
**APPLICATION
FOR
ENERGY CONSERVATION AWARD**

2007

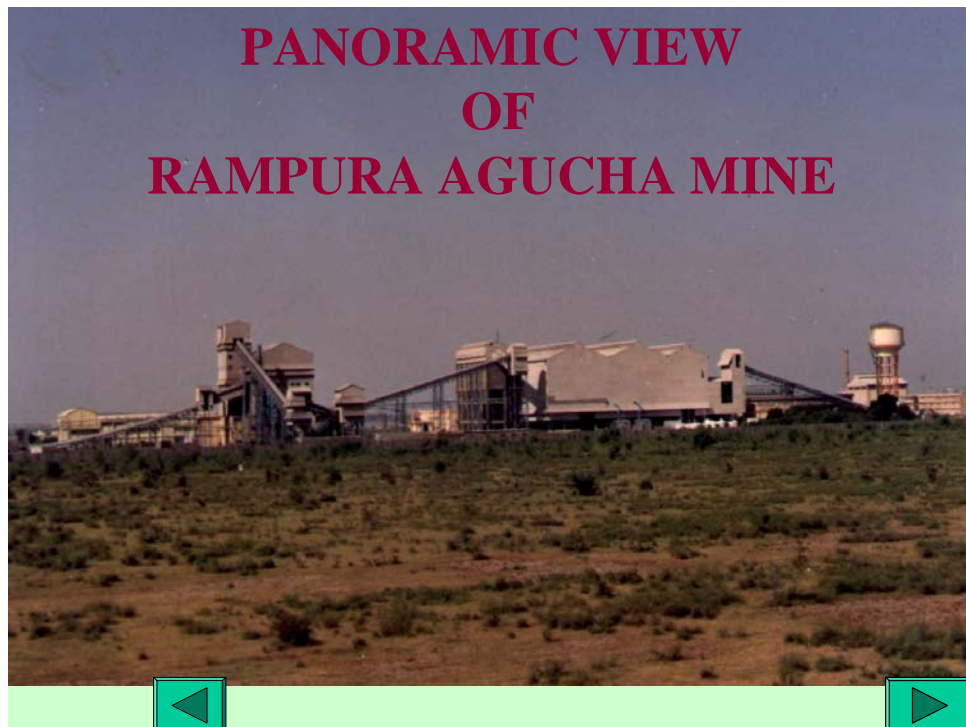
**RAMPURA AGUCHA MINE
HINDUSTAN ZINC LIMITED**

ANNEXURE - 1

UNIT PROFILE

Hindustan Zinc Limited is the only integrated Zinc manufacturer in India and owns captive Zinc mines that supply complete requirement of Zinc concentrate for its smelters. HZL operates mechanized open cast (Rampura Agucha Mine) as well as underground mines (Rajpura Dariba and Zawar Mines) in the state of Rajasthan with state of the art technology. Rampura Agucha Mine being one of the most cost-efficient Zinc mine in the world and resources-wise it is fifth in the world

