








Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <u>Energy Efficient lighting</u>	Sector			
Year to be filled by BEE		Technology			
Description of the energy conservation measure:					
Fluorescent Lights in shop floor were replaced with energy efficient T-5 Lamps with electronic ballast to reduce the power consumption & improve illumination levels. 540 fitting/ fixtures were replaced & it was observed shop floor illumination increased by 40 % & the lighting power consumption reduced by 35 %					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
Conventional tube light fixture			Energy Efficient T – 5 Lighting fixture		
					
Agency that executed the project (with complete address and email):					
Total investment, Rs.:1000000			Year of implementation: 2006-2007		
First year energy cost savings, Rs.:21.25 Lakhs					
First year other savings, Rs.: 4.0 Lakhs (Up keep & maintenance charges)					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	936				
Energy consumption after	616				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: Kenametal India Ltd 8/9th 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	

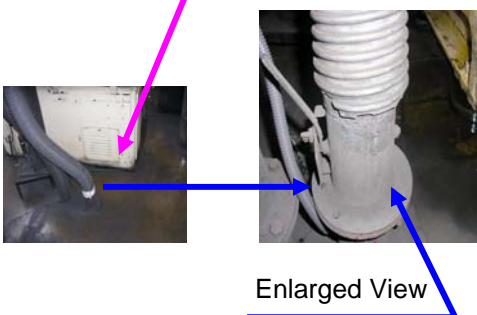
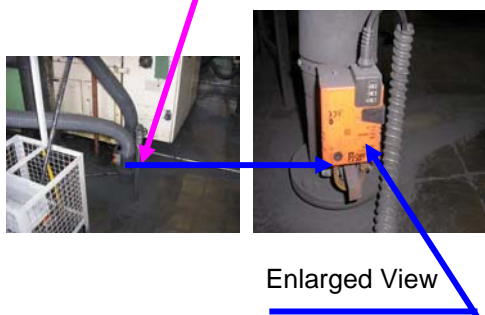
Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure Cooling water system improvement	Sector			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: For the centralised Cooling Water System Variable Frequency Drive (VFD) with pressure control was introduced & for the cooling tower fan VFD was installed with closed loop feed back from Temperature sensor to optimize the power consumption.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
<p style="color: magenta; margin: 0;">Controls with out VFD</p> 	<p style="color: magenta; margin: 0;">Controls with VFD</p>  <p style="margin: 5px 0 0 0;">Pressure transducer Temperature Sensor</p> 				
Agency that executed the project (with complete address and email):					
Total investment : Rs 5 Lakhs	Year of implementation: 2006-2007				
First year energy cost savings : Rs 6.97 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	525				
Energy consumption after	420				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: Kenametal India Ltd 8/9th 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	


Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b style="color: green; text-decoration: underline;">Efficient ventilation system	Sector			
Year to be filled by BEE		Technology			
Description of the energy conservation measure:					
In the existing ventilation system of Dies shop, Inserts shop & Sintering Dept. a) Energy Efficient Kruger fans were installed b) Celdek pads were installed in place of coir media for efficient humidification & the temperature of the shop floor was maintained at a comfortable working temperature of 25 +/- 1 Deg C by VFD monitored by Temp / Humidity sensor.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
Fan before modification 			Energy Efficient Kruger fans 		
Agency that executed the project (with complete address and email):					
Total investment, Rs.: 13 Lakhs			Year of implementation:		
First year energy cost savings, Rs.: 10.62 Lakhs					
First year other savings Rs :					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	464				
Energy consumption after	304				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: <b style="text-align: center;">Kennametal India Ltd 8/9th 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	



Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <u>Dust collector improvement</u>	Sector			
Year to be filled by BEE		Technology			
<u>Description of the energy conservation measure:</u>					
<p>In order to ensure optimum power consumption by the centralised dust collector in the Shaping Dept. Engineering Measures were introduced:</p> <ol style="list-style-type: none"> a) Belimo actuators were installed in the suction lines of the M/c to ensure automatic closing of suction when M/cs are not in use. b) AVFD was installed on the motor of the suction blower to regulate the speed of the motor as per the requirement through a close loop pressure sensor. 					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
<p><u>Dust Collector with out actuator</u></p>  <p style="text-align: center;">Enlarged View</p>			<p><u>Dust Collector with Belimo actuator</u></p>  <p style="text-align: center;">Enlarged View</p>		
Agency that executed the project (with complete address and email):					
Total investment, Rs.: 3 Lakhs			Year of implementation:		
First year energy cost savings, Rs.: 3.18 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	120				
Energy consumption after	64				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: Kennametal India Ltd 8/9th Mile, Tumkur Road Bangalore-560 073				We authorise Bureau to use this information for dissemination Signature Date	
Contact person who could be contacted for more information: N.M.JAI BHARATH					

Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <u>Compressed Air System improvement</u>	Sector			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: In the compressed Air system the following improvements were done to conserve the energy a) The lines were redesigned for optimum flow of compressed air to reduce the frictional losses & pressure drop. b) A Compressor with VFD was installed to optimize the power consumption during 3 rd shift & holidays. 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.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
			Compressor with VFD & Air Receiver 		
Agency that executed the project (with complete address and email):					
Total investment, Rs.: 13 Lakhs			Year of implementation:		
First year energy cost savings, Rs.: 5.81 Lakhs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	693				
Energy consumption after	606				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: Kennametal India Ltd 8/9th Mile, Tumkur Road Bangalore-560 073				We authorise Bureau to use this information for dissemination Signature Date	
Contact person who could be contacted for more information: N.M.JAI BHARATH					

Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b style="color: green; text-decoration: underline;">2 MW DG Set Waste Heat Recovery Project	Sector			
Year to be filled by BEE		Technology			
<u>Description of the energy conservation measure:</u>					
<p><u>Earlier Method</u> : The Exhaust gases from the 2MW Diesel Generator at 320 Deg c is discharged to Atmosphere through 42 Meters Stack as per the Environmental Regulations .</p> <p><u>Present Method</u> : The Exhaust gases are passed through HRU (Heat Recovery Unit) to exchange The Heat from the Exhaust gas to the Thermic Fluid which gets heated up to 200 Deg C which in turn is circulated through Secondary Heat Exchangers to</p> <ul style="list-style-type: none"> a) Heat the Furnace Oil used in Captive Power Plant which were earlier heated by Electrical Heaters thus Reducing the Power Consumption . b) Heat the Thermic Fluid in Atomiser and Vogele Mixer which were earlier heated by Electrical Heaters thus reducing the Power consumption. c) Heat the Water which in turn circulated through VAM (Vapor Absorption Machine) to chill the Water which was earlier chilled through Compressor thus reducing the Power Consumption . 					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
	Heat Recovery Unit installed for DG set  <small>PDF created with pdfactory trial version www.pdfactory.com</small>				
Agency that executed the project (with complete address and email):					
Total investment, Rs.:188 Lakhs	Year of implementation:2006-2007				
First year energy cost savings, Rs.:70 Lakhs					
First year other savings, Rs.: 20 Lakhs					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	1890				
Energy consumption after	840				
Energy tariff, Rs/ kWh ...	6.64				
Company complete address: <b style="text-align: center;">Kennametal India Ltd 8/9th Mile, Tumkur Road Bangalore-560 073				We authorise Bureau to use this information for dissemination Signature Date	
Contact person who could be contacted for more information: N.M.JAI BHARATH					