






Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure Elimination of Air Wastage during Moisture Removal from Air Receivers	Sector: Tyre Industry.....			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: Elimination of Air Wastage by replacing Fixed Time based Air Moisture Drain by Level Sensing based Air Moisture Traps.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
					
Fixed Time based Air Moiture Drain	Level sensing based Air Moisture Trap				
Agency that executed the project (with complete address and email): Self					
Total investment, Rs.:2.2	Year of implementation:2006-07				
First year energy cost savings, Rs.:3.84 lkhs					
First year other savings, Rs.:76.56					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	106.75	N.A	N.A	N.A	
Energy consumption after	105.87	N.A	N.A	N.A	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.16 Rs/Kwh	N.A	N.A	N.A	
Company complete address: Apollo Tyres Ltd. Limda Village, Waghodia Taluka, Dist Vadodara 391 760				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Sandeep Sharma mobile : +919825500154				Signature Date	


Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure Air wastage Elimination by providing interlock with the Machine.	Sector Tyre Industry.....			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: Manual Hand Valve used to operated by operator manually to clean the Tyre Mould with Compressed Air. Some times this valve tends to not closed fully so continous air wastage was taking place. Existing interlock valve provided to shut –off the Air when it is not required.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
					
Agency that executed the project (with complete address and email):Self					
Total investment, Rs.:2.6 lakhs	Year of implementation:2006-2007				
First year energy cost savings, Rs.:2.9					
First year other savings, Rs.:76.56 lakhs					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	30250	N.A	N.A	N.A	
Energy consumption after	30050	N.A			
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	Rs 4.16/Kwh				
Company complete address: : Apollo Tyres Ltd. Limda Village, Waghodia Taluka, Dist Vadodara 391 760				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Sandeep Sharma mobile : +919825500154				Signature	
				Date	


Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure Voltage Regulation for Plant Lighting	Sector Tyre Industry.....			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: Plant Lighting Voltage Reduced from 415 VAC to 380 VAC . by proving voltage Regulator.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
<p style="text-align: center;">No Voltage Regulation Available</p> <p style="text-align: center;">415 VAC</p>	<div style="text-align: center;">  </div> <p style="text-align: center;">Input Voltage 415VAC Output Voltage 380 VAC</p>				
Agency that executed the project (with complete address and email):Self					
Total investment, Rs.:14.8	Year of implementation:2006-2007				
First year energy cost savings, Rs.:14.5					
First year other savings, Rs.:76.56					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	38.5	N.A	N.A	N.A	
Energy consumption after	35	N.A	N.A	N.A	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	4.16Rs/Kwh				
Company complete address: Apollo Tyres Ltd. Limda Village, Waghodia Taluka, Dist Vadodara 391 760				We authorise Bureau to use this information for dissemination Signature Date	
Contact person who could be contacted for more information: Sandeep Sharma mobile : +919825500154					

Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure Measuring Instruments for Gas & Steam Consumption Monitoring in Boiler House.	Sector Tyre Industry.....			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: Flow meters for Boiler Gas Consumption and Steam generation Installed for Measurement ,Monitoring and Control of Energy.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
Was Not Available	 <p style="text-align: center; margin-top: 10px;">Existing Flow meters</p>				
Agency that executed the project (with complete address and email):Self					
Total investment, Rs.:12.2 lakhs	Year of implementation:2006-2007				
First year energy cost savings, Rs.: Virtual Cost not Calculated.(Better Monitoring & Control of the Energy Usage.)					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	N.A				
Energy consumption after	N.A				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...					
Company complete address: : Apollo Tyres Ltd. Limda Village, Waghodia Taluka, Dist Vadodara 391 760				We authorise Bureau to use this information for dissemination Signature Date	
Contact person who could be contacted for more information: Sandeep Sharma mobile : +919825500154					