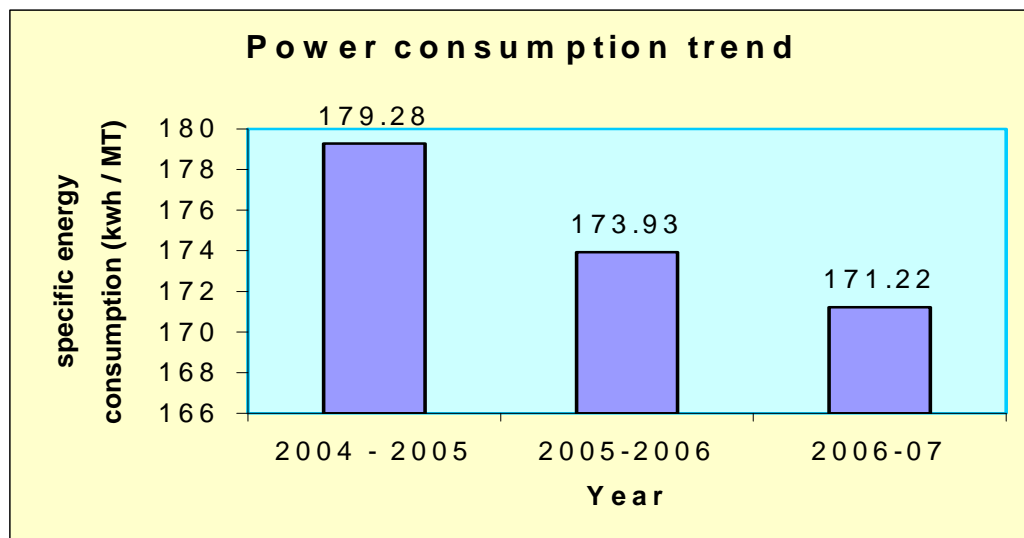
Rampura Agucha Mine is an ISO 9001, ISO 14001 & OHSAS 18001 certified unit. Commissioned in the year of 1991 and it is located 225 kms North of Udaipur (Rajasthan). This open cast mine having low strip ratio of 1:5 with good mineralogy leading to higher recovery and resultant low cost of production. The present capacity of the mine is 3.75 million MTPA ore production with 13.54% Zinc, & 1.97% Lead and beneficiation plant to produce zinc and lead concentrates of 53-54% and 60-65% respectively.



Achievement in Energy conservation: –

First mining sector industry, Recipient of second prize for this prestigious Energy conservation National energy conservation award 2005

There has been a steady decrease in the electrical energy consumption per MT of concentrate due to the implementation of the various energy conservation measures.



Description	Unit	2004 - 05	2005-06	2006-07
Concentrate production (zinc + lead concentrate)	Metric tonne (MT)	597051	855244	920994
Total energy consumption	Lakhs kWh	1070.44	1487.57	1576.95
Specific energy consumption	kWh / MT	179.28	173.93	171.22
Energy cost as % of manufacturing cost	%	15.3	13.41	8.63

ENERGY POLICY

WE, AT RAMPURA AGUCHA MINES ARE COMMITTED TO CONTINUOUSLY IMPROVE OUR ENERGY PERFORMANCE IN ALL OUR ACTIVITIES AND PRODUCTS SO AS TO MAKE IT ENVIRONMENTALLY SUSTAINABLE FOR FUTURE GENERATIONS.

