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Dated: 6th September 2022

4th PROJECT LIE REPORT (FOR QUARTER ENDING JUNE 2022) OF INTEGRATED CEMENT PLANT UNIT (IU) AND CLINKER GRINDING UNIT (GU)

INTEGRATED UNIT SITUATED AT

VILLAGES HARDUWA KEN, PURAINA, MADDIAN AND SOTIPURA, TEHSIL
AMANGANJ, DISTRICT PANNA, MADHYA PRADESH

GRINDING UNIT SITUATED AT

DISTRICT HAMIRPUR, UTTAR PRADESH

IMPLEMENTED BY

JAYKAYCEM (CENTRAL) LIMITED SUBSIDIARY OF

 **JKCement**

REPORT PREPARED FOR

BANK OF BARODA, INTERNATIONAL BUSINESS BRANCH, THE MALL,
KANPUR-208 001

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PART A

REPORT SUMMARY

- 1. Name of Project:**
Project 1- To Set Up a Greenfield Integrated Cement Plant of Capacity 8000 TPD Clinker and 2MI. TPA Cement Capacity which includes setting up of Waste Heat recovery System (WHRS) with estimated capacity of 22 MW
Project 2- To Set Up A Greenfield Clinker Grinding Unit (GU) of 2.0 MI. TPA Cement Production Capacity.
- 2. Project Location:**
Project 1: Villages Harduwa Ken, Puraina, Maddian and Sotipura, Tehsil Amanganj, District Panna, Madhya Pradesh
Project 2: District Hamirpur, Uttar Pradesh
- 3. Name of the Borrower:** M/s. Jaykaycem (Central) Limited a wholly owned subsidiary of JK Cement Limited
- 4. Director's**
Mr. Madhavkrishna Sighania
Shri Ajay Kumar Saraogi
Shri Anil Kumar Agarwal
Shri Krishna Behari Agarwal
- 5. Prepared for Bank:** Bank of Baroda, International Banking Branch, Kanpur
- 6. LIE Consultant Firm:** M/s. R.K. Associates Valuers & Techno Engineering Consultants (P) Ltd.
- 7. Date of Survey:** 26th July 2022 (Grinding unit) and 27th July 2022 (Integrated Unit)
- 8. Date of Report:** 16/08/2022



9. Purpose of the Report:

To provide fair detailed analysis report to the Bank based on the "in-scope points" mentioned below for facilitating them to take appropriate credit decision on the Project.

10. Scope of the work provided by the Lender:

- a. To conduct site reviews, document reviews and study progress reports on continuous basis specially vis-à-vis Original timelines to avoid sudden shocks of overrun.
- b. To determine the progress achieved and appropriateness of related transactions. The consultant shall also flag any issue which is resulting in Nonperformance/ under performance by the contractor. All payments to related parties should be closely monitored and highlighted to the consortium.
- c. Deviations in project progress vis-à-vis timelines and amount disbursed. High value payment/ dues to be clearly monitored and highlighted to the consortium.
- d. Periodical review of invoices and submission of exception report to the consortium.
- e. Fortnightly review of production/ supplies (quantities of works certified) vi-a-vis inventory consumption records, cash flow to contractor, sub-contractor and vendors, wastages, extent of work and quality non conformities raised by borrower and highlight exceptions. A single review report will be released each fortnight for invoices raised and inventory consumed in that period.
- f. Suggestions, if any for improving the project management practices.



- g. Perform such other services as request by the lenders and mutually agreed to by the party and lenders.

- 11. Documents perused for Proposal:**
- a. Techno economic feasibility report
 - b. Pending Project Statutory approvals
 - c. CA certificate
 - d. List of contractors/Suppliers
- 12. Annexure with the report:**
- 1. Pending Project Statutory approvals
 - 2. CA Certificate
 - 3. List of Contractors/ Suppliers



PART B

INTRODUCTION

1. THE PROJECT:

Jaykaycem (Central) Limited (JCL) is setting up a Greenfield Integrated Cement Plant (IU) of 8,000 TPD clinker and 2.0 million output TPA cement capacity at village Devra, Hardua, Puraina, Sotipura and Madaiyan, tehsil Amanganj, district Panna, Madhya Pradesh with a Split located Grinding Unit (GU) of 2 million TPA capacity in district Hamirpur, Uttar Pradesh. The project also envisages setting up of Waste Heat Recovery System (WHRS) based power plant, along with the integrated cement plant. A part of Clinker produced shall be consumed at integrated cement plant and balance shall be supplied to **JCL's** Grinding Unit (GU) in Hamirpur, Uttar Pradesh.



2. ABOUT THE BORROWER:

Jaykaycem (Central) Limited (JCL) is a wholly owned subsidiary of JK Cement Limited, which in turn, is the Cement vertical of the industrial conglomerate JK Organisation. **JCL**, thus, is an affiliate of the flagship JK Organisation. The primary set of directors of JCL as on date are:

- Mr. Madhavkrishna Singhania: Deputy Managing Director & CEO
- Shri Ajay Kumar Saraogi
- Shri Anil Kumar Agarwal
- Dr. Krishna Behari Agarwal

JCL is setting up a Greenfield grey cement manufacturing unit of 8,000 TPD clinker capacity in Panna district of Madhya Pradesh, and a Greenfield split grinding unit in Hamirpur district of Uttar Pradesh.

‘Jaykaycem’ is an affiliate of the multi-disciplinary industrial conglomerate- JK organisation. JK Cement limited acquired 100 Percent shares, whereupon Jaykaycem became its wholly owned subsidiary. Jaykaycem is being granted the mining lease of cement grade lime stone in Panna District of Madhya Pradesh state and letter of intent in this regard has already been issued by Madhya Pradesh government. It started the process of acquisition of land from villagers falling under mining and under construction plant area. It has plans to set up grey cement manufacturing unit of appropriate capacity in phased within the periphery of mining area.

JK cement deals in production of grey cement, white cement, wall putty, gypsum plaster, tile adhesives and grouts and wood finishes.

JK Cement is having following units

1. JK Cement works, Nimbahera
2. JK White cement works, Gotan
3. JK Cement works, Muddapur
4. JK cement works, Mangrol
5. JK cement works, Jhajjar
6. JK cement works, Aligarh
7. JK Cement works, Balasinor
8. JK White, Katni
9. Besides above listed plants, JK Cement is also having a step down subsidiary in UAE i.e. J.K. Cement works (Fujairah) FZA.



3. PROJECT LOCATION:

3.1 LOCATION OF INTEGRATED UNIT (IU)

Details of Location of Integrated unit is as below:

Particulars	Description
Latitude	N 24° 19' 14"
Longitude	E 79° 58' 40"
Connectivity Systems	
Road	<p>The project site of the subject under construction plant is well connected by road network and is on State Highway 49. The Project site is on Village Road leading to Amanganj town and Nagar panchayat which is can be easily accessed via State Highway SH-49 towards panna national park. It is around 53 Km from main district Panna. District Panna is around 285 Km far away from Lucknow State Capital.</p> <p>The project site can be approached from by traveling on National Highway – 75 (NH-75) up to Panna and then traveling on Madhya Pradesh State Highway SH-49 towards Damoh. The approximate distance of the site from NH-75 is about 48 km and about 12 km from Amanganj.</p>
Rail	Railway network is not available in the near vicinity of the under construction cement plant. The nearest railway station is at Damoh at a distance of about 85 km in South direction.
Air	The nearest domestic airport is at Khajuraho at about 100 km distance from the plant site. The nearest international airport is at Lucknow at a distance of about 350 km from the project site.

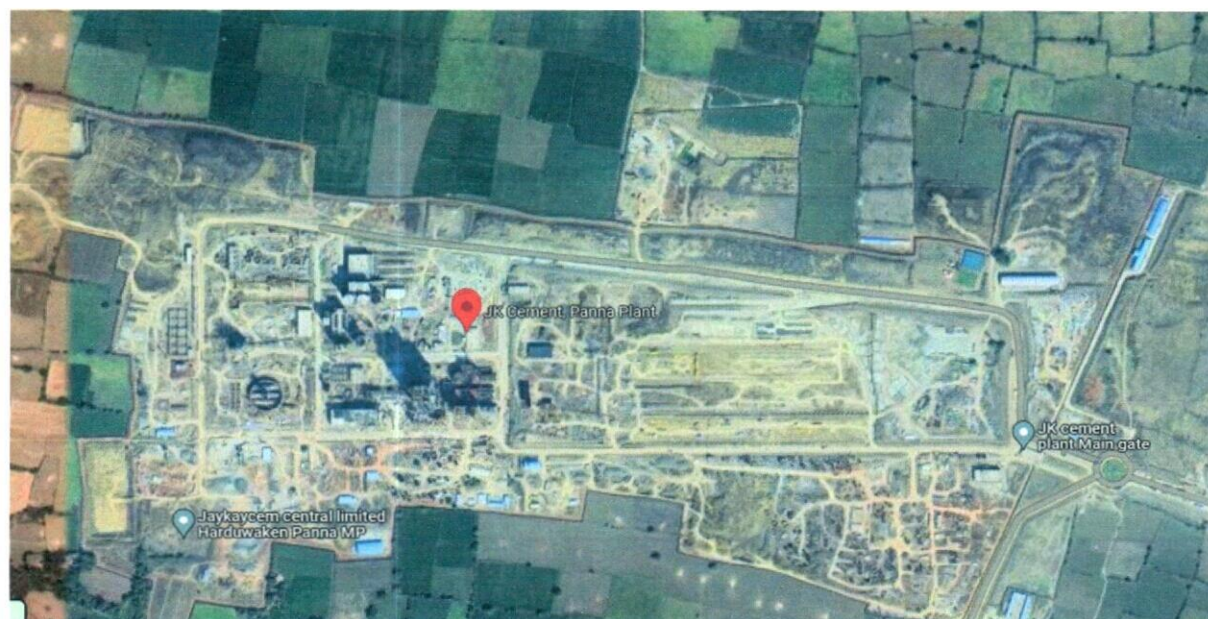


Figure 1: Location of under construction Integrated Unit

3.2 LOCATION OF GRINDING UNIT

Details of Location of Grinding unit is as below:

Particulars	Description
Latitude	N 25° 46' 16"
Longitude	E 80° 07' 40"
Connectivity Systems	
Road	The considered location of the cement manufacturing unit is well connected with major cities and town, and the markets of interest. The approximate road distances of the project site from the major towns and cities are: Kanpur : 85 km, Lucknow : 170 km, Prayagraj : 220 km, Panna (Amanganj) : 240 km, Varanasi : 350 km
Rail	The nearest railway station from the plant site is at Ingotha at a distance of about 2.5 km. The other nearest railway station is at Bharuwa Sumerpur located about 9 km from the site.
Air	The nearest domestic airport is at Kanpur at a distance of about 90 km from the under construction cement manufacturing unit. The nearest international airport is at Lucknow at a distance of about 157 km from the project site.

