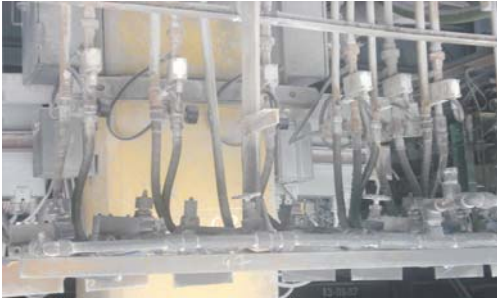


## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Extra capacity of Main Air slide Fans are utilized in fluidization purpose of secondary discharge air slide thus stopping the Secondary Discharge Air slide fan of Fume Treatment Plant of PL # 1, 2 &amp; 3 by suitable modification in discharge headers.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b> In our fume treatment plant of Pot line # 1 to 3, high-pressure fans are used for the fluidizing of Secondary discharge air slides having motor rating of 15 kW in each line running 24 hours/day. After measurement it is noticed that main air slide fans are running under capacity having motor rating of 55 to 60 HP. To Utilize the extra capacity of Main Air slide Fans modification in pipe line of secondary air slide fan is done and connected with main air slide. With this modification operation of Secondary Discharge Air slide fan is stopped.					
<b>Picture/ sketch/ drawing before modification</b> <small>(if available)</small>	<b>Picture/ sketch/ drawing after modification</b>				
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 0.12 Lac	Year of implementation: 2006-2007				
First year energy cost savings, Rs.: 4.00 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	211.569				
Energy consumption after	0.00				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Reducing the compressed air pressure during holding time of Point feeder by modifying the circuit to save the compressed air in Pot line # 2 to 11.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<p>Description of the energy conservation measure:</p> <p>In our pot cells of Smelter, alumina is fed into pot automatically as per the signal of Celtrol. According to celtrol, point feeder operates and alumina goes into pot. There are two point feeders provided in each pot. These point feeder cylinder and piston operates pneumatically i.e. by compressed air. The compressed air pressure required to operate the cylinder is about 4 Kg. The operating time of cylinder is very less as compared to holding time. The pressure remains same in both the cases i.e. during operation of the piston and holding of the piston. Higher pressure during holding time calls for air leakage through the seals of piston. To overcome this problem a regulating valve has been provided in circuit of air line of each pot whose main function is to reduce the pressure to 2 Kg/Cm<sup>2</sup> from the 4 Kg/CM<sup>2</sup> thus reducing the air leakage leading to conservation of compressed air. This modification is carried out in all the remaining pot lines (PL- 2 to 11) after encouraging result in Pot line –1.</p>					
<b>Picture/ sketch/ drawing before modification (if available)</b>		<b>Picture/ sketch/ drawing after modification</b>			
					
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 99.42 Lac		Year of implementation: 2006-2007			
First year energy cost savings, Rs.: 48.80 lacs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	27660				
Energy consumption after	25078				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Individual point feeder operation in Pot Line II to improve the current efficiency.</b>		Sector: Aluminium			
Year to be filled by BEE			Technology: Kaiser			
<b>Description of the energy conservation measure:</b>						
<p>In our pot cells of Smelter, alumina is fed into pot automatically as per the signal of Celtrol. According to celtrol, point feeder operates and alumina goes into pot. There are two point feeders provided in each pot. As per the command of celtrol both the point feeders operate at a time and alumina is fed into the cell. On trial basis we have modified the circuit in one of our pot line so that only one point feeder operate at a time to improve the current efficiency. After this modification the current efficiency of pot line – 3 is improved by 0.003%</p>						
<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): In house						
Total investment, Rs.: 10 Lac			Year of implementation: 2006-07			
First year energy cost savings, Rs.: 2.48 Lac						
First year other savings, Rs.: Nil						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before	414696					
Energy consumption after	414565					
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89					
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Provision of ON/OFF switches in addition to timer in the lighting circuit of DSS platforms to reduce the ON time.</b>				Sector: Aluminium	
Year to be filled by BEE					Technology: Kaiser	
<b>Description of the energy conservation measure:</b> Light fittings of our DSS platforms are provided with timer. These lights remain ON for the whole night. During the survey it was observed that there is no need of continuous glowing of these lights through out the night hence a separate ON/OFF switch is provided at the entrance of the platform so that these lights can be used only when required.						