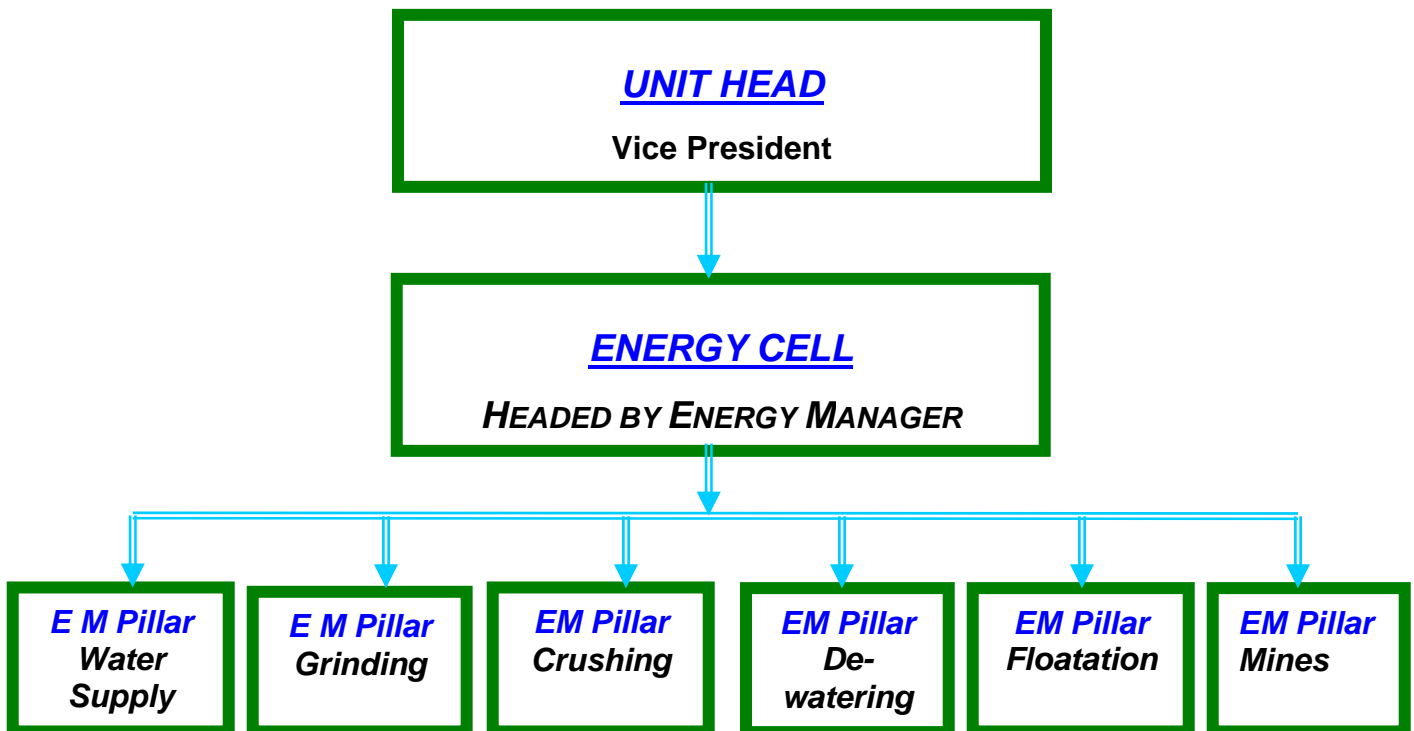
Our mission: -

To be the lowest specific energy consumer in the industry segment we operate.

THIS MISSION WE ACHIEVE BY IMPLEMENTING THESE: -

- To train employees to make Rampura Agucha mine the pace starter in the field of energy conservation .
- To carry out regular internal and external audits to identify areas for improvements.
- To benchmark continuously our performance against the best in the world .
- To enrich our experience on energy conservation by exchange of ideas with other organizations .
- To promote awareness among all the members of the company.
- Replacement of energy inefficient equipment with energy efficient equipment .
- To adopt energy efficient technologies/equipment for all new projects.
- To comply with energy legislation and other regulations.
- To communicate energy management policy to all employees and encourage their participation through proper training .
- To recognize effects of our employees in energy conservation.

ENERGY MANAGEMENT SETUP



Major achievements in environment, health and safety in the past has remained as follows:

(1) Natural resources:

- (a) Fuel: Fuel consumption reduction per MT of excavation from 0.569 Litre (2002-03) to 0.515 Litre (2006-07).
- (b) Water: Water consumption per MT of Ore treatment from 1.36 m³ (2002-03) to 0.55m³ (2006-07)

(2) Environment Awards

- (a) Recipient of "FIMI's GEM GRANITE ENVIRONMENT AWARD 2005-06" given by Federation of Indian Mineral Industry .
- (b) Winner of OVERALL EXCELLENCE Prize in the Mine Environment & Mineral Conservation week organized under aegis of Indian Bureau of Mines, Ajmer region for three consecutive years i.e. from 2003-04 to 2005-06.
- (c) Greentech Environment Award by Greentech Foundation on 31st July 2006 (Silver) and 29th August 2007 (Gold).

(3) Safety Awards

- (a) First mine audited for British safety Council's British Sword award and received 4 star recognition
- (b) Winner of overall first prize in the Mines Safety Week organized under the auspices of DGMS, Ajmer region for last three consecutive years
- (c) Greentech Safety Silver Award by Greentech Foundation on 8th April 2006 and 22nd February 2007.