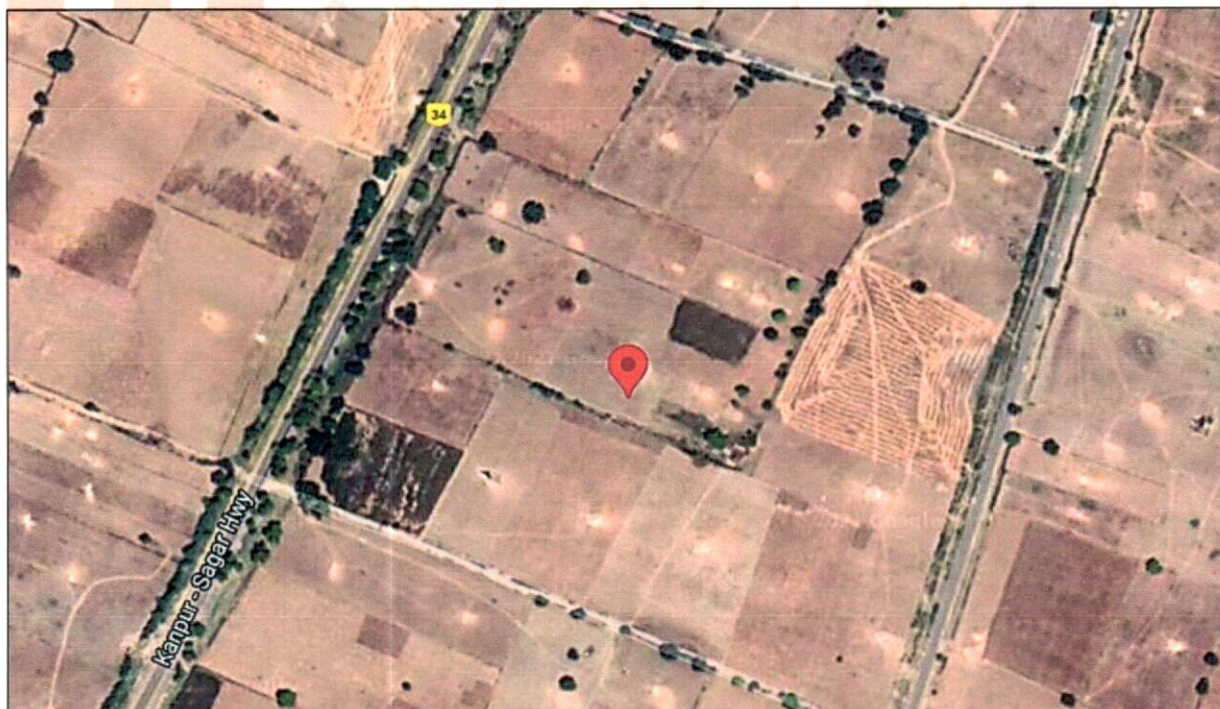


Figure 2: Project Location of Grinding Unit

4. PROJECT OVERVIEW:

Jaykaycem (Central) Limited (JCL) a wholly owned subsidiary of JK Cement Limited is setting up a Greenfield Integrated Cement Plant (IU) of 2.64 MTPA (8,000 TPD) of clinker and 2.0 Million output TPA of cement at village Devra, Hardua, Puraina, Sotipura and Madaiyan, tehsil Amanganj, district Panna, Madhya Pradesh with a Split located Grinding Unit (GU) of 2 Million TPA capacity at district Hamirpur, Uttar Pradesh.

The total proposed Project cost sums approx. Rs.2970 crores out of which Rs.2187.50 cr. is proposed for Integrated Cement Plant (IU) at Panna, MP and Rs.322.98 cr. at Hamirpur, Uttar Pradesh. In addition to this Rs.459.82 cr. is proposed for common expenses taken in Total Project Cost for pre-operative, IDC and finance expenses.

The proposed completion date for the Project and both these Plants are envisaged by 30th April, 2023 as per BOB Sanction Letter. As per TEFR, 24 months' period is envisaged for Integrated Unit and 18 months for Grinding Unit from the date of start of the construction. As per the site inspection and information provided by the borrower, construction at IU, Panna started on July, 2021 and at GU, Hamirpur from September, 2021. Presently as per our site inspection in February, the construction work is going on in full swing at both the sites and the project is anticipated to start the commercial production by April 2023.

The borrower has appointed reputed and well established contractors/Suppliers for completing this project. As per the information available in public domain for these suppliers/Contractors they are having good track record in completion such type of works.

4.1 INTEGRATED CEMENT PLANT OF CAPACITY 8000 TPD CLINKER AND 2 MILLION OUTPUT TPA CEMENT CAPACITY:

Integrated Cement Plant of Capacity 2.64 MTPA (8000 TPD) of Clinker and 2 Million output TPA of Cement is located at Villages Harduwa Ken, Puraina, Maddian and Sotipura, Tehsil Amanganj, District Panna, Madhya Pradesh. This project is proposed on about total land area about 480 acres and the same is also approved in Environment clearance.

As per Environment Clearance from Ministry of Environment, Forest and Climate Change and Industrial Entrepreneur Memorandum from Ministry of Commerce & Industry, Integrated unit situated at Panna is having approval for setting up of 5.28 MTPA of clinker unit and 6.0 MTPA of Cement Unit having 2 units each in clinker and cement production. However as per present plan borrower has decided to setup single unit each in clinker and cement units with production capacity of 2.64 million output TPA (8000 TPD) of Clinker production and 2 Million output TPA of Cement production which will be around 50% & approx. 33.33% of clinker and cement unit respectively of the approved capacity. In addition to this borrower also has approval for setting up CPP of 80 MW and WHRS of 30 MW out which borrower has currently planned to setup only 22 MW WHRS. Presently in the subject project, borrower has not planned Captive Power Plant (CPP) and Railway siding at both the locations.

The under-construction plant will be sustained through Kakra-Panna Limestone mining lease admeasuring 1594.34 Hectare out of which 75.754 ha. Is Govt. leased land and 1518.586 ha is private land planned to be obtained by JKL. The northern boundary of proposed site of the plant adjoins the southern boundary of granted Limestone mining lease.

As per TEFR prepared by HOLTEC, JCL has estimated that Kakra mine area has about 237.27 million output ton of cement grade limestone, 58.20 million output ton of blend able grade limestone, and 27.32 million output ton inferior grade probable limestone reserves which shall meet the requirement of clinkerisation plant for about 80 years for the envisaged production capacity of 2.64 million output TPA clinker.

In this regard out of the total available capacity, borrower has got Consent to Establish from M.P Pollution Control Board for mining at following capacities:

Activity/Product	Quantity/Year
Mining of Limestone	4.08 Million TPA
Mine Waste	0.18 Million TPA
Mining of Sub Grade Lime stone	0.58 Million TPA
Mining of Inter Burden	1.51 Million TPA
Mining of Soil/Alluvium	1.26 Million TPA

In Cement unit, JCL has proposed to produce OPC and PPC as per relevant BIS Standards:

Sr. No.	Product Type	Proportion	Cement Volume	Relevant IS
1.	OPC	40%	2424 TPD	IS 12269-1987
2.	PPC	60%	3636 TPD	IS 1489-1991

In the subject Plant borrower has opted clinker dry process kiln system of 8,000 TPD capacity. This process will include limestone Crushing and transport, correctives & additive crushing, transport, pre-blending stockpiles, Closed Circuit Roller Press (CCRP) for raw material grinding, a vertical roller mill for coal grinding, 6-stage double string preheater with in line calciner, Waste Heat Recovery System (WHRS), coal fired rotary kiln with 3 roller stations, storing & dozing of fuel, clinker cooler, clinker storage silo, clinker extraction system, Vertical Roller Mill (VRM) for clinker grinding, clinker bulk loading via trucks, cement silos, packing and loading equipment.

A part of clinker produced at Panna Plant shall be consumed at integrated cement Plant and balance shall be supplied to JCL's Grinding unit in Hamirpur, Uttar Pradesh.

In addition to above clinkerisation process, JCL has planned setting up pyro processing section with 8,000 tpd nominal capacity and 10,000 tpd potential capacity to produce 2 Million output TPA of Cement.

Main machineries to be installed in integrated Cement unit is as below:

- i. Limestone Crusher
- ii. Corrective/Additive Crusher
- iii. Coal Crusher
- iv. Raw material Grinding
- v. Kiln
- vi. Cooler
- vii. Coal mill
- viii. Cement Grinding
- ix. Packing machine

The water requirement for plant, colony and WHRS has been estimated as about 2500 m³/Day. Details of water requirement is as below:

- **Cement Plant:** 2,100 m³/Day
- **Drinking, Sanitation and Plantation:** 100 m³/Days
- **Mines:** 150 m³/Day
- **Waste heat Recovery System (WHRS):** 150 m³/Day

Water requirement is envisaged to be primarily met from mines pits, check dams, rain harvesting etc. beside Ken River. For domestic purposes, water requirement may be augmented by utilizing underground sources.

The maximum power demand for the under construction plant and mines has been estimated as about 34MW which is proposed to be met through a combination of Grid and Waste heat recovery system (WHRS) based thermal power plant.

Geographical Conditions on the site:

- i. The area has generally hot climate. The maximum temperature is around 45 Degree Celsius while the minimum is 8 Degree Celsius.
- ii. The average annual rainfall of this area is about 800 mm.
- iii. The annual relative humidity varies from 30% to 90%.
- iv. The above plant site area falls in Seismic Zone III.

4.2CLINKER GRINDING UNIT (GU) OF 2 Million Output TPA CEMENT PRODUCTION CAPACITY

Grinding unit of Capacity 2 Million output TPA of Cement is located at District Hamirpur, Uttar Pradesh. As estimated by JCL, the under construction project will require about 27 Acres which translates to approx. 11 Hectares of land for the purpose of setting up the under construction Grinding unit. The same area is also approved as per environment clearance.

Clinker grinding unit (GU) is located at Hamirpur district, Uttar Pradesh. The district falls under Chitrakoot Division. **As per the product mix details provided by the borrower, they have planned to manufacture 100% Portland Pozzolona Cement (PPC).** The plant technical concept conceptualizes use of modern energy efficient and environment friendly material transport, handling, storage, grinding, packing and dispatch systems. The core grinding circuit is envisaged to constitute of inbound material unloading and handling



through bulk receiving units with truck tipping systems; optimized and just sufficient material storages; vertical roller mill for grinding; rotary packing machines with truck & bulk loading systems, and a suitable hot gas generator for moisture mitigation and mill operations. The plant technical concept envisages to have suitable and adequate infrastructure along with stipulated green belt provisions.