<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): In house						
Total investment, Rs.: 15 Lac			Year of implementation: 2006-2007			
First year energy cost savings, Rs.: 0.93 Lac						
First year other savings, Rs.: Nil						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before	67.452					
Energy consumption after	18.396					
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89					
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007		

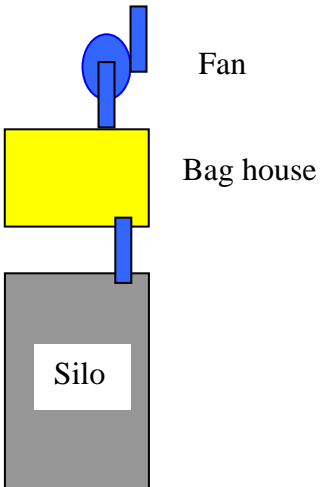
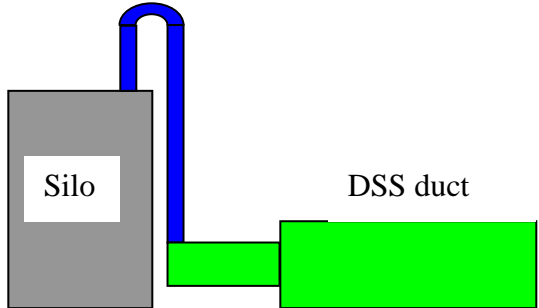
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>To reduce energy consumption/Ton of Aluminium produced by reducing stub to carbon drop in Pot Line-3 by changing the stub dia.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b> Stub to Carbon Voltage drop contributes significantly towards energy consumption/T of metal produced. In order to reduce this loss it was decided to optimize stub diameter. Initially 180 mm dia in place of 130 mm stub was used to reduce the S-C drop. Although S-C drop reduced substantially from 125 mV to 70 mV for 180 mm stub diameter but butt cracking also increased substantially. Experiments were conducted to optimize stub diameter to reduce butt cracking with view to gain maximum from reduced Stub-to-Carbon drop. Use of 160 mm diameter stubs reduced S-C drop from 120 mV to 80 mV but butt cracking still persisted. To overcome the problem of butt cracking cast iron thickness around stub was increased on experimental basis, which resulted in substantial reduction in butt cracking. Initial trials were performed with increased cast iron thickness & gradually it was also optimized to 13 mm. During the FY 06-07 implementation was done in pot line-3 only.					
<b>Picture/ sketch/ drawing before modification</b> <small>(if available)</small>			<b>Picture/ sketch/ drawing after modification</b>		
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 18 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 52.98 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	11679				
Energy consumption after	8876				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	


## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation of FRP fan in place of metallic blade in cooling towers of Reduction Plant - 2.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b> In our Reduction Plant – 2, Centrifugal compressors are equipped with 3 numbers cooling tower. These cooling towers having the metallic fan blade. During FY 06-07, these metallic fan blades were replaced with FRP fan blade to save the power.					
<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): In house					
Total investment, Rs.: 0.90 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 1.38 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	396.916				
Energy consumption after	324.120				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Stopped the operation of enriched alumina silo filter bag house fan by connecting the duct with main bag house duct of FTP in Pot line # 6.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
In our pot line # 6 a bag house is installed for arresting the dust of enrich alumina silo. Seeing the big capacity of main DSS fan it was decided to remove the fan of enrich alumina silo bag house and connect the duct with main DSS duct so that energy of small fan can be saved accordingly modification was carried out.					
<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): In house					
Total investment, Rs.: 0.08 Lacs			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 0.79 Lacs					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	42.048				
Energy consumption after	0.00				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Replacement of inefficient open type impeller fan with energy efficient backward curve impeller fan in Baking furnace # 3.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
Baking furnace is used for baking the green anode. Our Baking furnace # 3 was equipped with two numbers ID fan having open type impeller. During the audit it was found that these fans are very old and inefficient from energy point of view. Hence it was decided to replace this fan with backward curve impeller fan. During the FY 06-07 one fan was replaced and we are running this fan only and old one is kept as standby.					
