




## Energy Conservation Measure implemented in 2007-2008



**(To be filled up separately for each Energy Conservation Measure)**

ID to be filled by BEE	Title of the measure <b><u>Improvements in street lighting</u></b>	Sector .....			
Year to be filled by BEE		Technology .....			
<b>Description of the energy conservation measure:</b>					
Fluorescent lamps & MV Lamps catered the street lighting in the campus. The street lighting was modified by incorporating the specially designed POT Optics luminaire with 2x 18w CFL Lamps with low wattage copper ballast giving more lumens output at reduced power consumption.					
135 fixtures of 2 x 40w & 15 fixtures of 250w MV Lamp were replaced by 2 x 18w CFL Lamps & it was observed that illumination increased by 40 % & the lighting power consumption reduced by 35 %					
<b>Picture/ sketch/ drawing before modification</b>			<b>Picture/ sketch/ drawing after modification</b>		
<b>Conventional tube light fixture</b>			<b>Energy Efficient T – 5 Lighting fixture with specially designed POT Optics luminaire</b>		
			 		
Agency that executed the project (with complete address and email): Self execution					
Total investment, <b>Rs.: 6 Lakhs</b>			Year of implementation: 2007-2008		
First year energy cost savings, <b>Rs.: 5.34 Lakhs</b>					
First year other savings, <b>Rs.: 1.0 Lakhs</b> (Up keep & maintenance charges)					
On annual basis	KWh 000	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>93.636</b>				
Energy consumption after	<b>24.624</b>				
Energy tariff, Rs/ kWh ...	<b>7.74</b>				
<b>Company complete address:</b> Kennametal India Ltd 8/9 <sup>th</sup> Mile, Tumkur Road Bangalore-560 073				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: N.M.JAI BHARATH					
				Signature	
				Date	

**Note:** Please submit this sheet separately for each Energy Conservation Measure implemented in 2006-2007.



**Energy Conservation Measure implemented in 2007-2008**

(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure		Sector .....		
Year to be filled by BEE	<b><u>Energy efficient Adiabatic Water cooling system</u></b>		Technology .....		
<b>Description of the energy conservation measure:</b> Centralised conventional cooling tower of 400 m <sup>3</sup> with 5 collecting tanks was upgraded by incorporating 5 numbers independent Adiabatic cooling tower with pressure/Flow/Temperature controls in closed loop by integrating with the (Variable frequency drive) VFD in the system.					
<b>Picture/ sketch/ drawing before modification</b> )			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): Self execution					
Total investment : Rs <b>47.11 Lakhs</b>			Year of implementation: 2007-2008		
First year energy cost savings : Rs <b>28.23Lakhs</b>					
First year other savings(Water), Rs.: <b>14.60 Lakhs</b>					
On annual basis	kWh 000	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	<b>759.2</b>				
Energy consumption after	<b>394.2</b>				
Energy tariff, Rs/ kWh ...	<b>7.74</b>				
<b>Company complete address: Kennametal India Ltd 8/9<sup>th</sup> Mile, Tumkur Road Bangalore-560 073.</b>				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: N.M.JAI BHARATH				Signature Date	