Main machineries envisaged for the project area:

- i. Cement grinding mill
- ii. Cement Mill hoppers
- iii. Cement dispatch packing machine and loading machines
- iv. Hot air generator

As per Environment clearance (EC) issued to the project by Ministry of Environment, Forest and Climate Change (MoEFCC) and Industrial Entrepreneur Memorandum (IEM) from Ministry of Commerce & Industry the project has been granted approval for manufacturing of 2 million TPA of PPC. In addition to the environment clearance the project has also obtained Consent to Establish (CTE) from UP Pollution Control Board for Production of PPC up to 1,50,000 MT per month which translates to 1.8 Million TPA, OPC up to 16,600 MT per month which translates to 0.2 Million TPA apart from other products like PSC (16,600 MT per month) and Cement composites (16,600 MT per month).

The total water requirement for the project is envisaged to be about 300m³/Day, which is planned to be met from underground sources and secondary sources like rainwater harvesting etc.

The total maximum power demand for the under construction plant has been estimated as about 12MW, which is envisaged to be met from the sumerpur grid substation of UP Power transmission corporation limited (UPPTCL) located at about 6Km from the under construction plant.



Geographical Conditions on the site:

- i. The terrain of the location/area is generally flat and The Plant site area falls at the cusp of Seismic Zone II and Seismic Zone III.
- ii. The average annual temperature is about 25 Degree Celsius. The average minimum and maximum temperature recorded in the past few decades has been 18 Degree Celsius and 32 Degree Celsius respectively while the record minimum and maximum temperatures have been 0 Degree Celsius and 47 Degree Celsius.
- iii. The area witnesses a dry winter Humid Subtropical Climate.

5. SCOPE OF WORK DURING PROJECT DURATION:

- I. To Conduct Site reviews, document reviews and study progress reports on continuous basis specially vis-à-vis Original timelines to avoid sudden shocks of overrun.
- II. To determine progress achieved and appropriateness of related transactions. The consultant shall also flag any issue which is resulting in Non-performance/ under performance by the contractor. All payments to related parties should be closely monitored and highlighted to the consortium.
- III. Deviations in project progress vis-à-vis timelines and amount disbursed. High value payment/dues to be clearly monitored and highlighted to the consortium.
- IV. Periodical review of invoices and submission of exception report to the consortium.
- V. Fortnightly review of production/supplies (quantities of works certified) vi-a-vis inventory consumption records, cash flow to contractor, sub-contractor and vendors, wastages, extent of work and quality non conformities raised by borrower and highlight exceptions. A single review report will be released each fortnight for invoices raised and inventory consumed in that period.
- VI. Suggestions, if any for improving the project management practices.
- VII. Perform such other services as request by the lenders and mutually agreed to by the party and lenders.

Note:

1. The scope of work is for the complete duration and not for a specific report.
2. Carrying out the scope of work will depend on the details/ information/ data provided to us by the borrower from time to time.
3. As per our discussion with the lead lender during meeting on 23rd February 2022, it has been informed that the lender is taking proper due diligence measures for all the parties

involved in construction works of integrated unit as well as grinding unit. The payment process of the lender was also physically verified during the meeting.

6. PURPOSE OF THE REPORT: To provide fair detailed analysis report to the Bank based on the "in-scope points" mentioned above for facilitating them to take appropriate credit decision on the Project.

7. METHODOLOGY ADOPTED:

- a. Study of Project Planning documents/ reports to know about the Project.
- b. Additional information, data, documents collection the borrower.
- c. Study and analysis of the documents and information obtained from the borrower.
- d. Research about the Project/ sector from the sources in the public domain.
- e. Correlation of the provided information against Industry/ sector benchmarks/ trend.
- f. Information compilation, analysis and reporting.



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PART C

**PLANT INFRASTRUCTURE SECTIONS & FACILITY DETAILS WITH
ACTUAL PROGRESS**

1. LAND DETAILS:

1.1 PROJECT 1: INTEGRATED UNIT (IU)

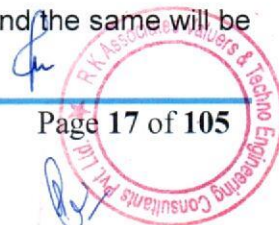
As per TEFR of the project, the borrower has proposed an expenditure amounting to Rs.474.95 Crore towards land and site development. Breakup of Rs.474.95 Crore is below:

(Amount in Rs. Crore)

Sr. No.	Particular	Amount
1.	Land cost for Plant (Govt. Land)	424.20
2.	Land cost for plant (Private Land)	
3.	Land cost for mining area (Govt land)	
4.	Land cost for mining area (Private Land)	
5.	Mines development expenses	1.24
6.	Site preparation, levelling and grading	1.50
7.	Geo technical, hydrological investigation and topographic survey	0.60
8.	Boundary wall	7.33
9.	Gates, security pickets etc.	0.30
10.	Approach road	6.27
11.	Plant internal roads	13.41
12.	Truck parking, logistics offices and other semi paved areas	11.09
13.	Plant drainage	8.61
14.	Landscaping and provision of green belt	0.40
	Grand total	474.95

As per TEFR Prepared by HOLTEC, Jaykaycem (Central) Limited plans to acquire about 480 acres of land for setting up of the Integrated cement plant. Fresh update on status of purchase of land was sought from the borrower. Accordingly, the borrower has informed that they have already acquired the land required for construction of integrated unit. However, we have not received any substantial information document regarding the same. As per present status based on our site inspection, the actual project land was observed to be in possession of the company since no encroachment was visible on site.

As per TEFR prepared by HOLTEC, JCL has proposed 1060 Acres (429.14 ha.) of land for mining purpose. However, the borrower has already obtained Environment clearance form Ministry of Environment, Forest and Climate for 1594.34 Hectare (3938 Acres). As per HOLTEC report, borrower has planned to initially purchase 621.075 ha. We have also asked for clarification regarding possession and acquire status of this land parcel. Accordingly, the company has informed that this area is majorly for mining functions only and the same will be acquired step by step based on raw material demand.



1.2 PROJECT 2: GRINDING UNIT (GU)

As per TEFR of the project the borrower has proposed an expenditure amounting to Rs.22.70 Crore towards Land and Site Development. Breakup of Rs.22.70 Crore is as below:

(Amount in Rs. Crore)

Sr. No.	Particular	Amount
1.1	Capital Cost of procured land for setting up the plant	9.00
1.2	Site preparation & development	0.50
1.3	Site enabling investigations (Topographical, Geotechnical & Hydrological)	0.50
1.4	Boundary Wall	1.25
1.5	Gates, Security Pickets, etc.	0.30
1.6	Approach Road to Plant	1.90
1.7	Plant Internal Roads	4.00
1.8	Truck Parking & Logistics Office	3.70
1.9	Plant Drainage	1.35
1.10	Landscaping and Provision of Green Belt	0.20
	Sub-total (1.0)	22.70

As per TEFR JCL was in process of procuring a land patch of about 27 Acres area for the purpose of setting up of grinding unit at the time of TEFR preparation. Similar area admeasuring 26.33 acres is also approved by Ministry of Environment, Forest and Climate Change. Fresh update on status of purchase of land was sought from the borrower. Accordingly, the borrower has informed that they have already acquired the land required for construction of Grinding unit. However, we have not received any substantial information document regarding the same. As per present status based on our site inspection, the actual project land was observed to be in possession of the company since no encroachment was visible on site.

As per our discussion with the lender regarding unavailability of some documents from the borrower's end, it was informed by the lender that a consortium meeting was held on 25th March 2022 in which our findings in First LIE Report and Second Draft LIE Report were discussed. Accordingly, the company has informed to the lender that there are high number of title deeds which are currently under legal scrutiny. As soon as the legal scrutiny process is finished the company will provide the title deeds directly to the lender. Therefore, we have relied simply on CA certificate dated 09th August 2022 with UDIN. 22424004AOQULC5196 for cost incurred towards purchase of land and no further analysis is done from our end to verify the cost incurred for acquiring the land.

2. BUILDING & STRUCTURAL DETAILS:

2.1 PROJECT 1: INTEGRATED UNIT (IU)

JCL has planned following Building/ structures as per the requirement of the Plant:

STRUCTURE OF EQUIPMENTS	CAPACITY OF STRUCTURES
Lime stone Crusher	Crusher Capacity: 1300 TPH (Proposed) Wobbler Feeder capacity: 1600 TPH (Proposed)
Limestone pre blending stockpile	Storage Capacity: 2 X 40,000 t (Proposed) Limestone stacker capacity: 1600 TPH (Proposed) Limestone reclaimer capacity: 900 TPH (Proposed)
Corrective/Additive crushing	Capacity: 1 X 300 TPH (Proposed)
Corrective/Additive & Blending Material storage	Bauxite Corrective storage: 7500 t (Proposed) Iron Ore Corrective storage: 7500 t (Proposed) Gypsum storage: 2100 t (Proposed) Limestone Storage: 1000 t (Proposed) Pond ash: 5000 t (Proposed)
Fuel handling, storage and transport	Fuel storage: 2 X 10,000 t (Indian coal) (Proposed) and 2 X 3000 t (Pet Coke) (Proposed) Fuel stacker: 1 X 300 TPH (Proposed) Fuel side scraper: 1 X 200 TPH (Proposed)
Fuel crushing and transport	Capacity: 1 X 300 TPH (Proposed)
Fuel drying and grinding	-
Raw material drying and Grinding	Closed Circuit Ball mill capacity: 2 X 375 TPH (Proposed)
Raw material Blending and Kiln Feed	Raw mill blending silo capacity: 10000 t (Proposed)
Waste heat recovery System (WHRS)	22 MW
Cement Grinding system	Vertical Raw mill (VRM) capacity: 300 TPH@3600 Blaine (Proposed)
Cement storage	Cement storage capacity: 3 X 5000 t (Proposed)
Cement packing and dispatch:	Capacity: 2 X 240 TPH (Proposed)
Preheater, Pre-Calcliner, Kiln and Cooler	-
Fuel firing system	-

Limestone handling and transportation to stockpile	-
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As per HOLTEC report, for development of above listed sections, JCL has estimated Rs.378.63 Crore in Building/ structures out of total project cost amounting to Rs.2970.29 Crore. Bifurcation of Rs.378.63 Crore is as below:

(Amount in Rs. Crore)

Sr. No.	Particular	Amount
1.	Main factory Buildings	85.65
2.	Silos, Hoppers, Storages, Covered Gantry etc.	69.45
3.	Auxiliary services	28.64
4.	Office/Non factory buildings and mine building	7.52
5.	Residential Colony	64.05
6.	Equipment foundations cost	29.85
7.	Deep foundations cost provisioning on account of possibility of weaker soil bearing capacity	33.40
8.	Indicative GST on Civil works	60.07
	Total	378.63

→ Detailed breakup of above building sections is below:

(Amount in Rs. Crore)

Sr. No.	Description	Building Cost	Equipment foundation Cost out of Building Cost
1. Main Factory Building			
1.1	Limestone crusher complex (including retaining wall, ramp, stone pitching, etc.)	10.90	1.35
1.2	Correctives & Additive crusher house (including short ramp, pitching, etc.)	1.00	0.25
1.3	Raw mills complex	10.40	2.10
1.4	Raw mill bag house & stack support structure	7.20	0.90
1.5	Preheater tower (Six stage, Double string)	24.15	0.35
1.6	Rotary Kiln Piers, Walkways, TA duct support	1.85	4.10
1.7	Clinker cooler house (including De-dusting structures & Stack supporting structure)	7.70	1.80
1.8	Coal Crusher House (incl. short retaining wall, ramp, stone pitching, etc.)	0.60	0.35
1.9	Coal mill house	7.45	2.05
1.1	HAG supporting structure	2.25	0.25
1.11	Cement mill house (including De-dusting structures & Stack supporting structure)	6.75	2.25
1.12	Packing plant, truck & bulk loading, bags godown	5.40	0.05
	SUB TOTAL (1.0)	85.65	15.80
2. Silos, Hoppers, Storages, Covered Gantry etc.			