(4) Environment Management Plan

- (a) As per the recommendation of EMP, HZL is committed to reduce the waste generation and improve the recovery of lead and zinc concentrate. This is being done by controlling emissions and resource conservation
- (b) HZL has developed a green belt of 240 Ha area in and around the mine. This is also in line with the recommendation of EMP. The noteworthy point is the survival rate of this green belt which is about 80% in Rajasthan's harsh climate

ENVIRONMENT HEALTH AND SAFETY POLICY

We at Rampura Agucha Mines, producers of lead and zinc concentrates are committed to :

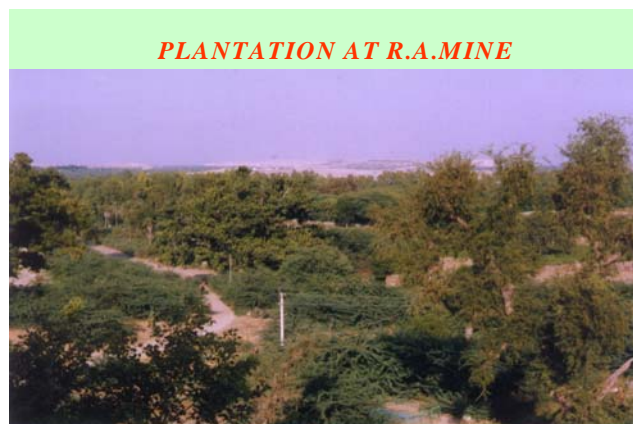
- Continual improvement in our environment and safety performance indicators.
- Comply with all applicable Environmental and Occupational Health and Safety legislations.
- Work towards prevention of pollution and minimizing occupational Health and Safety risks.
- Minimize pollution and conserve key input resources.
- Minimize loss time accidents.
- Use environmentally sound technologies and standard safety equipments wherever viable.
- Train all employees, departmental as well as contractors, in sound environment, Health and Safety practices.

SOME OF OUR INITIATIVES FOR ENVIROMENT PROTECTION: -



Environment

- Intensive Green Belt Development
- Dust Control
- Wet drilling : -
 - Automatic water sprinkling on permanent haul roads
 - Water sprinkling on haul roads by water sprinklers
 - Truck Tyre Washing Station
 - Wet scrubbers at primary crusher and secondary crusher .
- Collection & Recycling of Run-off /Spillage
- Zero Discharge by Recycling Tailing Dam Water & Water Conservation
- Monitoring & Control of Ground Vibration
- Regular Monitoring of Air, Water(Run-off & Sub-Surface), Soil, Dust Fall and Noise
- Studies for Structural Stability of Tailing Dam .
- Environmental Auditing for Chemical, Water & Energy
- ISO 14001/ OHSAS 18001 Certification Achieved



Various studies regarding environment and safety

- (a) Review of geological stability of tailing dam
- (b) Identifying birds species at tailing dam site and suggest plan to develop the area as refuge
- (c) Review the green belt development plan
- (d) Evaluation of tailing disposal at RA Mine
- (e) Land use cover change study within 15 Km. Radius of RA mine
- (f) Stability of tailing dam by GPR method
- (g) Pit-slope stability study
- (h) Aquifer Vulnerability Index study for Tailing Dam
- (i) Hydrology and hydrogeology study

FOLLOWING MEASURES ARE TAKEN TO ATTAIN ZERO ACCIDENTS.

- Shop floor safety talk by the supervisors , engineers on weekly basis.
- Inspection and safety Audit.
- Safety inspection by safety officer to be carried out regularly.
- Safety instruction to work person during inspection.
- Safety Audit of equipment are to be carried out quarterly by respective "ENGINEER"
- Training by vocation wise as per norms.
- Special Training for new method , new equipment.
- Refresher training to seriously injured person before joining to duty.
- Counseling of accident-prone person.
- TPM'S Safety pillar is one of the active pillar which has resulted to bring down the accident rate of the plant.

EHS Measures institutionalized at the mine are ;

- Zero discharge of effluents
- Air pollution control system / facilities
- Occupational health care centre
- Emergency preparedness measures
- Green Belt Development