, Rs.: <b>298.50 Lakhs</b>	Year of implementation: <b>2007</b>				
First year energy cost savings, Rs.: <b>26.80 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>13894903</b>	<b>10353</b>			
Energy consumption after	<b>13544612</b>	<b>9572</b>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>	<b>1996</b>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>New 4 Stage Low Pressure Drop and Efficient Centricleaners in Paper Machine No.1</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: <b>A detailed study undertaken by Allimand France suggesting replacing the PM1 Centricleaner System with Low Pressure Drop 4 Stage Centrifugal Cleaning System with Cyclotech Cleaners from Kadant. A straight away decrease in 37kW of connected load was achieved along with usage of high efficient pumps and super efficient motors in the total system.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <b>Kadant-Lamort, France</b>					
Total investment, Rs.: <b>70 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>8.32 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>736544</b>				
Energy consumption after	<b>476540</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Paper Machine No.1 Wire Part Extension by 3 Meter with other modifications to improve productivity and reduce drag load.</b>	Sector : <i>Paper &amp; Pulp</i>			
Year to be filled by BEE		Technology: <i>Imported</i>			
<b>Description of the energy conservation measure:</b> <i>A detailed study undertaken by Allimand France suggesting enhancement of Wire part by 3 mtrs, for better and smoother water removal along with introduction of New Ceramic Vacuum Foils, a Three Zone Suction Box and A New Dandy Roll. The entire project was aimed at enhancing energy efficiency and reduce quality rejections. An enhancement of machine speed by minimum 50MPM was also targeted and achieved.</i>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <i>Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</i>					
Total investment, Rs.: <i>150 Lakhs</i>			Year of implementation: <i>2007</i>		
First year energy cost savings, Rs.: <i>9.62 Lakhs</i>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<i>13544612</i>	<i>9572</i>			
Energy consumption after	<i>13369780</i>	<i>9370</i>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<i>3.2</i>	<i>1996</i>			
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Higher Diameter 2nd Nip Top Press Roll in Paper Machine No.1.</b>	Sector : <b>Paper &amp; Pulp</b>			
Year to be filled by BEE		Technology: <b>Imported</b>			
<b>Description of the energy conservation measure: The Nip pressure improvement through a higher diameter roll in 2<sup>nd</sup> Press Nip Top Roll reduced predryer moisture level thus conserving LP steam consumption in Paper Machine1. This was an inhouse idea implemented during machine modifications.</b>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
No picture available.					
Agency that executed the project (with complete address and email): <b>Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.</b>					
Total investment, Rs.: <b>124 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>3.11 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before		<b>9370</b>			
Energy consumption after		<b>9214</b>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...		<b>1996</b>			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacing 2 Nos. of Jhyla Refiners with 2 No. 28" Double Disc Refiners in Paper Machine No.1.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: Old and energy consuming Jhyla refiners (2 Nos. were replaced with Allimand Supplied State-of-art Double Disc Refiners specially designed for High Porosity Grade Paper in paper Machine No.1. This project resulted in an overall energy consumption reduction for Refining Area in Paper Machine No.1.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.					
Total investment, Rs.: 180 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 11.21 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	3924480				
Energy consumption after	3574080				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	3.2				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	






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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Jordon Refiner with 21" Tri-Disc Refiner in Paper Machine No.4.</b>	Sector : <b>Paper &amp; Pulp</b>			
Year to be filled by BEE		Technology: <b>Indigenous</b>			
<b>Description of the energy conservation measure: Old and inefficient Jordon Refiner having 250kW Slipring Motor was replaced with Parason Make Tri-Disc refiner having only 160kW Motor.</b>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <b>Parason Machinery Pvt. Ltd. India.</b>					
Total investment, Rs.: <b>60 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>6.73 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>1086240</b>				
Energy consumption after	<b>876000</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504					We authorise Bureau to use this information for dissemination
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					 Signature
					Date: 29.09.08



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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of 21 Nos. DC Variable Speed Drives with AC Variable Speed Drives in Paper Machine No.1.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported Drives, Indigenous Motors.		
Description of the energy conservation measure: All the sectional Variable Speed DC Drives of Paper Machine No.1 having KEC DC Motors and ABB Midi2 DC Drives were replaced with state of art ACS800 Drives and Energy Efficient Motor technology from ABB. The result was a straight minimum saving of 70kW load in the Machine Drives.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
   					