<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): In house					
Total investment, Rs.: 5.00 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 21.17 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	3238				
Energy consumption after	2118				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

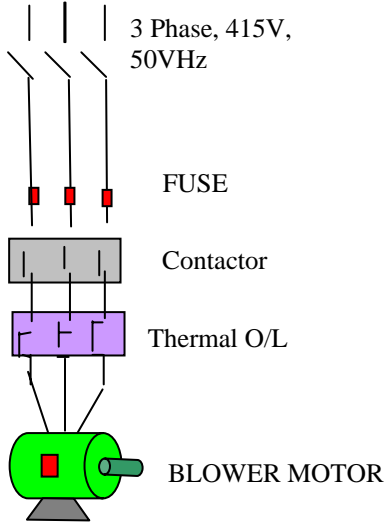
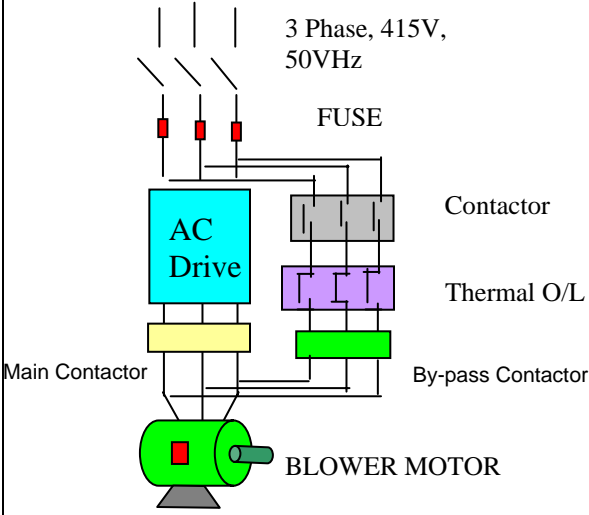
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Interlocking of FTP heater of Paste Plant with the temperature of duct gas thus preventing the idle running of Heater.</b>				Sector: Aluminium
Year to be filled by BEE					Technology: Kaiser
Description of the energy conservation measure:					
<p>There are 5 heaters of 39 kW each are installed in FTP of old circuit of Paste Plant for maintaining the anode paste temperature. During audit it was found that these heaters remain on all the time where as it is required only during use of anode press. Use of anode press is reduced due to commissioning of Vibro compactor. Now these heaters have been interlocked and change has been done in PLC so that it will ON only when the anode press circuit comes in operation.</p>					
<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): In house					
Total investment, Rs.: Nil			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 20.05 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	1591.2				
Energy consumption after	530.4				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

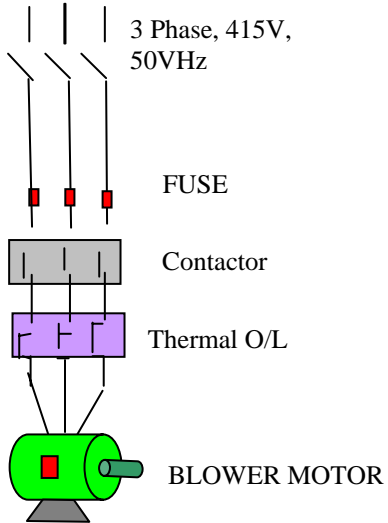
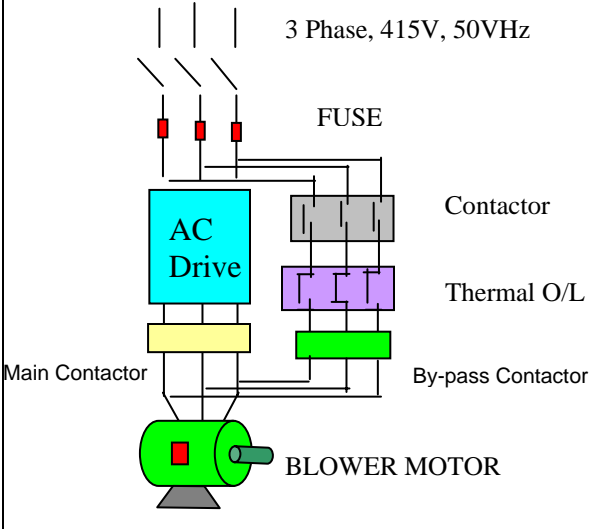
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Stopped the unwanted continuous blowing of compressed air by providing the solenoid valve, timer and PLC program modification.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
<p>In our Rodding shop, shot blast machine is used for butt cleaning. In the machine there are two main chambers, blasting chamber &amp; blow off chamber. In blow off chamber shots are removed from top of butt. Two blow off headers are installed in butt cleaner. Since the commissioning of machine, blow off got started with machine &amp; continuously compressed air remains open with machine where as the supply of butt is intermittent. Also a limit switch is provided at the entry track of power &amp; free conveyer to start the blasting of shots to clean the butt.</p> <p>To avoid the wastage of compressed air, air line modification has been done and a solenoid valve is provided along with timer and PLC program is modified in such a manner that after operating limit switch, blast on time is 94 sec &amp; blow off time 120 sec, in absence of butt, blow off shut off by solenoid valve.</p>					
<b>Picture/ sketch/ drawing before modification</b> <small>(if available)</small>			<b>Picture/ sketch/ drawing after modification</b>		
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 0.05 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 1.75 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	447.483				
Energy consumption after	354.638				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation of AC drives in motors of FTP fans &amp; blower of Pot lines of Pl - 2.</b>	Sector-Aluminum			
Year to be filled by BEE	<b>Installation of AC drives in motors of FTP fans &amp; blower of Pot lines of Pl - 2.</b>	Technology-Kaiser			
<b>Description of the energy conservation measure:</b> In our pot lines high-speed air slide fan/blower motors are installed to feed the air in air slide, which is used to convey the Alumina Powder. Motors of these air slide fans were selected as per plant requirements during installation time. These motors are running continuously without any speed control arrangement. After a detailed analysis it was felt that there is possibility to reduce the speed of the motors. Hence during FY 06-07 A.C. Drives were provided to save the electrical 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):					
Total investment, Rs.: 18 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 9.17 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	1768				
Energy consumption after	1283				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	


## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation of AC drives in ID &amp; FD fans of Cast house &amp; Billet Casting Furnaces to save power.</b>	Sector-Aluminum			
Year to be filled by BEE	<b>Installation of AC drives in ID &amp; FD fans of Cast house &amp; Billet Casting Furnaces to save power.</b>	Technology-Kaiser			
<b>Description of the energy conservation measure:</b>					
In our melting cum holding furnaces of Slab & Billet casting, ID fans and Exhaust blowers are installed to discharge the flue gasses and to supply the combustion air respectively. These motors are running continuously without any speed control arrangement. Airflow requirement varies from 20 % to 80% during the firing cycle, which is controlled through actuator valve. Also there is no need of running the fan/blower during casting period. After a detailed analysis it was felt that AC drive is to be installed to control the speed of the motors according to process requirement. Hence during FY 06-07 A.C. Drives were provided to save the electrical 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):					