2.1	Limestone pre blending stockpile (linear, covered, with S/R foundations)	3.50	4.50
2.2	Correctives storage (linear, covered, with S/R foundations)	1.55	1.95
2.3	Solid fuel storage (linear, covered, with S/R foundations)	1.85	4.65
2.4	Raw mill hoppers & building	3.40	0.10
2.5	Blending (Raw Meal) silo	6.30	0.20
2.6	Clinker silo & transport supporting structure	21.75	0.20
2.8	Clinker load-out silos (4nos.)	2.95	0.15
2.9	Gypsum, pond ash and sweetener storage (linear, covered)	2.90	0.00
2.10	Cement mill hoppers & building	3.40	0.10
2.11	Fly ash silo	4.00	0.10
2.12	Cement silos	13.85	0.15
2.13	AFR Storage	4.00	0.15
	SUB TOTAL (2.0)	69.45	12.25
3. Auxiliary Services			
3.1	Switch yard	0.45	0.61
3.2	Main indoor substation	1.45	0.20
3.3	CCR, including Lab, Technical Offices, etc.	5.42	0.05
3.4	Load centres & MCC rooms	5.30	0.20
3.5	Electrical/ Mechanical Workshop & Yard	0.72	0.10
3.6	Compressor house & rooms	0.75	0.11
3.8	Belt conveyors, TTs, etc. (plant internal; partly with gallery & partly locally covered)	7.15	0.00
3.9	Water Storage (UG+OH)	2.65	0.05
3.10	Weigh Bridges & Weigh Rooms	0.35	0.25
3.11	Overhead cable galleries	2.50	0.00
3.12	Dump hoppers & Truck tippler foundations	1.30	0.20
3.13	Cable Tunnels, Trenches, etc.	0.60	0.00
	SUB TOTAL (3.0)	28.64	1.77
4. Office/ Non factory buildings, etc.			
4.1	Administrative & Services building	2.10	0.00
4.2	Gate house, Time & Security office	0.30	
4.3	Sales, Dispatch & Logistics offices	0.45	
4.4	General store & yard	0.95	
4.5	Canteens (Executive, Workers, Truckers, etc.)	0.35	
4.6	Shift units/ washrooms (in general/common areas)	0.40	
	SUB TOTAL (4.0)	4.55	
5. Mines offices, buildings, services, etc.			
5.1	Mines offices & basic workshop (Basic provisioning only)	2.17	0.00
5.2	Mines load centre	0.35	0.05
5.3	Magazine building	0.40	0.00
	SUB TOTAL (5.0)	2.92	0.05
6. Residential Colony & Social Amenities			
7.1	Unit Head's Villa - 1 no. of ~250 sqm	0.65	0.00
7.2	TH/CH House - 02 nos of ~225 sqm	1.10	
7.3	Type A Quarters - 8 nos. of ~200 sqm each	3.25	



7.4	Type B Quarters - 16 nos. of ~150 sqm each (Multi Storey)	4.75	
7.5	Type C Quarters - 32 nos. of ~125 sqm each (Multi Storey)	9.00	
7.6	Type D Quarters - 40 nos. of ~100 sqm each (Multi Storey)	8.00	
7.7	Type E Quarters - 120 nos. of ~80 sqm each (Multi Storey)	0.00	
7.8	Bachelor Executives' Hostel - 1 no.	1.75	
7.9	Workers' Dormitories - 2 nos.	0.70	
7.10	Occupational Health Centre	.80	
7.11	Temple complex	2.50	
7.12	Community hall, playground, shops, etc.	1.50	
7.13	Guest house	4.00	
7.14	Club, gymnasium, recreation, etc	1.25	
7.15	School building & allied facilities	10.00	
7.16	Other services (STP, WTP, roads, drains, water supply, green areas, etc.)	14.80	
	SUB TOTAL (7.0)	64.05	0.00
8.	Total (1.0+2.0+3.0+4.0+5.0+7.0)	255.26	29.89
9.	Deep foundations cost-provisioning (Indicative 10% lumpsum provisioning considered as Geotechnical investigations at proposed plant site are at preliminary level only)	30.40	3.00
10.	Indicative GST component on Civil works (average approx.18% of total civil cost considered for TEFR formulation purpose)	54.70	5.37
11.	Total Civil Works Cost (7.0+8.0+9.0)	340.36	38.26
	Grand Total	378.63	

Source: TEFR prepared by HOLTEC Consultancy

Notes:

1. The above estimation of cost is as per the TEFR prepared by HOLTEC consultancy. HOLTEC consultancy is very well-established consultancy for such type of works and have greatly established themselves in this sphere.
2. Building Plans have been prepared by HOLTEC consultancy only.
3. The Map is sanctioned on 13/05/2022 and is valid till 13/05/2025.
4. The concerned building plans provided to us doesn't have individual measurements of various structures.



As per Approved Map for the integrated unit is provided by the Borrower following buildings are proposed:

S.NO.	GENERAL PLANT DESCRIPTION
1.	LIMESTONE CRUSHER
2.	BRU FOR CORRECTIVE
3.	LIMESTONE STOCKPILE
4.	IRON ORE STOCKPILE
5.	BAUXITE STOCKPILE
6.	BRU FOR COAL/PETCOKE
7A.	RAW MATERIAL HOPPERS I
7B.	RAW MATERIAL HOPPERS II
8A.	RAW MILL HOUSE I
8B.	RAW MILL HOUSE II
9.	RAW MILL BAG HOUSE AND LC-103
10.	BLENDING SILO
11.	PREHEATER + COMPRESSOR HOUSE
12.	KILN & TA DUCT
13.	COOLER
14.	COOLER ESP
15.	C.O.R. & LAB
16.	CLINKER SILO
17.	CLINKER TRUCK LOADING
18.	ADDITIVE SHED
19.	CEMENT MILL HOPPERS
20.	FLYASH SILO
21A.	CEMENT MILL - RE-CIRCULATION BLDG.
21B.	CEMENT MILL - VRM
21C.	CEMENT MILL - BAGHOUSE
22.	CEMENT SILOS
23.	PACKING PLANT AND EMPTY BAGS GODOWN
24.	TRUCK LOADING
25.	COAL STOCKPILE
26.	PETCOKE STOCKPILE
27.	RAW COAL/PETCOKE HOPPER
28.	COAL/PETCOKE MILL
29.	SWG YARD & LC-107
30.	LIMESTONE CRUSHER LOAD CENTER LC-101
31.	LC-105
32.	LC-102
33.	LC-106
34.	TRUCK BULK LOADING CONTROL ROOM
35.	RAW AND TREATED WATER TANK + WTP
35A.	RE-CIRCULATION WATER TANK
36.	TDG STORAGE
37.	WTR SHED
38.	RAW WATER RESERVOIR (50000 M3)

39.	MAIN WATER HARVESTING TANK (20,000 M ³)
40.	MECHANICAL & ELECTRICAL WORKSHOP
41.	GENERAL STORE
42.	PROJECT OFFICE
43.	GATE COMPLEX
44.	ADMINISTRATION BUILDING
45.	WORKS/RAW MATERIAL/PACKING ENTRY AND EXIT GATE
46.	RAW MATERIAL WEIGH BRIDGE WITH CABIN
47.	PACKING PLANT WEIGH BRIDGE WITH CABIN
48.	TRUCK PARKING
49.	CONSTRUCTION POWER SY. & SUB-STATION
50.	OXYGEN PLANT
51.	SECURITY BARACKS
52.	DUST SUPPRESSION ROOM

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Progress of Building and Civil Structures as per site visit dated 27th July 2022 to Integrated Unit.:

Sr. No.	DESCRIPTION	March 2022 Building Progress (%)	June 2022 Building Progress (%)	March 2022 Foundation progress (%)	June 2022 Foundation Progress (%)
1	Main Factory Building				
1.1	Limestone crusher complex (including retaining wall, ramp, stone pitching, etc.)	10%	35%	40%	60%
1.2	Correctives & Additive crusher house (including short ramp, pitching, etc.)	25%	25%	45%	45%
1.3	Raw mills complex	90%	90%	90%	90%
1.4	Raw mill bag house & stack support structure	90%	90%	90%	90%
1.5	Preheater tower (Six stage, Double string)	90%	90%	90%	90%
1.6	Rotary Kiln Piers, Walkways, TA duct support	85%	90%	85%	90%
1.7	Clinker cooler house (including Dedusting structures & Stack supporting structure)	60%	75%	90%	90%
1.8	Coal Crusher House (incl. short retaining wall, ramp, stone pitching, etc.)	80%	85%	90%	90%
1.9	Coal mill house	85%	90%	90%	90%
1.1	HAG supporting structure	95%	95%	95%	95%
1.11	Cement mill house (Including Dedusting structures & Stack supporting structure)	90%	90%	95%	95%
1.12	Packing plant, truck & bulk loading, bags godown	95%	95%	95%	95%
2	Silos, Hoppers, Storages, Covered Gantry, etc.				
2.1	Limestone preblending stockpile (linear, covered, with S/R foundations)	40%	50%	60%	70%
2.2	Correctives storage (linear, covered, with S/R foundations)	0%	0%	0%	
2.3	Solid fuel storage (linear, covered, with S/R foundations)	40%	50%	60%	60%
2.4	Raw mill hoppers & building	90%	90%	90%	90%
2.5	Blending (Raw Meal) silo	95%	95%	95%	95%
2.6	Clinker silo & transport supporting structure	90%	90%	90%	90%
2.7	Unburnt clinker silo	0%		0%	
2.8	Clinker load-out silos (4 nos.)	95%	95%	95%	95%
2.9	Gypsum, pond ash storage (linear, covered)	75%	80%	75%	80%
2.1	Cement mill hoppers & building	95%	95%	95%	95%
2.11	Flyash silo	95%	95%	95%	95%
2.12	Cement silos	95%	95%	95%	95%
2.13	AFR Storage	40%	40%	60%	60%
3	Auxiliary Services				
3.1	Switch yard	95%	95%	95%	95%
3.2	Main indoor substation	60%	70%	80%	80%
3.3	CCR, including Lab, Technical Offices, etc.	95%	95%	95%	95%
3.4	Load centres & MCC rooms	75%	80%	80%	80%
3.5	Electrical/ Mechanical Workshop & Yard	90%	90%	90%	90%
3.6	Compressor house & rooms	0.00		0%	0%
3.8	Belt conveyors, TTs, etc. (plant internal; partly with gallery & partly locally covered)	90%	90%	90%	90%
3.9	Water Storage (UG+OH)	90%	90%	90%	90%
3.1	Weigh Bridges & Weigh Rooms	80%	80%	40%	40%
3.11	Overhead cable galleries	35%	60%	40%	40%
3.12	Dump hoppers & Truck tippler foundations	0%	0%	0%	0%
3.13	Cable Tunnels, Trenches, etc.	30%	40%	30%	40%
4	Office/ Non factory buildings, etc				
4.1	Administrative & Services building	90%	90%	90%	90%
4.2	Gate house, Time & Security office	95%	95%	90%	95%
4.3	Sales, Dispatch & Logistics offices	0%	0%	0%	0%
4.4	General store & yard	90%	90%	90%	90%
4.5	Canteens (Executive, Workers, Truckers, etc.)	90%	95%	90%	95%

5	Mines offices, buildings, services, etc.				
5.1	Mines offices & basic workshop (Basic provisioning only)	0%	20%	0%	40%
5.2	Mines load centre	10%	50%	0%	70%
5.3	Magazine building	0%		0%	
5.4	Mines garage (Future)	0%		0%	
7	Residential Colony & Social Amenities				
7.1	Unit Head's Villa - 1 no. of ~250 sqm	0%	0%	0%	
7.2	TH/CH House - 02 nos of ~225 sqm	0%	0%	0%	
7.3	Type A Quarters - 8 nos. of ~200 sqm each	0%	0%	0%	
7.4	Type B Quarters - 16 nos. of ~150 sqm each (Multi Storey)	0%	0%	0%	
7.5	Type C Quarters - 32 nos. of ~125 sqm each (Multi Storey)	0%	0%	0%	
7.6	Type D Quarters - 40 nos. of ~100 sqm each (Multi Storey)	0%	0%	0%	
7.7	Type E Quarters - 120 nos. of ~80 sqm each (Multi Storey)	0%	0%	0%	
7.8	Bachelor Executives' Hostel - 1 no.	90%	95%	90%	95%
7.9	Workers' Dormitories - 2 nos.	90%	95%	90%	95%
7.1	Occupational Health Centre	0%	0%	0%	
7.11	Temple complex	0%	0%	0%	
7.12	Community hall, playground, shops, etc.	0%	0%	0%	
7.13	Guest house	90%	95%	90%	95%
7.14	Club, gymnasium, recreation, etc	90%	95%	90%	95%
7.15	School building & allied facilities	0%	0%	0%	
7.16	Other services (STP, WTP, roads, drains, water supply, green areas, etc.)	0%	35%	40%	40%

Note:

1. Nomenclature of March 2022 and June 2022 is only for illustration purposes. However, the actual site visits were conducted in July 2022 for Financial Quarter ending June 2022 and in May for the Financial Quarter ending March 2022.
2. The Physical progress captured in above table is based on approximate observations of status of structures constructed on site during our site inspection and our subsequent discussions held with the engineers with whom the site visit was conducted. Thus, the above progress is on approximate basis which may vary from 5%-10%.
3. We have received the list of machineries delivered to the site up to 25th July 2022. The Listed machineries were randomly verified on site with the help of Package Material Numbers since the machineries were packed in the delivery boxes or casings. To summarise, the project is working on full swing and satisfactory progress was observed during site visit and the project is anticipated to start the commercial operations by April 2023. However as per our discussion with the company they are planning to start the commercial production of integrated unit by December 2022. As per the strategy informed by the accompanying engineers during site visit, all the major works related to commercial production will be completed by December 2022. Work that will be started after starting commercial operations include site development works, works of ancillary structure, finishing works of structures, painting works etc.

3.2 PROJECT 2: GRINDING UNIT (IU)

JCL Envisages setting up of below mentioned units/Sections in the Project:

STRUCTURE OF MACHINERIES	CAPACITY OF MACHINERIES
Clinker, Gypsum and Coal/Handling, Transport and Storage	Storage Capacity: 300 TPH
Fly ash and pond ash/Handling, Transport and storage	Storage Capacity: 5000 t
Cement grinding system	Cement mill capacity: 300 TPH
Hot Air generator	-
Cement storage	Silos Capacity: 2 X 5000 t
Cement packing, loading and dispatch	Packing capacity: 2 X 240 TPH
Clinker, Gypsum and Coal/Handling, Transport and Storage	-

For setting up/ development of above listed sections, JCL has estimated Rs.82.05 Crore out of Total project cost amounting to Rs.2970.29 Crore. Bifurcation of Rs.82.05 Crore is as below:

(Amount in Rs. Crore)

Sr. No.	Particulars	Amount
1.	Main factory buildings	17.85
2.	Silos, Hoppers, Storages, Covered Gantry etc.	31.00
3.	Auxiliary services	12.20
4.	Office/Non factory buildings and mine building	2.50
5.	Deep foundations cost provisioning on account of possibility of weaker soil bearing capacity	4.00
6.	Indicative GST on Civil works	14.50
	Total	82.05



→ Details of Rs.82.05 Crore is as below:

(Amount in Rs. Crore)

Sr. No.	Description	Building Cost	Equipment foundation Cost out of Building Cost
1. Main Factory Building			
1.1	HAG supporting structure	2.20	0.30
1.2	Cement mill house & De-dusting building	10.25	2.25
1.3	Packing plant, truck loading, bags godown	5.40	0.05
	SUB TOTAL (1.0)	17.85	2.60
2. Silos, Hoppers, Storages, Covered Gantry, etc.			
2.1	Foundation network for linear & covered storage sheds for Gypsum, Pond ash & Coal	1.10	0.00
2.2	Clinker silo & transport supporting infrastructure	13.65	0.20
2.3	Support structure for cement mill hoppers (hoppers excluded)	2.10	0.10
2.4	Dry Fly ash silo	4.60	0.10
2.5	Cement silos (2nos. RCC silos)	8.50	0.10
2.6	Cement silo (1no. Steel silo)	1.05	0.05
	SUB TOTAL (2.0)	31.00	0.55
3. Auxiliary Services			
3.1	Switchyard & Main receiving substation	0.90	0.30
3.2	CCR, Technical office, Laboratory, etc.	3.80	0.00
3.3	MCC rooms & Load centres	2.10	0.10
3.5	Compressor house	0.45	0.08
3.6	Foundations & pedestals for belt conveyor galleries & transfer towers	1.50	0.00
3.7	Water storage (UG+OH) & Water treatment plant	1.10	0.10
3.8	Weigh bridges & Weigh rooms	0.05	0.15
3.9	BRU & truck tippler foundations with common ramp for receiving clinker & gypsum	1.65	0.35
3.1	Foundations & pedestals for Overhead cable galleries	0.45	0.00
3.11	Cable tunnels & trenches, etc.	0.20	0.00
	SUB TOTAL (3.0)	12.20	1.08
4. Office/ Non factory Buildings, etc.			
4.1	Administration & services office block	0.65	0.00
4.2	Time, security & dispatch offices block	0.20	
4.3	Executives' & workers' canteens	0.65	
4.4	General store & yard	0.80	
4.5	Shift units/ washrooms (in general/common areas)	0.20	
	SUB TOTAL (4.0)	2.50	0.00
7.	Total civil cost (1.0+2.0+3.0+4.0)	63.55	4.23

8.	Deep foundations cost-provisioning (Indicative 5% lumpsum provisioning considered; Geotechnical investigations at proposed plant site not carried out yet)	3.80	0.20
9.	Indicative GST component on Civil works (average approx.18% of total civil cost considered for TEFR formulation purpose)	13.75	0.75
10.	Total Civil Works Cost (7.0+8.0+9.0)	81.10	0.95
Grand Total		82.05	

Notes:

1. The above estimation of cost is as per the TEFR prepared by HOLTEC consultancy. HOLTEC consultancy is very well-established consultancy for such type of works and have greatly established themselves in this sphere.
2. Building Plans have been prepared by HOLTEC consultancy only.
3. The Borrower has obtained the Building Plan approval and the fire NOC from the concern authorities. However, we have not been provided with the approved Building Plan for the Grinding Unit and only the building plan approval Letter is produced to us.
4. The concerned Unapproved building plans provided to us doesn't have individual measurements of various structures.