Agency that executed the project (with complete address and email): <b>ABB Peenya, Bangalore. India</b>					
Total investment, Rs.: <b>350 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>15.52 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>2482280</b>				
Energy consumption after	<b>1997280</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Complete Automation of Paper Machine No.1 with DCS.</b>	Sector : <b>Paper &amp; Pulp</b>			
Year to be filled by BEE		Technology: <b>Imported</b>			
<b>Description of the energy conservation measure: Complete Automation of Paper Machine No.1 with state of the Art DCS technology ACS800xA from ABB. Process Controls like Multiple interlocks and most optimum control logics were used to save energy and steam consumption. In the process, various process control valves were also replaced to ensure finer controls and hence improve upon the objective of energy conservation.</b>					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
No DCS					
Agency that executed the project (with complete address and email): <b>ABB Peenya, Bangalore. India</b>					
Total investment, Rs.: <b>58 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>12.96 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>13369780</b>	<b>9214</b>			
Energy consumption after	<b>13134384</b>	<b>8945</b>			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>	<b>1996</b>			
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	

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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Paper Machine No.1 Pope Reel Replacement to improve productivity.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: Roll Build-up was a constant issue increasing the quality rejections in Paper Machine No.1. A detailed study enabled us to understand the importance of introducing a Pope Reel specifically designed for Fine Tissues like in PM1. Quality rejections reduced drastically by more than 3% improving electrical energy and steam energy consumption per finished ton.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Allimand, BP21-1250 avenue jean JAURES, 38140 – RIVES, France.					
Total investment, Rs.: 235 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 6.48 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	13134384	8945			
Energy consumption after	13016686	8809			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2	1996			
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Worm Gear Boxes by Helical Gearboxes for Paper Machine Drives.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Indigenous			
Description of the energy conservation measure: <b>Worm Gears for Paper Machine Drives were replaced with Helical Gears specially designed to reduce the transmission energy losses in Paper Machine No.1</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <b>NewAllenbury Works Pvt. Ltd., Kolkata.</b>					
Total investment, Rs.: <b>6.00 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>1.22 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>88144</b>				
Energy consumption after	<b>50144</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Replacement of Paper Machine No.1 Flat Suction Box Vacuum Pump NASH'L-5' with NASH'CL-1001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
<b>Description of the energy conservation measure:</b> A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Nash L-5 pump in Flat Suction Boxes was replaced with NASH CL-1001 pump. A straight minimum saving of 6kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 6 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 1.35 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	224256				
Energy consumption after	182208				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				Date: 29.09.08	

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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 Suction Couch Vacuum Pump NASH'L-6' with NASH'CL-2001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: : A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Nash L-6 pump in Suction Couch was replaced with NASH CL- 2001 pump. A straight minimum saving of 15kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 3.36 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	378432				
Energy consumption after	273312				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 Suction Pick-up Vacuum Pump KVM-600 with NASH'CL-1001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Kakati KVM600 pump in Suction Pickup was replaced with NASH CL- 1001 pump. A straight minimum saving of 17.83kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 3.36 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	434496				
Energy consumption after	303496				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 Suction Press 1st Zone Vacuum Pump KVM-900 with NASH'CL-2001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Kakati KVM-900 pump in Suction Press 1 <sup>st</sup> Zone was replaced with NASH CL- 2001 pump. A straight minimum saving of 21kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 3.36 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	595680				
Energy consumption after	448675				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 Suction Press 2nd Zone Vacuum Pump KVM-900 with NASH'CL-2001', With Poly-V Belt System.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
<b>Description of the energy conservation measure:</b> A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Kakati KVM-900 pump in Suction Press 2 <sup>nd</sup> Zone was replaced with NASH CL- 2001 pump. A straight minimum saving of 15.4kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <a href="#">Nash Gardner Denver Nash Singapore Pte. Ltd.</a> No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 3.46 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	564845				
Energy consumption after	456844				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504   Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				We authorise Bureau to use this information for dissemination   Signature  Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 UHLE BOXES Bottom Felt Vacuum Pump KVM-900 with NASH'CL-2001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure: A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Kakati KVM-900 pump in Uhle Boxes Bottom felt was replaced with NASH CL- 2001 pump. A straight minimum saving of 15.8kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 2.94 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	348298				
Energy consumption after	256297				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 UHLE BOXES Top Felt Vacuum Pump KVM-900 with NASH'CL-2001', With Poly-V Belt System.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure A detailed study by NASH OEM, was conducted in Paper Machine No.1, surfacing the need to redesign the vacuum system with focus on energy conservation and also on paper making requirements as per grades manufactured. This project is an outcome from the study undertaken. Further value addition was done in adopting efficient belt transmission system "Poly-V technology" from Fenner. The old Kakati KVM-900 pump in UHLE boxes of Top felt was replaced with NASH CL- 2001 pump. A straight minimum saving of 13.12kw was achieved.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Nash Gardner Denver Nash Singapore Pte. Ltd. No. 1 Gul Link, Singapore 629371					
Total investment, Rs.: 9 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 3.55 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	537514				
Energy consumption after	426513				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Replacement of 2 Nos. 37kW          LT Induction Motor with          Super Energy Efficient          Motors.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
<b>Description of the energy conservation measure</b> A detailed internal study was conducted in assessment of Induction Motor Efficiency (taking into consideration its number of rewindings done). With more than 3 rewinding and less than 85% running efficiency we considered the motors for replacement. The second phase of motor efficiency tests conducted were with selected motors ranging 50HP and above. In this case 2Nos. 37kW LT Induction motors were replaced keeping other criterion similar with super efficient motors ILG series from Siemens Germany, resulting in a minimum saving of 1.72kW in running load.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <b>Siemens Ltd.</b>					
Total investment, Rs.: <b>3 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>0.38 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>199027.2</b>				
Energy consumption after	<b>187027.6</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit- Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				 Signature	
				Date: 29.09.08	




