

Nava bharat ventures limited
Paloncha-507154, Khammam DST (A.P)

I. Unit profile



Nava Bharat Ferro Alloys Limited, Paloncha started their first Ferro alloy furnace of capacity 16.5 MVA in the year 1975. Later, three more furnaces were installed in the years 1979, 1983 & 2005 respectively. Presently total installed furnace capacity is 74.5 MVA and annual production capacity ranges from 1,17,000 MT to 1,44,000 MT depending on the product mix.

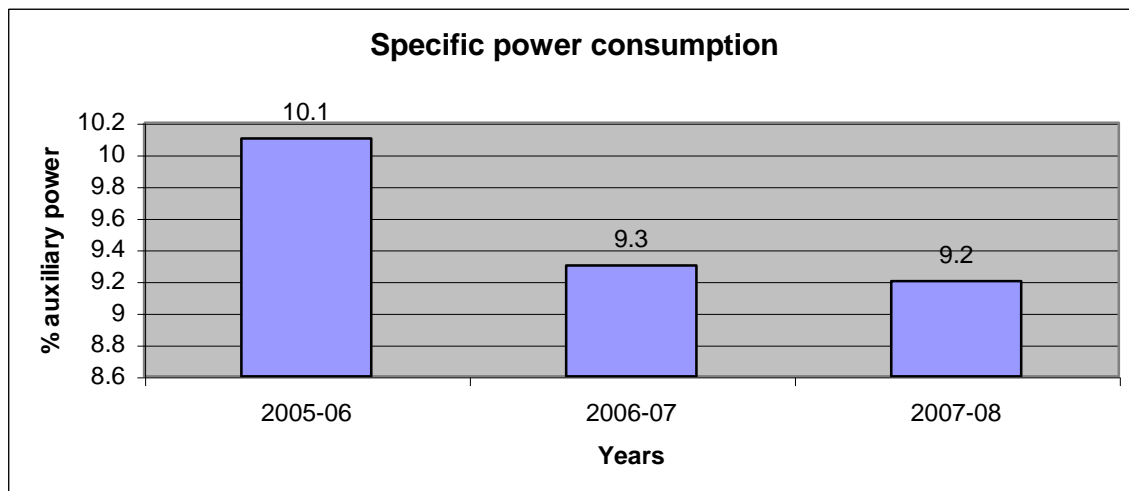
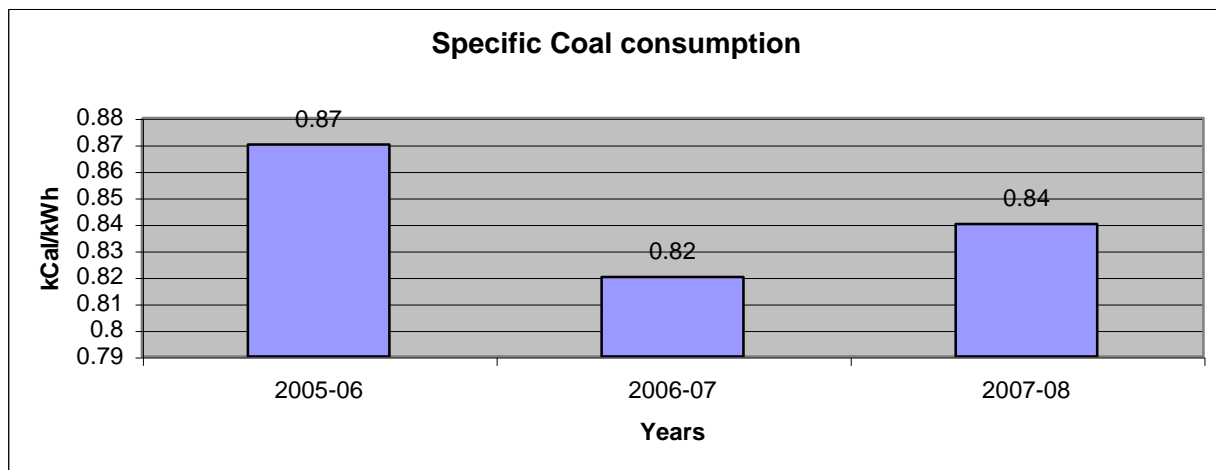
In the year 1997 Nava Bharat Ferro Alloys Limited entered into the field of power generation by installing a thermal power plant (Unit-1) using coal as fuel, with a capacity of 30 MW. In the year 2000, unit-1 capacity was enhanced to 50 MW by adding another boiler. Further, in the years 2006 & 2007, two new units each of capacity 32 MW were added. Present total installed capacity of Power Plant is 114 MW. Surplus power available is sold, to different trading companies, after meeting the captive and auxiliary requirements.

In the year 2006, organization's name was changed to Nava Bharat Ventures Limited from Nava Bharat Ferro Alloys Limited.