Total investment, Rs.: 12 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 14.46 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	18781				
Energy consumption after	18016				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Modification in duct of Baking furnace # 3 ID fan to avoid the unwanted stoppage of firing thus saving the unwanted cooling of furnace during duct cleaning.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b> Baking furnace is used for baking the green anodes. In our Baking furnace # 3 two ID fans are provided, out which one remains in operation & second is as standby. As there was no provision to fully isolate the one fan causing stoppage of fire during cleaning of I.D fan Impeller and siuce gate. Frequency of cleaning is monthly and Fire stopped for at least 8 hrs in a month and thus increases in fire cycle by about 20 hrs, as well as increase in oil consumption. Hence it was decided to provide one blind provided in the both duct line of I.D Fans so that isolation of fan can be done with out stopping the fire.					
<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): In house					
Total investment, Rs.: 0.02 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 7.73 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before (on a/c of increase in cycle time due to cleaning)				43.44	
Energy consumption after (on a/c of increase in cycle time due to cleaning)				0.00	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...				17786	
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

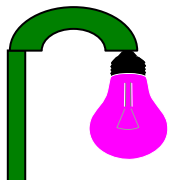
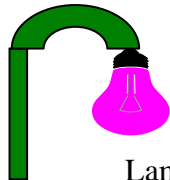
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Optimization of operating parameter thus reducing the losses in Pig ingot casting to reduce the specific fuel consumption.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
In Pig casting, two oil-fired melting/holding furnaces are used for ingot casting. During the year lot of efforts were taken to reduce the energy losses. We are regularly doing the heat balance of the furnaces to know the losses thus optimizing the same. During our heat balance major losses found were on account of flue gas loss. To reduce the losses a cleaning system of recuperator is introduced as well as maintaining the proper furnace pressure. Also regular training to workers has been given to improve their skills. These efforts lead reduction in specific fuel oil consumption. Specific fuel oil consumption is reduced to 14 Ltr/MT during FY 06-07 against 22 Ltrs/MT in FY 05-06.					
<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): In house					
Total investment, Rs.: Nil			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 99.05 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before				1531.53	
Energy consumption after				974.61	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...				17786	
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Introduction of new size mould to suit the rolling requirement to reduce the generation of process scrap thus saving the fuel oil and melt loss.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
Aluminium Slab is cast at our Wagstaff slab casting. For casting the slab we were using 4 sizes of moulds, which were procured with the Wagstaff casting machine. The sizes available were 36", 40", 44" & 52" in 12" width. If requirement of any intermediate size occurred then next higher size mould was used. In this practice higher scrap was generated causing the reprocessing of the scrap.					
To reduce the process generation, during FY 06-07 4 new sizes (36", 38", 42" & 50" in 13" width) of mould were procured. Utilization of these new moulds reduced the scrap generation thus saved the energy required for reprocessing as well as melt loss.					
<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): In house					
Total investment, Rs.: 112 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 14.97Lacs					
First year other savings, Rs.: 27.92 Lac (On account of melt loss)					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	37.798			80.134	
Energy consumption after	0.00			0	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89			17786	
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation of 18 watt CFL in place of incandescent bulbs in worker toilets of Pot line - 4 to 11.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b> In our pot room, at the west end side of each line a worker toilet is provided. In each toilet incandescent bulbs of 200 watt were fitted. These bulbs used to glow for 24 through out the day. To reduce the energy consumption, all the 35 bulbs were replaced with 18 watt CFL.					
