



CONCEPT TO COMMISSIONING

3.0 mio tons per annum UltraTech cement, Kotputli, Rajasthan, India

UltraTech Cement is India's largest and the World's 10th largest manufacturer of cement with an installed capacity of 52 Million Tonnes Per Annum and an expected increase of 10 Million Tonnes Per Annum by end of FY 13-14. UltraTech is part of the US \$40 billion Aditya Birla Group.. Kotputli Cement Works is one of their integrated cement plant having 10,000 tpd single kiln based clinkerisation capacity with part grinding and balance grinding at Panipat.

Owner

UltraTech Cement Limited



Project Consultant

Holtec Consulting Private Limited, India

Supply of Main Machinery

KHD, Germany & Humboldt Wedag, India
Loesche, Germany & Loesche India

Scope of Consulting Services

- Techno-economic Feasibility Study
- Computer Aided Deposit Evaluation and Quarry Scheduling & Optimization
- Basic Engineering, Procurement,
- Detailed Engineering & Inspection
- Project Implementation Management
- Supervision of Construction, Erection, Trial Runs and Commissioning

Special Features

- Use of fly ash for production of fly ash based cement
- 6 Stage PH/PC with Pyro-floor cooler -first time of such size
- One of the largest VRM (LM 69.6 – 735 tph) for raw material grinding

- Captive Thermal power Plant of 2 x 25 MW capacity
- Stringent pollution control measures comprising Bag House for Kiln/Raw Mill (< 30 mg/Nm³), , Coal Mill & Cement Mills and ESP for Cooler in the plant.
- Plant was constructed on soft soil with pile foundations.
- Nearest Clinkerisation unit to National capital city of Delhi.

Key Project Data

Quantities

Excavation	350,000 m ³
RCC excluding piles	152,000 m ³
Reinforcement Steel	21,500 T
Structural Steel	17,000 T
Power Cables	900 Km
Control Cables	450 Km
Utility Piping	17 Km
Project Drawings	1600 nos.
Suppliers	35 nos.
Execution Agencies	10 nos.

Main Equipment/Storages

Crusher system Capacity	1600 tph
Raw Mill	735 tph
Raw Meal Silo	27,000 T
Kiln	8,000 tpd
Clinker Silo	150,000 T
Coal Mill	95 tph
Cement Mills	2 x 170 tph
Cement Silos (3 compartments)	2 x 15,000 T
Packing Plant	8 x 90 tph

Significant Accomplishments

- Clinker production 125% of the rated capacity in third year of operation
- Clinkerization Section commissioned in 26 months even after installation of nearly 4400 piles that took additional 6 months of construction time.
- Specific Power consumption 80 Kwh/t cement
- Specific Heat Consumption 697 Kcal/Kg clinker