Energy Conservation Measure implemented in 2006-2007

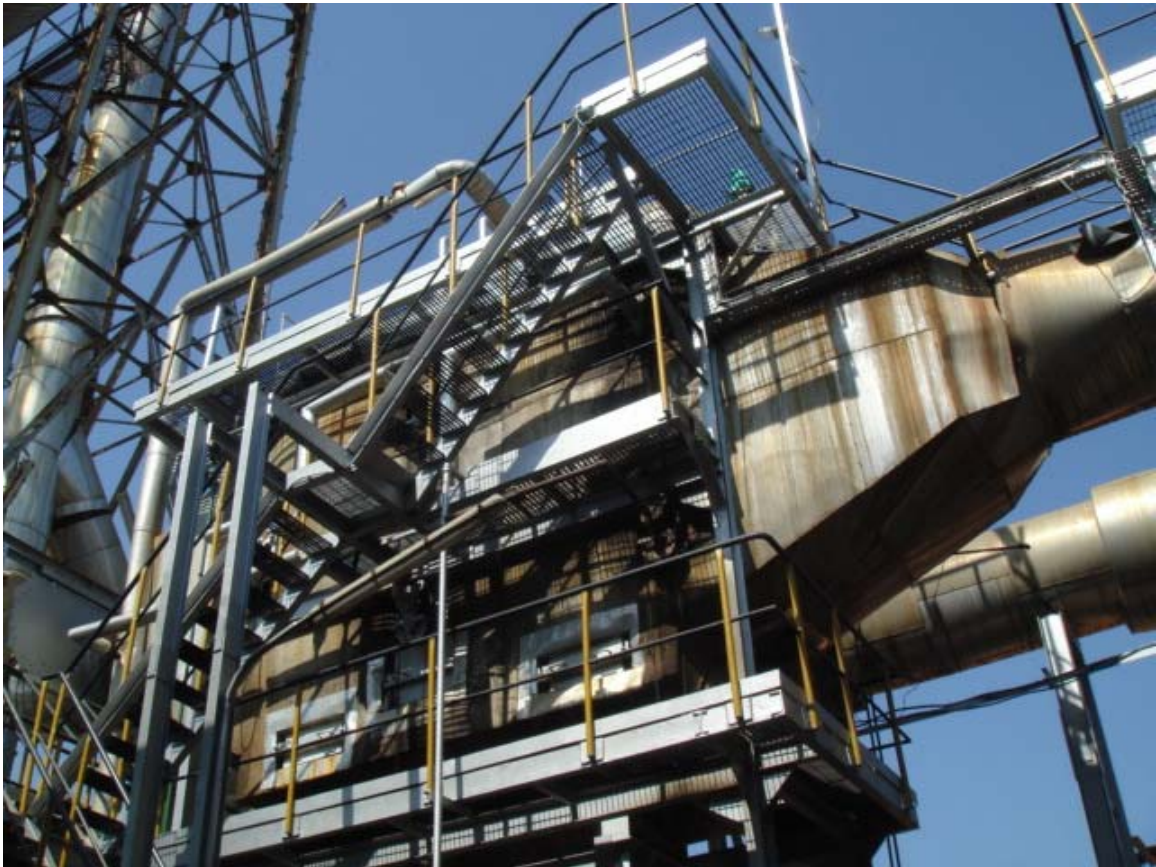
ID to be filled by BEE	Title of the measure Power factor Improvement	Sector Tyre Industry.....			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: Power factor Improvement from 0.65 to 0.95 at Machine load Centers (Curing Ventillation Fans) from 0.65 to 0.95.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
<p>Capacitors not Available</p>					
Agency that executed the project (with complete address and email):Self					
Total investment, Rs.:0.7 lakhs			Year of implementation:		
First year energy cost savings, Rs.:6.7 lakhs					
First year other savings, Rs.:76.56 lakhs					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	12.5	N.A	N.A	N.A	
Energy consumption after	10.88	N.A	N.A	N.A	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	Rs 4.16Rs/K wh				
Company complete address: Apollo Tyres Ltd. Limda Village, Waghodia Taluka, Dist Vadodara 391 760				We authorise Bureau to use this information for dissemination	
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				Date	