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of 3 Nos. 45kW LT Induction Motor with Super Energy Efficient Motors.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
Description of the energy conservation measure <b>A detailed internal study was conducted in assessment of Induction Motor Efficiency (taking into consideration its number of rewindings done). With more than 3 rewinding and less than 85% running efficiency we considered the motors for replacement. The second phase of motor efficiency tests conducted were with selected motors ranging 50HP and above. In this case 3Nos. 45kW LT Induction motors were replaced keeping other criterion similar with super efficient motors ILG series from Siemens Germany, resulting in a minimum saving of 2.28kW in running load.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <b>Siemens Ltd.</b>					
Total investment, Rs.: <b>5 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>0.51 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>256073</b>				
Energy consumption after	<b>240072</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
				Date: 29.09.08	



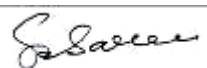
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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	<b>Title of the measure</b> <b>Replacement of 3 Nos. 90kW LT Induction Motor with Super Energy Efficient Motors.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
<b>Description of the energy conservation measure</b> A detailed internal study was conducted in assessment of Induction Motor Efficiency (taking into consideration its number of rewindings done). With more than 3 rewinding and less than 85% running efficiency we considered the motors for replacement. The second phase of motor efficiency tests conducted were with selected motors ranging 50HP and above. In this case 3Nos. 90kW LT Induction motors were replaced keeping other criterion similar with super efficient motors ILG series from Siemens Germany, resulting in a minimum saving of 4.14kW in running load.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <a href="#">Siemens Ltd.</a>					
Total investment, Rs.: <b>11 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>0.93 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>538355</b>				
Energy consumption after	<b>509354</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
				Date: 29.09.08	



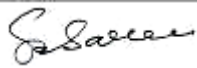
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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of 3 Nos. 75kW          LT Induction Motor with          Super Energy Efficient          Motors.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Imported			
<b>Description of the energy conservation measure</b> A detailed internal study was conducted in assessment of Induction Motor Efficiency (taking into consideration its number of rewindings done). With more than 3 rewinding and less than 85% running efficiency we considered the motors for replacement. The second phase of motor efficiency tests conducted were with selected motors ranging 50HP and above. In this case 3Nos. 75kW LT Induction motors were replaced keeping other criterion similar with super efficient motors ILG series from Siemens Germany, resulting in a minimum saving of 6 kW in running load.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): <b>Siemens Ltd.</b>					
Total investment, Rs.: <b>7.8 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>1.34 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>415855</b>				
Energy consumption after	<b>373850</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	<b>3.2</b>				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				Date: 29.09.08	



