

Punjab Alkalies & Chemicals Limited

COMPANY PROFILE

PACL has been promoted by Punjab State Industrial Corporation. The mercury cell caustic soda plant of the company commenced operation in January, 1984 originally with an installed capacity of 37,059 MT per annum. The company had undertaken capacity optimization of the mercury cell plant in three phases, as a result of which the installed capacity of caustic soda increased to 50,820 MT.

The company's 100 TPD membrane cell caustic soda plant (UNIT – 1) was commissioned in June, 1995. This plant is based on HOECHST-UHDE membrane cell technology.

The mercury cell plant was converted to 200 TPD membrane cell plant (UNIT –2) with KRUPP-UHDE Technology in Nov, 1998.

The present plant capacity of UNIT-1 and UNIT-2 is 99000 TPA of caustic soda.

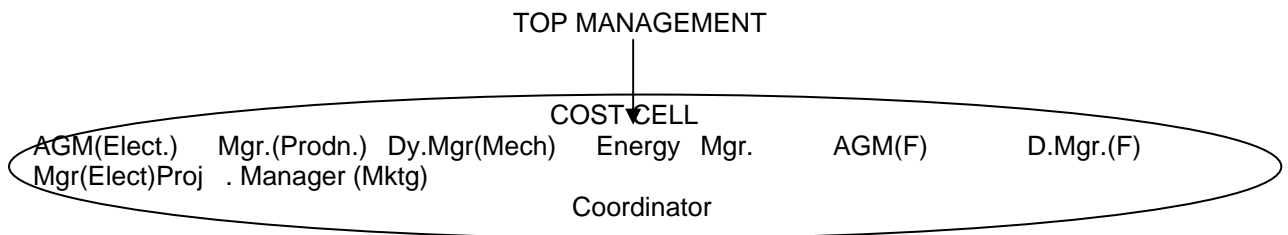
ENERGY CONSERVATION COMMITMENT

PACL top management is committed to energy conservation and environment protection. PACL has implemented Environment Management System ISO 14001-2004 and got certified for this system by DNV w.e.f 30.06.2005

The methodology adopted to carry out energy conservation is such as to encourage participation of company employees at all levels.

MIDDLE LEVEL PARTICIPATION

The company has established a Cost Cell which comprises of middle level executives. The cost cell identifies various cost reduction opportunities, and after analyzing these opportunities presents recommendations to the management. The energy cost being a major input in caustic chlorine industry most of the proposals taken up in the cost cell pertains to improvement of energy efficiency. These recommendations are discussed at top management level in monthly review meeting chaired by Managing Director of the company and get implemented after approval of top management. e.g. Proposal of clarifier insulation presented by cost cell for thermal energy saving is under implementation.



WORKER LEVEL PARTICIPATION

There is two fold methodology for encouragement of worker participation.

Quality circles: Pacl has established four (04) Quality Circles and energy cost being major cost ,the energy efficiency/ conservation is the focus area for these quality circles also e.g. Electrical Department Quality Circle has suggested and taken up an assignment to select old and rewind motors for purpose of measuring their efficiency and working out economic viability of replacing these motors with new energy efficient motors.

Suggestion Schemes : Pacl management encourage the worker participation through suggestion schemes also, as various awards such as Creativity award, Best suggestion award are given for valuable suggestions.

ENERGY MANAGER

The company has designated Sh. Rajeev Sharma as Energy Manager. He has been accredited as Energy Manager by the Bureau of Energy Efficiency under the Energy Conservation Act 2001.

The major responsibilities of Energy Manager are:

1. To increase the level of awareness on energy conservation amongst the company's employees at all levels by organizing training programmes through HRD Department of the company.
2. To monitor and analyse energy efficiency of various equipments.
3. To establish energy consumption values for various equipments and compare the actual consumption with fixed consumption norms.

ENERGY CONSERVATION TARGETS

The company has fixed energy conservation targets under ISO 14001-2004 implemented w.e.f. 30.06.2004

1. To reduce electric energy consumption for auxiliary equipments by 10 units/mt of caustic production in next two years.
2. To reduce AC power consumption for electrolysis by 10 unit/mt of caustic production in next 2 years.

ENERGY CONSUMPTION

SPECIFIC ENERGY CONSUMPTION DETTAILS

	UNIT	2002-03 15MONTHS	2003-04 9MONTHS	2004-05 12MONTHS
Production	MT	98974	60378	80518
Total Energy Consumption	KWH Lacs	2659.43	1629.6	2138.55
Total Thermal Energy Consumption	Million Kcal	63613	40195	52795
DC Electrolysis Power Consumption	KWH/MT	2228	2245	2207
AC Rectification Power Consumption	KWH/MT	2341	2361	2318
AC Power Consumption with auxiliaries & without Flakes	KWH/MT	2687	2699	2656

ENERGY CONSERVATION PLANS AND TARGETS FOR THE YEAR 2005-06

1. Installation of 120 TR capacity vapour absorption refrigeration unit as a replacement of vapour compressor refrigeration unit. This unit has already been procured and received at site and shall be commissioned in Oct,2005.

The steam required for this unit shall be made available from boiler which are suitable for running on mixed mode i.e. hydrogen gas and furnace oil as well as on pure hydrogen gas. This shall enable us to achieve higher utilization of hydrogen which is a by product. Hydrogen is a clean fuel and generally available in excess than the present requirement.

Estimated Electrical Units Saving = 0.792 KWH per annum.

Investment = 25 Lacs.

2. Insulation of Clarifier in Unit-1:
Insulation of bare metallic shell of clarifier shall be carried out in 2005-06

Estimated Thermal Energy Saving = 30,000 Kcal/year
Saving in monetary terms = 3.00 Lacs
Investment = 4.00 Lacs

3. Installation of D-canter:
Vacuum Drum Filter installed in Unit-2 for brine separation from the sludge drained from clarifier shall be replaced with D-canter.

Estimated electric unit saving = 2.00 Lacs/year
Saving in monetary terms = 8.00 Lacs/year
Investment = 30 Lacs.