Low Nox Gas Turbine Commissioned in Year 2005-06



Waste Heat Recovery Steam Generator Installed for Gas Turbine Year 2005-2006

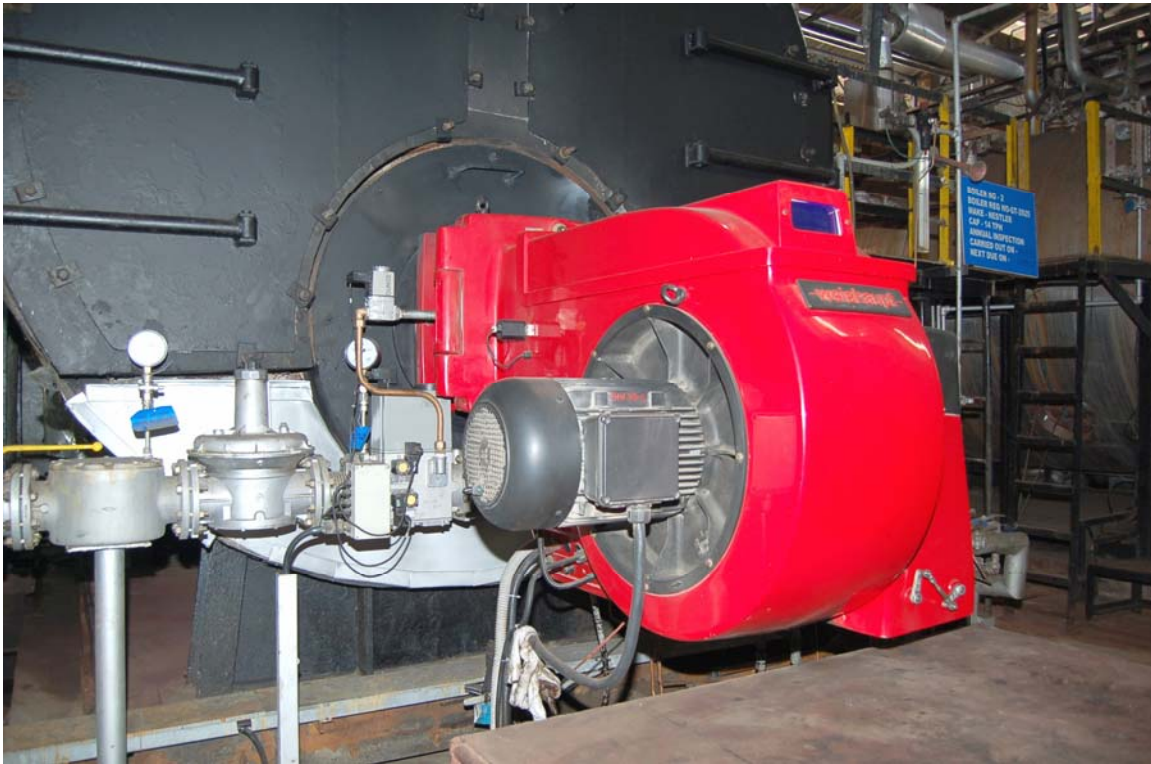
(Carbon Credit CER:13438 Nos Alloted for this Project by UNFCC)