As per Layout Plan provided by the borrower following buildings are proposed to be constructed at site:

LEGEND		IF IN DOUBT ASK	
S.NO.	GENERAL PLANT DESCRIPTION	±0.000M FFL CORRESPONDS TO (METER)	REMARKS
1.	BOX FEEDER FOR CLINKER	120.800M	
2.	CLINKER SILO	120.800M	
3.	STORAGE SHED	120.800M	
4.	CEMENT MILL HOPPERS	120.800M	
5.	CEMENT MILL BUILDING	120.800M	
6.	CEMENT MILL BAGHOUSE	120.800M	
7.	COAL DUMP HOPPERS AND CRUSHER	120.800M	
8.	SPARE	-----	
9.	HAG BUILDING	120.800M	
10.	FLYASH SILO	120.800M	
11.	CEMENT SILOS	120.800M	
12.	PACKING PLANT	120.800M	
13.	EMPTY BAGS GODOWN	120.800M	
14.	TRUCK LOADING PLATFORM	120.800M	
15.	CCR + LOAD CENTER + LAB + ADMIN BLDG.	120.800M	
16.	DOZER ENTRY	120.800M	
17.	EMERGENCY DUMP HOPPER	120.800M	
18.	GATE HOUSE	120.800M	
19.	ROAD WEIGH BRIDGE	120.800M	
20.	WEIGH BRIDGE CABIN	120.800M	
21.	WEIGH BRIDGE MATERIAL HANDING	120.800M	
22.	SEB RECEIVING SUB STATION & METERING ROOM	120.800M	
23.	COMP. ROOM BELOW CM BAG HOUSE	120.800M	
24.	AIR QUALITY MONITORING	120.800M	
25.	STORE	120.800M	
26.	SANITARY BLOCK	120.800M	
27.	CALCINED CLAY PLANT	120.800M	
28.	OIL STORAGE TANK	120.800M	
29.	GROUND WATER RECHARGING POINT	120.800M	
30.	WATER TANK AND PUMP ROOM	120.800M	
31.	PROJECT OFFICE	120.800M	
32.	OUTGOING LOGISTIC OFFICE	120.800M	
33.	TARPAULIN SHED PACKING PLANT	120.800M	
34.	TRUCK PARKING	120.800M	
35.	TRANSPORTER OFFICE	120.800M	
36.	DRIVERS CANTEEN AND REST ROOM	120.800M	
37.	SPACE FOR DG	120.800M	



Progress of Building and Civil Structures as per site visit dated 26th July 2022 to Grinding Unit at Hamirpur:

Sr. No.	Description	March Building Progress %	June Building Progress %	March Foundation Progress %	June Foundation Progress %
1 Main Factory Building					
1.1	HAG supporting structure	0%	0.00	90%	90%
1.2	Cement mill house & dedusting building	75%	80%	90%	90%
1.3	Packing plant, truck loading, bags godown	85%	90%	90%	90%
2 Silos, Hoppers, Storages, Covered Gantry, etc.					
2.1	linear & covered storage sheds for Gypsum, Pond ash & Coal	40%	60%	90%	90%
2.2	Clinker silo & transport supporting infrastructure	70%	85%	100%	100%
2.3	Support structure for cement mill hoppers (hoppers excluded)	90%	90%	95%	95%
2.4	Dry Flyash silo	90%	90%	100%	100%
2.5	Cement silos (2nos. RCC silos)	70%	85%	90%	90%
2.6	Cement silo (1no. Steel silo)	0%		0%	0%
3 Auxiliary Services					
3.1	Switchyard & Main receiving substation	50%	60%	50%	70%
3.2	CCR, Technical office, Laboratory, etc.	85%	85%	95%	95%
3.3	MCC rooms & Load centres	70%	70%	90%	90%
3.5	Compressor house	90%	90%	90%	90%
3.6	Foundations & pedestals for belt conveyor galleries & transfer towers	60%	80%	75%	85%
3.7	Water storage (UG+OH) & Water treatment plant	75%	75%	90%	90%
3.8	Weigh bridges & weigh rooms	90%	90%	90%	90%
3.9	BRU & truck tippler foundations with common ramp for receiving clinker & gypsum	70%	70%	90%	90%
3.1	Foundations & pedestals for Overhead cable galleries	60%	75%	90%	90%
3.11	Cable tunnels & trenches, etc.	50%	60%	60%	60%
4 Office/ Non factory Buildings, etc					
4.1	Administration & services office block	0%	0%	0%	0%
4.2	Time, security & dispatch offices block	0%	0%	0%	0%
4.3	Executives' & workers' canteens	0%	0%	0%	0%
4.4	General store & yard	0%	0%	0%	0%
4.5	Shift units/ washrooms (in general/common areas)	0%	0%	0%	0%

Note:

1. Nomenclature of March 2022 and June 2022 is only for illustration purposes. However, the actual site visits were conducted in July 2022 for Financial Quarter ending June 2022 and in May for the Financial Quarter ending March 2022.
2. The Physical progress captured in above table is based on approximate observations of status of structures constructed on site during our site inspection and our subsequent discussions held with the engineers with which the site visit was conducted. Thus, the above progress is on approximate basis which may vary from 5%-10%.
3. To summarise, the project is working on full swing and satisfactory progress was observed during site visit and the project is anticipated to start the commercial operations by April 2023. However as per our discussion with the company they are planning to start the commercial production of grinding unit by October 2022. As per the strategy informed by the accompanying engineers during site visit, all the major works related to commercial production will be completed by October 2022. Work that will be started after starting commercial operations include site development works, works of ancillary structure, finishing works of structures, painting works etc.



4. PLANT MACHINERY & EQUIPMENT:

3.1 PROJECT 1: INTEGRATED UNIT (IU)

JCL proposes to install below mentioned machineries/Equipment at the project site:

- Crushers
- Stockpile stackers and reclaimers
- Clinker extraction system,
- Steel for duct/chute/hoppers/chimneys
- Plant belt conveyors
- 4 nos of passenger lifts
- Compressors and dries
- HT motors
- LT motors
- Fire detection system
- Air conditioning
- Misc. electrical

For installing above listed machinery/Equipment, JCL has estimated Rs.1,285.24 Crore out of Total project cost amounting to Rs.2970.29 Crore. Bifurcation of Rs.1,285.24 Crore is as below:

(Amount in Rs. Crore)

Details of Mechanical and Electrical Equipment's		
Sr. No.	Description	F.O.B.
1.	Total Cost of Mechanical and electrical equipment's	895.11
2.	Equipment for distribution of Power	148.63
3.	Waste heat recovery system (WHRS) based power plant	200.00
4.	Mining Machinery	41.50
	Total	1285.24



Detailed breakup of **Mechanical and Electrical equipment's** and **Equipment for Distribution of power** is as below:

(Amount in Rs. Crore)

Details of Mechanical and Electrical Equipment's			
Sr. No.	Description	F.O.B.	F.O.R.
1.0	Mechanical Equipment		
1.1	Crushers		
1.1.1	Limestone crushing and wobbler	-	20.00
1.1.2	Coal Crushing	-	1.00
1.1.3	Additive/ Corrective Crusher	-	1.50
1.2	Stockpiles stackers & Reclaimers including the following:		
1.2.1	Limestone Storage, Stacker & Reclaimer including shed	-	26.66
1.2.2	Corrective Storage Stacker & Reclaimer including shed	-	17.01
1.2.3	Coal storage stacker and reclaimer including shed	-	15.73
1.3	Material Grinding and Pyro Processing including the following:		
1.3.1	Raw Material and Coal Drying and Grinding including Baghouse	23.15	92.60
1.3.2	Blending Silo feed B/Ele, Silo, kiln feed, Clinkerisation (upto clinker silo extraction), Fine coal firing from silo extraction including ESP	25.00	100.00
1.3.3	Clinker transport to mill through DPC, Clinker drying & grinding (Up to cement silo feed B/E) including Bag house	28.00	42.00
1.4	Cement Silo's and packing plant		
1.4.1	Clinker extraction system	-	1.50
1.4.2	Cement extraction from cement silo up to rotary packers including steel cement silo		7.64
1.4.3	Packing, truck loaders and bulk loading.		8.60
1.4.4	Clinker loading to trucks		2.50
1.4.5	AFR system with Shed		20.77
1.4.6	Fly ash Silo	-	1.50
	Sub-total of Main Machinery (1.0)	76.15	359.01
2.0	MECHANICAL AUXILIARY EQUIPMENT(S)		
2.1	Steel for Duct/ Chute/hoppers/chimneys 8,000 t @ Rs.46200/ t	-	36.96
2.2	Plant belt conveyors including belting 3,500 m @ Rs.45,000/ m	-	15.75
2.3	Over Land belt conveyor (OLBC) 000 m @ Rs.55,000/ m	-	
2.5	Refractory & Castable 8,000 t @ Rs.5,000/ t	-	28.00
2.6	Insulation 70,000 m2 @ Rs.1130/ sq. m	-	7.91
2.7	Lubricants	-	1.60
2.8	Passenger Lifts (4 nos)	-	1.50
2.9	Roots Blowers	-	
2.10	Compressors & Driers including piping	-	3.50
2.11	Misc. items like Water Tank, Water Pump, Water Piping, Compressed Air Piping, etc.	-	4.62
2.12	BRU & Truck Tippler (4 nos.)	-	2.80
2.13	Cranes/Hoists and other misc. items including HAG, N2 system etc.	-	6.50

	Sub-total of Mechanical Auxiliary Equipment (2.0)	0	109.14
	Total of Mechanical Equipment (1.0 + 2.0)	76.15	468.15
3.0	Electrical and Instrumentation		
3.1	HT Motors	-	9.60
3.2	LV & MV AC variable Speed Drives	-	15.05
3.3	LT Motors	-	6.27
3.4	Cross Belt Analyser, XRF, XRD, etc	2.50	4.81
3.5	Control & Automation and Field Instruments & Robo Lab	-	24.57
	Total Electrical and Instrumentation (3.0)	2.50	60.30
	Total Mechanical and Electrical equipment (1.0+2.0+3.0)	78.65	528.45
4.0	Landed cost of equipment		
4.1	Imported equipment		
4.1.1	F.O.B Cost		78.65
4.1.2	Ocean Freight, Insurance, etc. @ 6 % of (4.1.1)		4.72
4.1.3	Basic import duty @ 7.5 % of (4.1.1 + 4.1.2)		6.25
4.1.4	IGST @ 18 % of (4.1.1 to 4.1.3)		16.13
4.1.5	Clearing/ Loading/ Inland freight, etc. @ 5 % of (4.1.1 + 4.1.2)		4.17
	Sub-total of imported equipment (4.1)		109.92
4.2	Indigenous Equipment		
4.2.1	F.O.R cost		528.45
4.2.2	GST @ 18 % on F.O.R.		95.1201
4.2.3	Freight, handling, insurance, etc. @ 5 % of 4.2.1		26.42
	Sub-total of indigenous equipment (4.2)		649.99
	Total landed cost of equipment (4.1 + 4.2)		759.91
5.0	Spare parts @ 5 % of F.O.B. + F.O.R.		30.35
6.0	Fabrication of Duct/ Chute/hoppers/chimneys 8,000 t @ Rs 20,000/ t		16.00
7.0	Erection, commissioning & supervision charges @ 12 % of (F.O.R. + F.O.B)		72.85
8.0	GST @18% on (6.0+7.0)		15.99
	Total cost of Mechanical and Electrical equipment		895.11
	TOTAL COST OF EQUIPMENT (4.1+ 4.2+5.0+6.0+7.0+8.0)		895.11



(Amount in Rs. Crore)