<b>Picture/ sketch/ drawing before modification</b> (if available)			<b>Picture/ sketch/ drawing after modification</b>		
 <p>Lamp 200 Watt</p>			 <p>Lamp 18 Watt C.F.L</p>		
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 0.05 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 1.05 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	61.320				
Energy consumption after	5.519				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination   Signature Date – 19 <sup>th</sup> Oct' 2007	

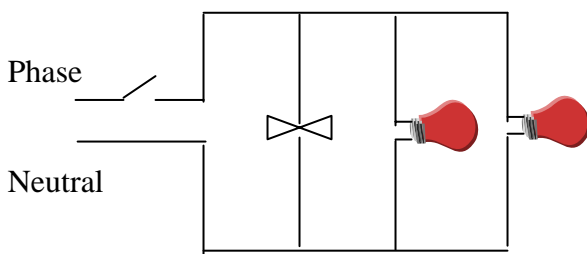
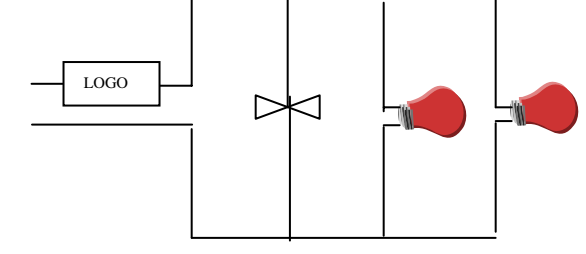
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Reduction in idle running of fan motor of Air conditioning through modification in control circuit of compressor house airflow control room.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
In our reduction plant-2 there is a control room, which was provided with AC unit. To reduce the energy consumption, interlocking of the fan was done with the operation of compressor to avoid the idle running of fan motor.					
<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): In house					
Total investment, Rs.: 0.11 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 0.70 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	1947				
Energy consumption after	1910				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

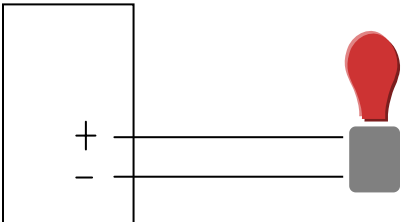
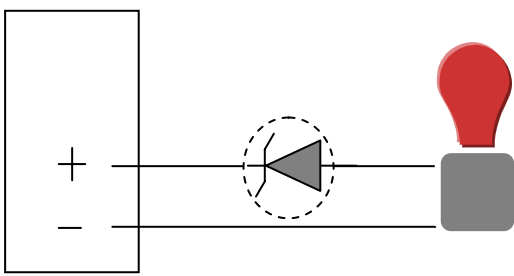
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Reduction in idle running of exhaust fan motor of dross press through modification in control circuit.</b>				Sector: Aluminium	
Year to be filled by BEE					Technology: Kaiser	
<b>Description of the energy conservation measure:</b>						
In our Cast house, Dross press is used for extraction of molten aluminium from dross. This press is equipped with an exhaust fan having 5 HP motor. During an audit it was found that this fan remains in running condition in between the pressing of different lot of dross. To avoid the idle running of the fan interlocking has been provided so that the fan will stop after completing the cycle. In this way approximately 6 hours per day idle running of the exhaust fan is avoided.						
<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): In house						
Total investment, Rs.: Nil			Year of implementation: 2006-07			
First year energy cost savings, Rs.: 0.26 Lac						
First year other savings, Rs.: Nil						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before	450					
Energy consumption after	436					
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89					
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation of small PLC (Siemens Logo) in circuit of Pot line # 9 Lunchroom to avoid the idle running of electrical equipments.</b>	Sector -Aluminum			
Year to be filled by BEE		Technology - Kaiser			
<b>Description of the energy conservation measure:</b> Our Pot line # 9 Lunchroom is equipped with tube light, ceiling fans, exhaust fan, scrubber fan and pump. During a walkthrough audit it was observed that these equipment run continuously even if there is no person in this lunchroom. To void the unnecessary running of these equipment a small PLC (Siemens Logo) was provided in the control circuit and programmed in such a manner that these equipment run only during the lunch/tea hours otherwise it remains off.					