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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of 1 No. 160kW Finishing Refiner Motor with Super Energy Efficient Motor in PM1.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Imported		
Description of the energy conservation measure <b>A detailed internal study was conducted in assessment of Induction Motor Efficiency (taking into consideration its number of rewindings done). With more than 3 rewinding and less than 85% running efficiency we considered the motors for replacement. The second phase of motor efficiency tests conducted were with selected motors ranging 50HP and above. In this case 1No. 160kW LT Induction motor of PM1 Finishing Refiner was replaced keeping other criterion similar with super efficient motors ILG series from Siemens Germany, resulting in a minimum saving of 8 kW in running load.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <b>Siemens Ltd.</b>					
Total investment, Rs.: <b>5.5 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>1.79 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>971659</b>				
Energy consumption after	<b>915648</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
				Date: 29.09.08	




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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Incorporation of 3 Nos. 100kVA and 2 Nos. 50kVA Dry Type Transformers in Lighting Circuits to optimise Lighting Voltage Level and Save Energy.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Indigenous		
<b>Description of the energy conservation measure</b> As a matter of encon principle, Tribeni has optimized its lighting system energy consumption not by investing in LightSavers System but with its inhouse design of Dry type transformer ratings for optimizing the lighting voltage at 215Volt – 220volt with 440/380 volt multi-tap dry-type class C insulation and energy efficient transformers sourced from m/s Universal Magnetics Kolkata. The entire project of 3Nos. 100KVA and 2Nos.50KVA lighting transformers introduced has resulted in a minimum power saving of 6.5kW.					
Picture/ sketch/ drawing before modification (if available)		Picture/ sketch/ drawing after modification			
No lighting transformers prior project in respective areas.					
Agency that executed the project (with complete address and email): <a href="#">Universal Magnetics – Kolkata.</a>					
Total investment, Rs.: 14 Lakhs			Year of implementation: 2007		
First year energy cost savings, Rs.: 0.61 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	278569				
Energy consumption after	259556				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL	3.2				
...					
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy				Date: 29.09.08	




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### Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Incorporation of 10 Nos. 70Watt Metal Halide Flood Lighting replacing 10 Nos. 500 Watt Halogen Light Fittings in Paper Machine.</b>	Sector : Paper & Pulp			
Year to be filled by BEE		Technology: Indigenous			
<b>Description of the energy conservation measure</b> The Paper Machines TPM Teams had undertaken this initiative of getting all 500watt halogens used for specific spot lighting arrangements inside machine hood with 70watt metal halide fittings saving quantum energy.					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
					
Agency that executed the project (with complete address and email): Philips India					
Total investment, Rs.: 0.15 Lakhs	Year of implementation: 2007				
First year energy cost savings, Rs.: 0.11 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	35040				
Energy consumption after	31536				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	3.2				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination   Signature  Date: 29.09.08	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					




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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Shutting Down of 1No. 25HP Suction Water Pump in Paper Machine No.3.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: In-House		
Description of the energy conservation measure <b>There were 2 nos Suction Water Tank pumps delivering to Krofta and back to White Water Tank. The White Water Tank Pump of 25HP motor was shut down by the TPM Team in PM3 saving direct running power of 12kW after subtracting the increase in running load of the main pump. The supply to WW Tank was fed from the main pump.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
			Pump Dismantled.		
Agency that executed the project (with complete address and email): <b>In-House TPM</b>					
Total investment, Rs.: <b>Nil</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>2.69 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>84096</b>				
Energy consumption after	<b>0</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
				Signature	
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## Energy Conservation Measure implemented in 2007-2008

ID to be filled by BEE	Title of the measure <b>Replacement of Paper Machine No.1 Pocket Ventilation Fan with Energy Efficient One.</b>		Sector : Paper & Pulp		
Year to be filled by BEE			Technology: Indigenous		
Description of the energy conservation measure <b>The PM1 Pocket Ventilation fan was identified by our in-house technical team as consuming higher energy with respect to the amount of air at respective temperature serviced by the same. During PM1 modernization this project was also undertaken and carried out fruitfully providing a direct minimum power saving of 10.3kW.</b>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): <b>RITZ India Ltd.</b>					
Total investment, Rs.: <b>3.60 Lakhs</b>			Year of implementation: <b>2007</b>		
First year energy cost savings, Rs.: <b>2.30 Lakhs</b>					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>222854</b>				
Energy consumption after	<b>150796</b>				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	<b>3.2</b>				
Company complete address: ITC Limited, Paper Boards & Specialty Papers Division, Unit-Tribeni, Chandrahati, Dist: Hooghly, West Bengal - 712504				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr. Sunil Ghosh – Senior Manager Energy					
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				Date: 29.09.08	

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