



TAMIL NADU POLLUTION CONTROL BOARD

Success Story in Water Conservation

The Tamil Nadu Pollution Control Board is taking various steps on environmental sustainability. It was decided to disseminate various appreciable initiatives taken by industries to other similar industries. One such initiative is brought in for information. A Captive Power plant attached to a cement industry in Ariyalur generating 42 MWH has replaced its existing 4 number of water cooled condensers attached to boilers with Air cooled condensers. The environmental benefits due to the measures taken are very appreciable.

Sl. No.	Description	Before Modernisation	After Modernisation	% of reduction	Environmental benefit
1.	Water Consumption	3843 KLD	355 KLD	90.76	The water consumption is drastically reduced.
2.	Effluent generation	875 KLD	193.5 KLD	78.08	This 193.5 KLD is used in their cement plant for cooling Hence there is zero discharge of effluent.
3.	Fuel Consumption (Coal)	570 T/D	550 T/D	3.5%	The heat from air cooler condenser is used to preheat boiler feed water reducing coal consumption and corresponding reduction of consumption.
4.	Specific heat consumption	3238 Kcal/KWh	2878 Kcal/KWh	11.11%	Energy Conservation achieved.
5.	Specific Water Consumption	3.34 m ³ /MWh	0.64 m ³ /MWh	80.83%	Water consumption reduced drastically.

The unit can get breakeven of Rs. 50 crores of money spent very easily due to reduction of water consumption and effluent treatment. The existing water storage tank and cooling tower were removed paving way for additional area for further utilization. The other captive power plants in cement industries can also explore the possibility of switching over to Air cooled condensers by virtue of the above benefits.


For Chairman

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