<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):					
Total investment, Rs. 0.08 Lac	Year of implementation: 2006-07				
First year energy cost savings, Rs.:0. 83 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	384				
Energy consumption after	340				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Elimination of wastage of Energy in anode effect signal system of pots.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
<p>Anode effect lamps are used in each pot cell that glows in abnormal condition i.e. when pot voltage reaches more than 12 volts. These bulbs are located near pot structure so damage frequency of bulbs; porcelain holders &amp; glass fibre cables are high approximately 170 bulbs &amp; 35 holders per month. Hence wastage of materials cost &amp; man-hour. Also anode effect bulbs are always connected to cell voltage so wastage of D.C. energy. Hence it was decided to relocate the anode effect lamps near celtrol and connect with DC fuse box along with Zener diode to save the DC energy as well as glass fibre wire, bulbs and porcelain holders consumption.</p>					
<b>Picture/ sketch/ drawing before modification</b> <small>(if available)</small>			<b>Picture/ sketch/ drawing after modification</b>		
					
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 2.0 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 0.24 Lac					
First year other savings, Rs.: 0.41 Lac (On account of consumables)					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	13.498				
Energy consumption after	0.562				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Stoppage of unwanted air flow by providing solenoid valve in main air supply line of Rieco conveying system to reduce compressed air consumption in Paste Plant.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
<p>In our Paste Plant FTP there is a pneumatic conveying system. To convey material, 5.50kg/cm<sup>2</sup> compressed air was supplied for material conveying with built-in diffuser. In original system (OEM) there was a provision that during material conveying this air was used through diffuser to convey the materials and during idle time also this air going to atmosphere through 1.1/2" pipe with 25 holes in it. There was no control available for compressed air during idle time. Due to this there is wastage of compressed air during idle hours.</p> <p>The system was by providing a solenoid operated valve in main air supply line and controlled by conveying line existing solenoid valve (Made parallel connection with conveying line solenoid valve). With this modification compressed air consumption is reduced to 1181 CFM from earlier consumption 1305 CFM.</p>					
<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): In house					
Total investment, Rs.: 0.12 Lac			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 3.58 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	1992.467				
Energy consumption after	1803.145				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Reduction in point feeder air header pressure to 4.0 Kg/SqCm from 5.2 Kg/SqCm in Pot line 1 to 3 to reduce the compressed air consumption.</b>				Sector: Aluminium	
Year to be filled by BEE					Technology: Kaiser	
Description of the energy conservation measure: In our Potroom Plant – 1 air pressure in Point feeder main header was being maintained at 5.0 Kg/Cm <sup>2</sup> to 5.2 Kg/Cm <sup>2</sup> to operate the Point feeder cylinders. A study revealed that actual air pressure requirement of point feeders cylinder during operation is in the range of 3.5 to 4.0 Kg/Cm <sup>2</sup> . To meet this air pressure requirement, the header pressure was reduced to around 4.0 to 4.5 Kg/Cm <sup>2</sup> in place of 5.0 to 5.2 Kg/Cm <sup>2</sup> by throttling the valve. With this reduction in compressed air pressure, compressed air consumption is reduced to 3912 CFM from earlier consumption 4130 CFM.						
<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): In house						
Total investment, Rs.: Nil			Year of implementation: 2006-07			
First year energy cost savings, Rs.: 6.22 Lac						
First year other savings, Rs.: Nil						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before	6237.828					
Energy consumption after	5908.567					
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89					
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Installation pressure regulating valve in point feeder header of Potroom Plant-2 to optimize the header pressure.</b>		Sector: Aluminium		
Year to be filled by BEE			Technology: Kaiser		
<b>Description of the energy conservation measure:</b>					
<p>In Potroom Plant-2, Point Feeders and Centre Punches are operated by compressed air. Compressed air is being supplied from central compressor house, This compressor house also supplies air to other utilities. To fulfill the requirement of different users, compressor house supplies the air into a main header at around 7 Kg/Cm<sup>2</sup> pressure and every sub-header regulates the pressure according to the requirement by throttling the valve. During the study it was felt that the header pressure in our point feeder circuit is not being optimized due to limitation of manual valve. Hence during FY 06-07 a pressure valve was provided in the point feeder line main header.</p> <p>With the installation of pressure regulator reduction of power consumption of 1199 kWh per day is achieved.</p>					
<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): In house					
Total investment, Rs.: 1.20 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 8.27 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Ton s)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	25605.845				
Energy consumption after	25168.210				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Modification in power supply circuit of Baking furnace # 4 sections so that separate supply control can be made for each fire group rather than complete section to reduce the outage of fire cycle thus reducing the unwanted cooling of furnace.</b>				Sector: Aluminium	