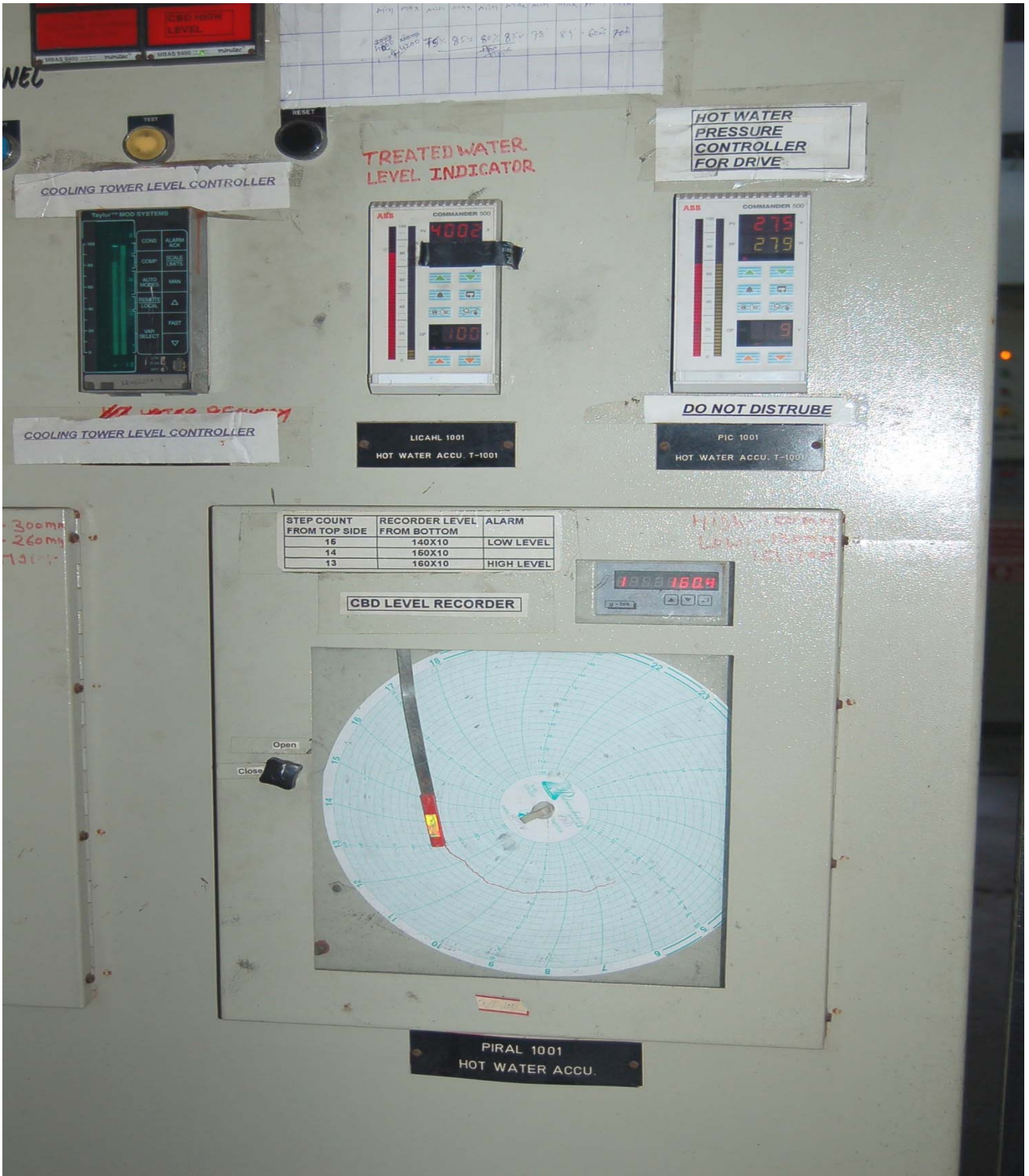


Replacement of Conventional Cooling Tower with Energy Efficient Cooling Tower: Year 2005-2006



Fuel Switching from Furnace Oil to Natural Gas(Furnace Oil Conventional Burners Replaced with Energy Efficient Gas Burners.)





Control Panel for Controlling and Monitoring Of Energy Parameters.