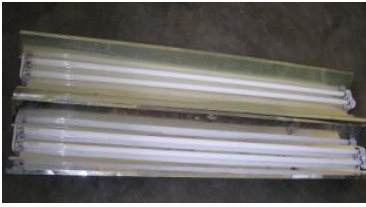

## Energy Conservation Measure implemented in 2007-2008

(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure <b><u>Efficient ventilation system</u></b>	Sector .....			
Year to be filled by BEE		Technology .....			
<p><b><u>Description of the energy conservation measure:</u></b>            The Ventilation systems in product units 1,2 &amp; 7 were upgraded by incorporating the following.</p> <p>a) Celldeck media was introduced in place of coir media for improving Humidification.</p> <p>b) Backward curved Energy efficient Kruger fans controlled by VFD With closed loop Temp.&amp; Humidity controls to ensure optimum power consumption with controlled working temperature of 25+/- 1 Deg.</p>					
<b>Picture/ sketch/ drawing before modification</b>			<b>Picture/ sketch/ drawing after modification</b>		
<p>Fan before modification</p> 			<p>Energy Efficient Kruger fans</p> 		
Agency that executed the project (with complete address and email): Self execution					
Total investment, Rs.: <b>31.4 Lakhs</b>			Year of implementation:		
First year energy cost savings, Rs.: <b>14.59 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>466.86</b>				
Energy consumption after	<b>278.34</b>				
Energy tariff, Rs/ kWh ...	<b>7.74</b>				
<p><b>Company complete address:</b> Kennametal India Ltd            8/9<sup>th</sup> Mile, Tumkur Road            Bangalore-560 073</p> <p>Contact person who could be contacted for more information:            N.M.JAI BHARATH</p>				<p>We authorise Bureau to use this information for dissemination</p> <p>Signature</p> <p>Date</p>	


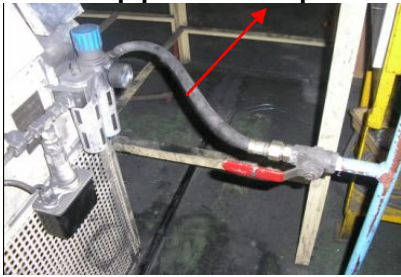

## Energy Conservation Measure implemented in 2007-2008

(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure	Sector. ....			
Year to be filled by BEE	<b><u>Improvements in shop floor Lighting</u></b>	Technology .....			
<b>Description of the energy conservation measure:</b> Improvement in shop floor lighting. Replaced 400w M V Lamps 48 nos by 2 x 54w Energy efficient T5 Lamps.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
400 W M V Lamp fittings			(2 x 54 w) 2 sets T5 Lamp		
					
					
Agency that executed the project (with complete address and email): Self execution					
Total investment, Rs.: <b>6.18 Lakhs</b>			Year of implementation: 2007 - 2008		
First year energy cost savings, Rs.: <b>4.89 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>120.336</b>				
Energy consumption after	<b>57.197</b>				
Energy tariff, Rs/ kWh ...	<b>7.74</b>				
<b>Company complete address:</b> Kennametal India Ltd 8/9 <sup>th</sup> Mile, Tumkur Road Bangalore-560 073				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: N.M.JAI BHARATH					
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## Energy Conservation Measure implemented in 2007-2008

(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure  <b><u>Compressed Air System improvement</u></b>	Sector .....
Year to be filled by BEE		Technology .....
<b>Description of the energy conservation measure:</b> In the compressed Air system the following improvements were done to conserve the energy, a) The FRL unit & Vortex pneumatic guns are provided at cleaning stations to optimize compressed air usage. b) Optimised the Pressure settings of the compressor with VFD to achieve constant pressure in all the three shifts by monitoring the compressed air requirement in shifts. c) Air receivers are added at different shop floors to reduce the pressure setting of Air compressor. d) Motorised valves are installed at main inlet to shop floors to close the line when not in use. e) The pneumatic pipes connecting the main line with the machines were replaced with flexible high pressure rubber pipes with proper fittings to eliminate leaks in the joints.		
<b>Before modification</b>	<b>After modification</b>	
	<b>Pneumatic pipe with leak proof fittings</b> 	
 Air pressure regulator with Vortex gun provided in all cleaning stations		
Total investment, Rs.: <b>4.94 Lakhs</b>		Year of implementation: 2007 - 2008
First year energy cost savings, Rs.: <b>5.26 Lakhs</b>		
First year other savings, Rs.:		
On annual basis	kWh 000	Coal (Tons)
Energy consumption before	<b>832</b>	
Energy consumption after	<b>764</b>	
Energy tariff, Rs/ kWh ...	<b>7.74</b>	
<b>Company complete address:</b> Kennametal India Ltd 8/9 <sup>th</sup> Mile, Tumkur Road Bangalore-560 073		We authorise Bureau to use this information for dissemination
Contact person who could be contacted for more information: N.M.JAI BHARATH		Signature
		Date