Year to be filled by BEE					Technology: Kaiser	
<p><b>Description of the energy conservation measure:</b>          In our Baking Furnace # 4 power supply was provided in-group of sections from Baking F/C MCC and it was looped for 6 nos. of TPIC. It was found that in the case of problem with main incoming cable, total sections of one fire group got affected. To resume the supply again it took about approximately 4 hours. This hampered production loss as well as fuel loss on account of increase in cycle time of anode baking.          Hence it was decided to modify the current power distribution scheme and separate power supply with separate controlling to be used for each fire group of sections. If problem occurs in any particular section then only that section unit stops working hence no loss of production.</p>						
<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): In house						
Total investment, Rs.: 1.53 Lac			Year of implementation: 2006-2007			
First year energy cost savings, Rs.: 1.14 Lac						
First year other savings, Rs.: Nil						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before (on a/c of increase in cycle time)				6.40		
Energy consumption after (on a/c of increase in cycle time)				0.00		
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...				17786		
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Modification in filter dust transfer route of bag houses of Paste plant to avoid the running of Old Ball Mill.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
<p>In our Paste Plant, Filter dust from North, Middle and South Bag Houses in Paste Plant are collected in Carbon Dust Bin. A part of it is transferred into the Filter dustbin and remaining part of it (when level of Filter Dust Bin reaches high level) is fed into Ball Mill Product (BMP), using Pneumatic Conveying System &amp; operation of old Ball Mill (22143). This leads to non-uniform layering of dust in BMP.</p> <p>To over come the problem as well as to avoid the unnecessary 3 hours running of old Ball Mill operation it was decided to install a chute from Reico Conveying System for transfer of excess carbon dust to New Ball Mill Feed Bin. Dust collected by the Bag House of New Ball Mill will be transferred in BMP Bin by a screw conveyor # 36-44-28 simultaneous feeding of Ball Mill Product in BMP Bin will result in uniform mixing of BMP and filter dust thereby preventing layer formation of Filter Dust. This modification resulted a saving of 907 kWh per day.</p>					
<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): In house					
Total investment, Rs.: 0.42 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 6.26 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before (On a/c of avoidable running of Old Ball Mill)	331.055				
Energy consumption after (On a/c of avoidable running of Old Ball Mill)	0.00				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination   Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Modification in filter bowl of Slab Casting to reduce the scrap generation.</b>				Sector: Aluminium	
Year to be filled by BEE					Technology: Kaiser	
<p><b>Description of the energy conservation measure:</b>                  Slab casting machine is used for casting the slab for feedstock for our rolling mill. Filter unit of slab casting having three chambers of filtration. Two are used at a time in casting of alloys. Average 600 kg aluminium of scrap is generated from these two chambers, which is being again charged into furnaces in form of solid cakes, resulting in melt loss and oil consumption.                  To reduce the generation as well as to reduce the filtration cost it was decided to stop the use of filter tiles in casting of non critical alloys contributing average up to 38% of total casting. To reduce the scrap generation it was decided to use only the centre chamber of the triplex bowl in place of previous practice of using the two chambers by suitable modification. This has resulted in reduction of scrap generation by 406 MT/Year.</p>						
<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): In house						
Total investment, Rs.: Nil			Year of implementation: 2006-07			
First year energy cost savings, Rs.: 3.97Lac						
First year other savings, Rs.: 8.61 Lac (On account of reduced melt loss)						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other	
Energy consumption before (On a/c of re-melting the scrap)				22.30		
Energy consumption after (On a/c of re-melting the scrap)				0.00		
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...				17786		
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination   Signature Date – 19 <sup>th</sup> Oct' 2007		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Clubbing of alloy ingot order of two months and casting accordingly to reduce the scrap generation.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<p><b>Description of the energy conservation measure:</b></p> <p>Our Pig casting furnace is used for casting the aluminium alloy ingot as well as CG grade ingot. After casting the alloy ingot, every time we have to clean the furnace to avoid the contamination for further casting of CG grade. Normally 20 MT off grade (Drain Out) ingot are produced to wash the furnace and switch over from alloy production to CG grade ingot, which directly impacts on production cost and per furnace productivity.</p> <p>As per management directive most of the alloy production was shifted to our other unit (Taloja), and only 100 MT monthly order of alloy ingot was left with us.</p> <p>Now it was a challenge with us to execute this small order. To reduce the generation of scrap we have discussed with our customers and started producing the alloy ingot in alternate month by clubbing the two months order. This has resulted in reduction of scrap generation by 259.32 MT/Year.</p>					
<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): In house					
Total investment, Rs.: Nil			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 2.54 Lac					