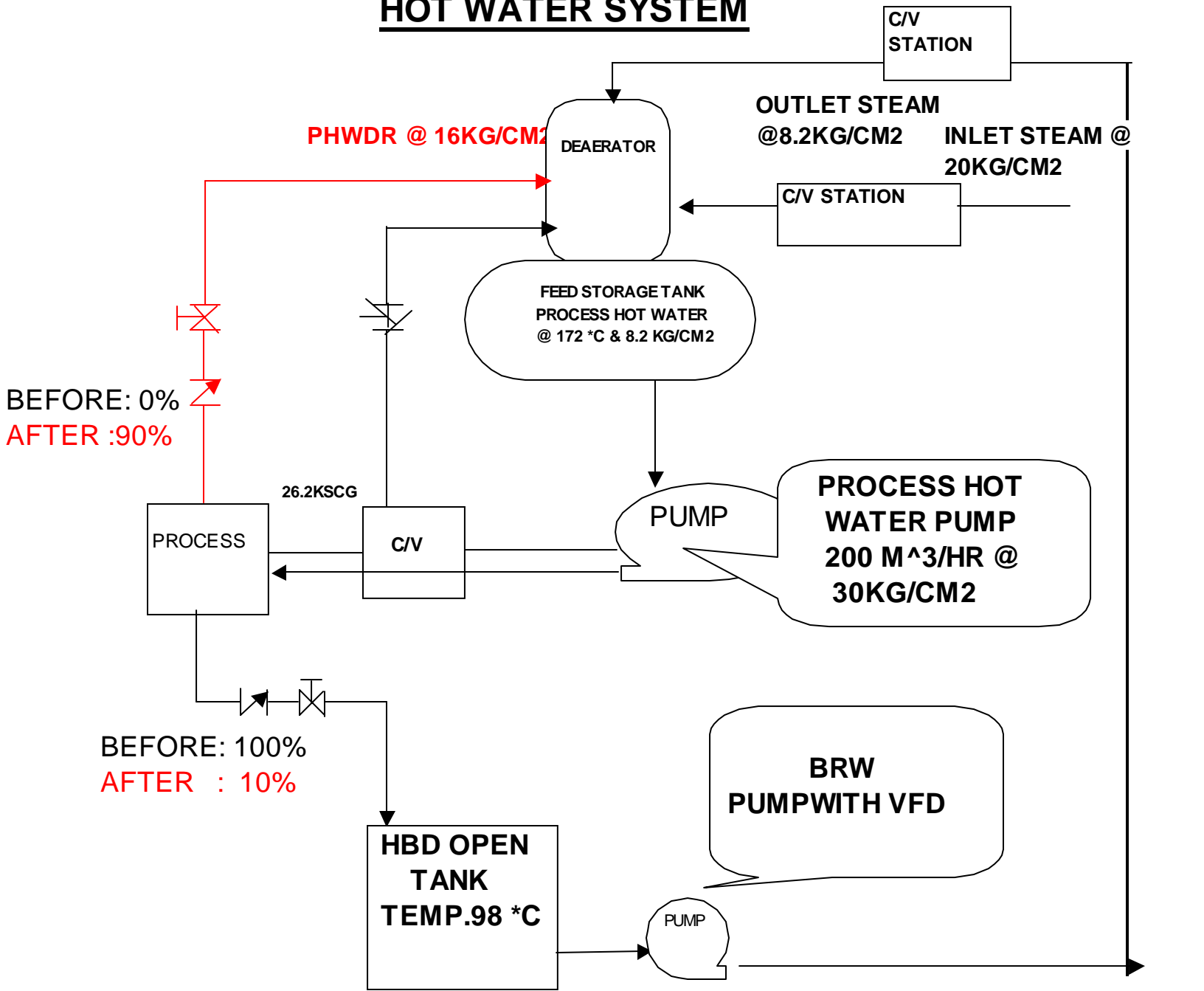


Replacement of Conventional Centrifugal Pumps with Energy Efficient Pumps.



3 Roll Calendar Variable Speed Drive Panel

HOT WATER SYSTEM



LEGEND

MODIFIED LINE

OLD LINE

PHWR- PROCESS HOT WATER RETURN
PHWDR- PROCESS HOT WATER DIRECT RETU
BRW- BAG RETURN WATER
HBD- HOT BLOW-DOWN

Implemented in 2004-2005



Waste Heat Recovery System of Gas Turbine





Project Report

[Schematic](#)

Subject :

- 1) To stop Chilled water dedicated pump for krupp extruder and capacity optimisation of Chilled water return pump running for VAC at Extruder Chiller room
- 2) Stand by pump to be availed for VAC which is not available
- 3) Waste of chilled water from Dual extruder skiver to be eliminated by giving chilled water return water

Activity carried out :

- 1) Flow requirement for Dual,8" and krupp was identified
- 2) After this existing pump capacity was measured
- 3) After stoppage of one VAC it was possible to divert the flow to Krupp extruder
- 4) It was observed that pressure drop across old line to krupp extruder was 4 kg/cm² which was very high
- 5) Trial taken after stoppage of CWRP # 2 and Krupp to be fed from CWRP # 1
- 6) Pressure was observed 2.1 Kg/cm² against specification of 3.2 Kg / cm²
- 7) New line fabricated from CWR # 1 To Krupp extruder
- 8) After pipeline work presuure was observed 4.4 kg/cm² at Krupp extruder
- 9) One tapping is taken from this line 1.5" for Dual extruder skiver

Benefits:-

Tangible :

- 1) Before project CWRP # 1 & CWRP # 2 together drawing $38.6 + 41.3 = 79.9$ Amp
After commissining of project CWRP # 2 is now drawing 52 Amp
Amp saved = 27.9
In TERMS OF kw = 17.64749 KW
In TERMS OF money = 1905.929 Rs / day = 668980.9 Rs / year

Intangible

- 1) Maintenance is easy as Stand by pump is now available for Both VAC and krupp extruder
- 2) Chilled water wastage is stopped as return water is fed to D/E skiver inspite of Chilled water

Total project expense was around 1.5 lacs (pipeline fabrication + insulation)

CHILLED WATER SYSTEM