II. Energy consumption

Total energy consumption

Description	Units	2005-06	2006-07	2007-08
Electrical energy	%	10.13	9.31	9.26
Thermal energy	M kcal/kwh	1296873	1897874	2581181
Total manufacturing cost	Rs.Lakhs	5484.84	9637.73	11614.03
Total energy bill	Rs.Lakhs	556.69	897.98	1080.18
Energy as % of total cost of production	%	10.14	9.31	9.30



III. Energy conservation activities & organizational set up

An energy conservation team was constituted in 2006 consisting of the engineers from all the sections. Chief Manager – operation leads the team who is also Certified Energy Manager from Bureau of Energy Efficiency (BEE), Ministry of Power. An office order was given to him as an authorized energy manager for PP.

The responsibilities of this team are being framed.

- They are meeting statutory requirements & correspond with state designated agencies of Government of India.
- Arranging of external audits as per the statutory requirement.
- They are conducting internal audits and monitor the equipment & process performances regularly.
- Framing of standards and comparison with national & international levels.
- Identifies the energy conservation opportunities and review the status of energy conservation projects.
- Projects the energy conservation activities and following up the status
- Organizes training classes on energy conservation.
- Identifies suitable seminars and depute the concerned staff.
- Conducts meetings periodically with all the section heads & concerned engineers.
- The committee reviews before procurement of any new equipment in view of energy conservation.

IV. Energy conservation achievements

During the period 2005-08, following are the energy conservation activities taken up.

Year	Activity taken up	Investment made (In Rs. Lakhs)	Saved in respective year (In Rs. Lakhs)
2005-06	Provided VFD for SA fan of boiler	7	6.65
2006-07	Waste heat recovery plant	470	35.7
	Higher efficient drip pump	0.6	0.1661
	Higher efficient CEP	13	(Commissioned in 2008-09)
2007-08	Vapor absorption machine	86	4.97
	Lighting transformer	2	0.3699
	Turbine lube oil cooler	35	(Commissioned in 2008-09)
	Gravity make up line for CW sump	6	(Commissioned in 2008-09)

Energy saving projects implemented during the year 2007-08

1. Vapor Absorption Machine

Installed Vapor absorption system – utilizing Ferro alloy furnace#4 exhaust gases for air conditioning in place of the existing conventional air conditioning units. Thus reducing power consumption by about 1200 kWh/day.



2. Lighting transformers

Energy saving lighting transformer was installed for Power Plant units – 2 & 3 lighting. There by reducing power consumption about 75 kwh/day



3. Gravity make up line for cooling water sump
By installing gravity make up line from reservoir to the CW sump we could save about 150 kWh/ day.



4. Turbine lube oil cooler

With the new cooler cooling water requirement reduces and pump energy consumption reduced by 528 kWh/day



V. Energy conservation plans and targets

1. To separate one of the compressors for service air consumption at low pressure.
2. To install VFDs for boiler – 2 PA fans and installing single higher size fan for boiler – 1.
3. Auto sequential start/stop of coal handling plant-1&2 to be studied to avoid idle running.
4. Reducing the set point of frequency in speed mode of Turbine from 50 Hz to 49 Hz will be studied. This gives 0.2 to 0.25% saving in auxiliary power consumption in case of Island mode operation of Unit-1.
5. Load manager procured, internal auditing is being conducted periodically. Photo sensors for lighting will be provided for general lighting purpose.
6. It is also proposed for solar lighting for streetlights in plant site .
7. Study the possibilities of providing turbo ventilators wherever possible.
8. Reduce the Station transformer– 1 & 2 sections bus voltage by 2% to reduce the auxiliary consumption.

9. It is to be studied to improve the boiler efficiencies by reducing the flue gas temperatures.

VI. ENVIRONMENT AND SAFETY

ENVIRONMENT

Our Company is certified for Environmental Management System as per the International Standard ISO 14001: 2004 & for Quality Management System as per the International Standard ISO: 9001: 2000

Our Company received the following Environmental Awards

- Our Company received award "Cleaner Production Award for Good Practices from A.P.Pollution Control Board, Hyderabad for the year 2003-2004
- Got Certificate of Appreciation for 100% Ash Utilization from Technology for Information Forecasting and Assessment Council, an autonomous body of Dept. of Science and Technology (DST), Govt. of India, New Delhi on 4th December 2005(Please see Annexure-C)
- Bagged Andhra Pradesh Pollution Control Board award in recognition of excellence in "CLEANER PRODUCTION TECHNOLOGIES AND ADOPTION OF CLIMATE CHANGE MITIGATION MEASURES" on the occasion of World Environment Day, 5th June 2008

SAFETY

- Our best performance with out reportable accidents from 12.01.2001 to 05.10.2003 (i.e. 997 days)
- Safety awareness programmes and mock drills are conducted on regular basis for all the staff, workers and contract labor.
- Safety committee and SHE committee meets regularly and monitors the safety performance. .

Our Company received the following Safety Award

- Bagged 'NATIONAL SAFETY AWARD' for the year 2000 towards 'LONGEST ACCIDENT FREE PERIOD'.