First year other savings, Rs.: 6.84 Lac (On account of reduced melt loss)					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before (On a/c of re-melting the scrap)				14.2626	
Energy consumption after (On a/c of re-melting the scrap)				0.00	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...				17786	
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

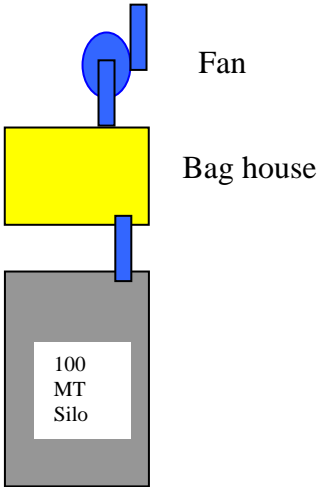
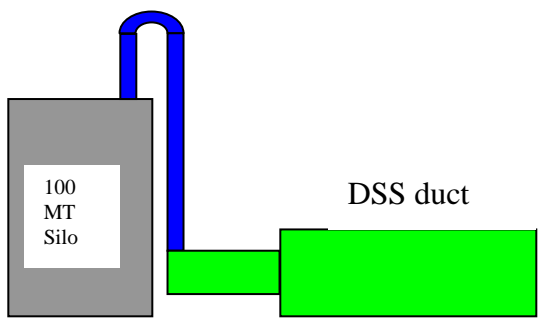
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Modification in discharge chute of Paste Plant conveyor to avoid the reprocessing paste mixer.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<p><b>Description of the energy conservation measure:</b>                  In our Paste plant Belt conveyor BC-36-25-02 is used for conveying Anode paste from Buss Mixer to Vibro Compactor. Metallic scrapper is used in this belt to separate the sticked anode paste. The Anode Paste conveyor belt (BC-36-25-02) scrap material fall outside and it is refed to raw material circuit by Toe cars for Re- processing. It causes wastage of energy in reprocessing anode paste.                  It was decided to modify the BC-36-25-02 discharge chute arrangement by providing an additional chute in such a way that scraped material can be fed to surge hopper directly for better utilization of scrap anode paste. After provision of one additional chute scrap generation is reduced by 2405 MT/Year, which resulted in saving of energy used for reprocessing.</p>					
<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): In house					
Total investment, Rs.: 0.03 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 5.45 Lac					
First year other savings, Rs.: 6.84 Lac (On account of reduced melt loss)					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before (On a/c of reprocessing the paste mixer)	120.250	119.288		10.582	
Energy consumption after (On a/c of reprocessing the paste mixer)	0.00	0.00		0.00	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89	1083.33		17786	
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination   Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Replacement of pulsing header of pot line # 4 DSS from 3" to 8" to reduce the header pressure loss thus saving the compressed air consumption.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
It was observed that pressure drop in pulsing header of line – 4 DSS was high. After detailed study it was found that the present header is under size, hence it was decided to replace the existing header of 3" dia with 8" dia. After this modification, the air consumption of DSS line – 4 is reduced by 63 CFM.					
<b>Picture/ sketch/ drawing before modification</b> <small>(if available)</small>			<b>Picture/ sketch/ drawing after modification</b>		
Agency that executed the project (with complete address and email): In house					
Total investment, Rs.: 0.25 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 1.82 Lac					
First year other savings, Rs.: Nil					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	742.022				
Energy consumption after	645.834				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Removal of Bag filter fan of Pot line # 2 alumina silo of 100 MT capacity by connecting the duct with main FTP bag house duct.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
In our pot line # 2 a bag house is installed for arresting the dust of 100 MT capacity alumina silo having 7.5 HP fan motor. Seeing the big capacity of main DSS fan it was decided to remove the fan of alumina silo bag house and connect the duct with main DSS duct so that energy of this small fan can be saved accordingly modification was carried out.					
<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): In house					
Total investment, Rs.: 0.15 Lac			Year of implementation: 2006-07		
First year energy cost savings, Rs.: 0.72 Lac					
First year other savings, Rs.: NIL					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before	38.284				
Energy consumption after	0.00				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	1.89				
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Reduction in steam consumption at Paste Plant through elimination of joints.</b>	Sector: Aluminium			
Year to be filled by BEE		Technology: Kaiser			
<b>Description of the energy conservation measure:</b>					
<p>In our continuous Paste Plant, we are using steam of 17 to 35 kg/cm<sup>2</sup> for heating Pitch before mixing in Buss Mixer. For this application we have three Melting tanks and two holding tanks. Frequent steam leakage problem was observed from flange joints (55 nos/tank). For attending each leakage point we had to drain the steam completely and change the gasket. By doing this we were wasting steam continuously.</p> <p>A study was carried out to eliminate /modify some joints from each tank without any process disturbance. During study it found that max numbers of joints are only due to erection requirement of Melting and Holding tanks. It had no importance for process / maintenance point of view. Finally we have identified that 34 nos. of joints per tank are useless and it can be removed directly. Finally such 170 joints were removed during the shut down. This has resulted in reduction of steam consumption in paste plant by 364.33 MT/month.</p>					
<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): In house					
Total investment, Rs.: 0.25 Lacs			Year of implementation: 2006-2007		
First year energy cost savings, Rs.: 11.75 Lacs					
First year other savings, Rs.: NIL					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	Oil (kL)	Other
Energy consumption before		10837			
Energy consumption after		9753			
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...		1083.33			
Company complete address: Hindalco Industries Ltd PO - Renukoot Dist- Sonebhadra Uttar Pradesh Pin- 231217 Contact person who could be contacted for more information: Mr. R M. S Tomar				We authorise Bureau to use this information for dissemination  Signature Date – 19 <sup>th</sup> Oct' 2007	