Equipment's for Distribution of Power		
Sr. No.	DESCRIPTION	F.O.R.
1.	Power distribution equipment	
1.1	132 kV Transmission line ~45 Km	22.50
1.2	132 kV yard at sub-station	1.00
1.3	Development charges/Security deposit	4.90
1.4	Supervision charges SEB (10% of line cost)	2.25
1.5	Incomer switchyard and power transformer	5.87
1.6	11 KV Switch board with Capacitor Bank	6.61
1.7	11/0.433 kV , Distribution transformer with bus duct	5.44
1.8	LT switchboards and bus trunkings	4.45
1.9	MCC & Push button Station	7.09
1.10	LV Capacitor	1.80
1.1	Capacitor and Reactor for 11 KV HT motors	1.80
1.12	LRS/GRR/GRS	1.80
1.13	Earthing, cable trays & Erection hardware	6.00
1.14	Cables - Power, Control & Instrumentation	18.18
1.15	Plant Illumination with LDB	3.72
1.16	Battery and Battery Charger with LRS	0.83
1.17	Ventilation System for Electrical Building	1.43
1.18	Air Conditioning	1.85
1.2	Fire Detection System	0.74
1.2	PA system for intercom and Telephone exchange	0.45
1.2	Mine Power Distribution	0.00
1.2	DG Sets for Construction (2 MW)	1.13
1.2	Construction Power	2.61
1.24	EMS/Synchronisation/load shedding	0.75
1.25	Non-plant buildings electrification	0.85
1.26	Misc. Electricals	0.50
	Sub total	104.55
2.0	Landed cost of equipment	
2.1	F.O.R cost	104.55
2.2	GST @ 18 % on F.O.R.	18.82
2.5	Freight, handling, insurance, etc. @ 5 % of 4.2.1	5.23
	Total landed cost of equipment	128.60
3.0	Spare parts @ 5 % of FOR cost	5.23
4.0	Erection, commissioning & supervision charges @ 12% of F.O.R.	12.55
5.0	GST @18% of 4.0	2.26
	Total cost of power distribution equipment	148.63

Apart from the above expenditure the borrower has also envisaged Waste heat recovery system (WHRS) amounting to Rs.200.00 Crore and mining machineries amounting to Rs.41.50 Crore.

Physical Progress of Plant and Machineries as per site visit dated 27th July 2022 to Integrated Unit.:

1. We have received the list of machineries delivered to the site up to 25th July 2022. As per the said list about 2337 machineries including small components have been delivered to the site. Therefore, we have randomly verified the machineries delivered to the site with the help of Package material Nos. since the machineries were packed in the delivery boxes or casings.

As per the observations during site visit following Major Machineries were found to be erected at the site:

- VRM for Coal was in the final stage of the erection
- VRM for cement mill was complete
- Kiln and TA Ducts were erected
- Turbine and generator was in place at the time of Survey
- Cement mill Hoppers were erect
- Conveyor from cement mill hopper to cement mill building was complete
- Reclaimer and stacker for coal and additive were erected
- All the four Clinker Load out silos were erected
- All the Cyclone and Calcliner were in erected in Preheater section
- 14 of the 14 Hoppers in the Bag house section were erected
- Cable Gallery work was in Progress
- Bag filters for different sections were erected
- Switch yard Panels and tower were erected
- Primary, Secondary Screener and Surge Bin in the Limestone Complex was erected
- Conveyor to be installed in the Limestone Complex was present at the site
- Cabling work in the load centre were in Progress
- All of the Major Machineries in the Packing Plant like Rotary Bin, Bagging Weighing Frame, and 06 Truck Loading Machine & Bucket elevator were erected.
- Mechanical equipment's in Silos
- Penthouse and DPC for the clinker Silo is fabricated and erection was under progress.
- AQC Boiler which is a part of Waste Heat recovery system

The PM list provided by the company also contain some items which are a part of above listed machines only. Thus the same are assumed to be installed in addition to above machines. Although few Parts/items from these machineries which were erected had PM no. mentioned which are included in the Section below.

2. Following Underreacted machineries physical present at the site were randomly verified during site visit to the Integrated unit:

- RAV
- Bearing Lubrication System
- Portable Belt Conveyors
- Hook
- Inerisation System
- Liner Bulk Loading Bin
- Motor
- Bucket
- Pneumatic Diverters
- Tank
- Bag Filter
- 10000 Litre Water Tank
- Dust Suppression System
- Opacity Monitor
- Actuators
- Filters & Strainers
- Pull Rope Clamp
- Boiler Components And Its Parts
- Vegapuls
- Dosimeter
- Actuator
- Meter
- Hose Pipe
- Fume hood
- Hopper
- Tilt Sensor Std
- Butterfly Valve

PM-1706	PM-2881	PM-501	PM-2110	PM-2875	PM-944	PM-646
PM-1335	PM-1413	PM-2307	PM-489	PM-624	PM-1988	PM-1583
PM-3303	PM-1415	PM-438	PM-722	PM-612	PM-106	PM-305
PM-2874	PM-2110	PM-419	PM-1505	PM-1807	PM-2888	PM-2680
PM-1766	PM-2114	PM-2735	PM-886	PM-2556	PM-1708	PM-2273
PM-1706	PM-1989	PM-1996	PM-2890	PM-1786	PM-478	PM-2917
PM-1639	PM-646	PM-2101	PM-1763	PM-2782	PM-2884	PM-722
PM-1640	PM-410	PM-1584	PM-547	PM-2496	PM-940	PM-458
PM-553						

4.2 PROJECT 2: GRINDING UNIT (GU)

JCL proposes to install below mentioned Machineries/Equipment:

- Material conveying system
- Material receiving system
- Passenger lifts
- Compressors and dryers
- HT Motors
- LT motors
- Auxiliary bag filters
- LT Switchboard and trunking
- UPS, Battery and Battery charger
- Air conditioning system
- DG Set
- Other misc. electrical

For installing above listed machineries/Equipment, JCL has estimated Rs.211.63 Crore out of total project cost amounting to Rs.2970.29 Crore. Bifurcation of Rs.211.63 Crore is as below:

(Amount in Rs. Crore)

Details of Mechanical and Electrical Equipment's		
Sr. No.	Description	F.O.B.
1.	Total Cost of Mechanical and Electrical equipment (Net of GST)	149.30
2.	GST Component on P&M	24.50
3.	Equipment for Distribution of Power (Net of GST)	25.60
4.	GST component on power distribution equipment	4.20
5.	Equipment foundations	4.23
6.	Secondary equipment	
6.1	Laboratory equipment and Setup	0.85
6.2	Firefighting equipment and hydrant system	0.40
6.3	Water treatment system	0.50
6.4.	Multi utility equipment	1.30

6.5	Weighbridges	0.75
	Grand Total	211.63

Detailed breakup of **Mechanical and Electrical equipment's** and **Equipment for Distribution of power** is as below:

(Amount in Rs. Crore)

Details of Mechanical and Electrical Equipment's			
Sr. no.	Description	F.O.B.	F.O.R.
1.0	Mechanical Equipment		
1.1	Gypsum & Pond ash handling, storage and transport to mill feed hoppers	-	0.75
1.2	Dry Fly Ash handling, transport, storage & feeding to mill	-	1.50
1.3	Coal handling, storage, feeding and transport (including HAG system)	-	2.05
1.4	Clinker transport, handling, storage, extraction & feeding system	-	2.25
1.5	Clinker grinding circuit & feeding to cement silos	24.00	36.00
1.6	Cement mill de-dusting	-	6.00
1.7	Cement extraction from silos up to packers	-	3.10
1.8	Packing, loading & dispatch (2 packers, 6 truck loaders and 1 bulk loader)		8.10
	Sub-total of Main Machinery (1.0)	24.00	59.75
2.0	MECHANICAL AUXILIARY EQUIPMENT(S)		
2.1	Structural Steel for sheds, hoppers, conveyors, ducts, chutes, etc. (approx. 2,250 t @Rs.50,000/ t)	-	11.25
2.2	Material conveying system (approx.1200m @Rs.40,000/ m)	-	4.80
2.3	Insulation (approx.8,500sqm @Rs.1000/ sqm)	-	0.85
2.4	Auxiliary bag filters (approx. 12nos.)	-	0.60
2.5	Lubricants	-	0.15
2.6	Material receiving system (Bulk receiving units with truck tippler facility, 2 nos.)	-	2.10
2.7	Passenger lift (for CCR)	-	0.25
2.8	Roots blowers	-	0.35
2.9	Compressors & dryers	-	0.60
2.10	Misc. items like water pump & pipeline, compressed air piping, etc.	-	0.60
2.11	Cranes/Hoists and other miscellaneous items, etc.	-	1.00
	Sub-total of Mechanical Auxiliary Equipment (2.0)	0.00	22.55
	Total of Mechanical Equipment (1.0 + 2.0)	24.00	82.30
3.0	Electrical and Instrumentation		
3.1	HT motors	-	2.35
3.2	LV & MV AC variable Speed Drives	-	1.65
3.3	LT motors	-	1.05
3.4	Table-top XRF	-	0.70
3.5	Control & Automation	-	2.60
	Total Electrical and Instrumentation (3.0)	0.00	8.35
	Total Mechanical and Electrical equipment (1.0+2.0+3.0)	24.00	90.65
4.0	Landed cost of equipment		

4.1	Imported Equipment	
4.1.1	F.O.B. Cost	24.00
4.1.2	Provisioning for Ocean Freight, Insurance, etc. (approx.@6% of 4.1.1)	1.45
4.1.3	Basic Import Duty provision (approx. @7.5% of 4.1.1 & 4.1.2)	1.90
4.1.4	GST (all taxes assumed to be clubbed under GST, approx.@18% of 4.1.1 to 4.1.3)	4.90
4.1.5	Clearing/ Loading/ Inland Freight, etc. (approx.@5% of 4.1.1 + 4.1.2)	1.25
	Sub-total of Imported Equipment (4.1)	33.50
4.2	Indigenous Equipment	
4.2.1	F.O.R. cost	90.65
4.2.2	GST provisioning on F.O.R. cost (@18% of 4.2.1)	16.30
4.2.3	Provisioning for freight, handling, insurance, etc. (approx.@5% of 4.2.1)	4.55
	Sub-total of Indigenous Equipment (4.2)	111.50
	Total Landed Cost of Equipment (4.1 + 4.2)	145.00
5.0	Provisioning for Spares (approx. @5% of F.O.B. & F.O.R. landed cost)	7.25
6.0	Fabrication of Str. Steel as in 2.1 above (2,250 t @Rs.20,000/ t)	4.50
7.0	Erection, Commissioning & Supervision Charges (approx.@12 % of F.O.R. + F.O.B.)	13.75
8.0	GST on Fabrication, erection & supervision charges (approx.@18% on (6.0+7.0))	3.30
	Total cost of Mechanical and Electrical equipment	173.80
A	Total landed cost of equipment	173.80
C	GST component on Plant & Machinery (approx. provisioning)	24.50
B	Total landed cost of equipment (Net of GST)	149.30

(Amount in Rs. Crore)

(Details of Power Distribution Equipment's)			
Sr. no.	Description	F.O.B.	F.O.R.
1.	Power distribution equipment		
1.1	Transmission line from Grid substation (33kV, approx.6 km)	-	3.60
1.2	Incomer switchyard & power transformer	-	2.00
1.3	6.6 kV switchboard	-	1.80
1.4	6.6 /0.433 kV distribution transformer	-	1.00
1.5	LT switchboard & trunking	-	1.20
1.6	MCC & push button Station	-	2.10
1.7	LV capacitors & control panel	-	0.35
1.8	Lighting transformer & main lighting distribution board	-	0.60
1.9	Cables (Power, Control & Instrumentation)	-	3.75
1.10	Construction power cables	-	0.35
1.11	Earthing, lighting protection & erection hardware	-	1.50
1.12	Plant Illumination	-	0.15
1.13	UPS, battery & battery charger	-	0.25
1.14	Ventilation system for electrical buildings	-	0.20
1.15	Air conditioning	-	0.20
1.16	PA system for intercom	-	0.05

1.17	Fire detection system	-	0.15
1.18	DG set for construction & emergency power supply	-	1.25
1.19	Miscellaneous electrical	-	0.25
	Sub-total (1.0)	-	20.75
2.0	Landed cost of equipment		
2.1	Imported Equipment		
2.1.1	F.O.B. Cost		0.00
2.1.2	Ocean Freight, Insurance, etc. (approx.@6% of 2.1.1)		0.00
2.1.3	Basic Import Duty (@7.5% of 2.1.1 & 2.1.2)		0.00
2.1.4	GST (all taxes assumed to be clubbed under GST, approx.@18% of 2.1.1 to 2.1.3)		0.00
2.1.5	Clearing/ Loading/ Inland Freight, etc. (approx.@5% of 2.1.1 + 2.1.2)		0.00
	Sub-total of Imported Equipment (2.1)		0.00
2.2	Indigenous Equipment		
2.2.1	F.O.R. cost		20.75
2.2.2	GST provisioning on F.O.R. cost (@18% of 2.2.1)		3.75
2.2.3	Provisioning for freight, handling, insurance, etc. (approx.@5% of 2.2.1)		1.05
	Sub-Total (2.0)		25.55
	Total Landed Cost of Equipment (2.1 + 2.2)		25.55
3.0	Provisioning for Spares (approx. @5% of total landed cost)		1.30
4.0	Erection, Commissioning & Supervision Charges (approx.@12 % of 2.1.1 + 2.2.1)		2.50
5.0	GST on erection & supervision charges (approx.@18% of 4.0)		0.45
A.	Total landed cost of Power Distribution Equipment (2.0+3.0+4.0+5.0)		29.80
B.	GST component on Power distribution (approx. provisioning)		4.20
C.	Total landed cost of Power Distribution Equipment (Net of GST)		25.60

Note: Due to confidentiality factor cited by the borrower, borrower has not shared with us any PO/Quotations/ Invoices of suppliers of above-mentioned machineries. However, we have physically verified some major contracts signed by them at borrower's registered office located in Kanpur during our first site visit dated 8th December 2021. Copies of the same have not been availed to us.



Progress of Plant and Machineries as per site visit dated 26th July 2022 to Grinding Unit.:

1. We have received the list of machineries delivered to the site up to 25th July 2022. As per the said list approx. 1803 machineries have been delivered to the site including small components. Therefore, we have randomly verified the machineries delivered to the site with the help of Package material Nos. since the machineries were packed in the delivery boxes or casings.
2. Following machineries were randomly verified during site visit to the Grinding unit:
 - Fabric Expansion Bellow
 - Bag Filter Cage 4MM, MS, 144* 8490 Dust Collection Split Cages With Alum Ventury Made
 - 3.3 KV Insulated Rubber Mat (Cat A) Color-Black
 - Hot Gas Generator
 - Rotary Star Feeder Equipment No. 531 RA1 (Parts for Loesche mill LM 63.3+3 CS)
 - Fabrication Steel Structure
 - 1A19010023-000R00 FILTER BAG SNFA - 1603 152X8500 MM
 - Gravity Dampers For AC Units, Fire Air Diffusers, Return Air Diffusers
 - Rotary Star Feeder Equipment No. 531 RA1 (Parts for Loesche mill LM 63.3+3 CS)
 - Fabrication of Canopy For Bag Filter
 - Hot Gas Generator
 - Ring Duct Part-2
 - Vent /De dusting Piping
 - Electric Wire Rope Hoist
 - PARTS OF BAG FILTER
 - De dust. Nozzle, NW20
 - Pedestal
 - Clinker Mill Fan (Bottom Casing Part -1 ,2 DE and NDE Pedestal)
 - Clinker Mill Fan (Shaft, Impeller)
 - Ring Duct Part-1/2, Lining-Ring Duct, Holder , Plate
 - GAS DUCT WITH FUNNEL
 - Mill Body CLP
 - Clinker Mill Frame
 - Deposition Weld for Buckets
 - A0221171002D 56M-Structure (531BF110)

- Drive Base Frame 511BE120/S-109147, Lateral Support, Chain Link 511BE120/S-109147
- SUPPLY OF COMPONENTS OF SAMSON FEEDER
- Package AC For Substations 11 TR
- LT Cable XLPE AL. 1.1KV, 4CX 10 SQ MM
- BEND, TEE, & CABLE TRAY
- Cable 3CX240SQMM
- Distribution Transformer 2500kva with Accessory
- Fire Fighting Equipment-NIFPS
- FN643823X23, Description : Earthing Truck LC02
- 11 KVA Board LC02-12 Panels
- Battery Charger
- Indoor Aux. Lighting Distribution Board-Type 1 FN643412C06
- 120KN A/F Disc Insulators
- Split AC 2.5 TR with Accessories (3 Phase)
- CURING TANK CAP 288 CUBE GLE-092
- Laboratory Cement Autoclave Analog With Pressure, Laboratory Items
- HUMIDITY CNTRL CABINET; TI-714
- P.B Station for DOL. Ipbs for bc-dol, power junction box for motor
- Item No.-361540016501, Assembly BOM For Battery
- Nut and Bolt With Washer 1 BAG
- ZJE001SDAV00000 PUMP, Pumps, Na, & Accs, SS 316, Set 3, With Base Frame, Variant
- Voltage Transformer Out Door oil Filleed Single Phase Painted 132 KV
- Dedust Nozzle, Switch Bracket
- Bucket elevetor Fabricated items
- Power Transformer Serial No: 223957267/10 , 18/20 MVA132/11.5 KV
- PARTS OF BAG FILTER
- Part of bag filter
- Bucket 511BE120/S-109147
- PARTS OF BAG FILTER
- Part of Completed Pulley For T.Pos.11
- Long time delivery item for Truck Loader
- Truck loading machine BTL F12
- Bag filter Capsule Assembly with casing & Hopper assembly
- A0221171007D 56M-Expansion Joint (531 BF110)



- 940788091001, Bin Weigh System PR6201/24
- Geared Coupling ED-11500 : DG, Bore Dia. 190K7, K/W P9 and DN
- MCC for P&V System various Load Centres
- Complete Conveyor Belting in Bulk as Per Po MMH PRJ 1775 Belting
- Bag filter (Hopper Panels, Bottom Cone, Channel Frame)
- Parts of other air pumps & air other gas compressors
- Parts of Complete d. Pulley(Air Distribution Box, Flat Belt Conveyor)
- Packing Plant Equipment/cement Silo/Flyash Silo
- SEAL AIR FAN
- Fabrication of steel structure (for Ducting))
- PARTS OF BAG FILTER
- Head Unit Assembly 511BE120/S-109147
- Glass Thermometers, 0-360 Deg C, Tong Ordinary, Room Heater Type Blower Etc.
- SUPPLY OF COMPONENTS OF SAMSON FEEDER
- PARTS OF BAG FILTER(Cages with enturies)
- Sever Stations, Workstation for the Programmingand moni , , Laser Printer, Large Video Screen
- Truck Tripler Uni-1 (Control Panel & Accessories)
- LT Cable XLPE AL. 1.1KV, 3CX 16 SQ MM
- Glass Fibre Braided Rope 3 MM, Fastening Fill Level Indicator, Switch Bracket For Claw Coupling
- Z06FBABV8000000 MCC & Electricals with Accessories,
- Supply of components of samson feeder
- HT Cable XLPE AL. 11 KV
- Dedust Nozzle, Nom Dia 315, NW 200, Flap 180x180, Shaft Casing BE/BEHC 1000-2500
- FN643587X75 One way Spacer Saddle
- Industrial Machinery for cement plant (Conveyor Belting For Conv. No. 531 BC 120)

During site visit we have asked the borrower to open few packed boxes to have a sample verification of machineries. Accordingly following machineries were verified on site after opening of boxes/Plastic Packing:

- Fabric Expansion Bellow



- Bag Filter Cage 4MM, MS,144* 8490 Dust Collocation Split Cages With Alum Ventury Made
- Disch belt conv., Curved roller conveyor
- KV Insulated Rubber Mat (Cat A) Color-Black
- Rotary Star Feeder Equipment No. 531 RA1 (Parts for Loesche mill LM 63.3+3 CS)
- Fabrication Steel Structure
- 1A19010023-000R00 FILTER BAG SNFA - 1603 152X8500 MM
- Gravity Dampers For AC Units, Fire Air Diffusers, Return Air Diffusers
- Rotary Star Feeder Equipment No. 531 RA1 (Parts for Loesche mill LM 63.3+3 CS)
- Fabrication of Canopy For Bag Filter
- Hot Gas Generator
- Ring Duct Part-2
- Vent /Dedusting Piping
- Electric Wire Rope Hoist
- PARTS OF BAG FILTER
- Dedust. Nozzle, NW20

3. Detailed Package Number verified during site visit are as below:

PM-625	PM-679	PM-877	PM-332	PM-384	PM-718
PM-405	PM-16	PM-475	PM-64	PM-596	PM-719
PM-410	PM-67	PM-5	PM-468	PM-476	PM-703
PM-182	PM-655	PM-66	PM-458	PM-135	PM-708
PM-13	PM-172	PM-48	PM-457	PM-742	PM-709
PM-418	PM-68	PM-30	PM-87	PM-92	PM-716
PM-392	PM-462	PM-34	PM-177	PM-228	
PM-672	PM-382	PM-58	PM-116	PM-744	
PM-288	PM-578	PM-394	PM-201	PM-367	
PM-381	PM-250	PM-39	PM-466	PM-586	
PM-489	PM-723	PM-485	PM-102	PM-210	
PM-351	PM-223	PM-162	PM-720	PM-309	
PM-235	PM-237	PM-28	PM-278	PM-34	
PM-200	PM-88	PM-70	PM-425	PM-320	

4. In the absence of quantity constructed for both the units we have only given the general analysis of status of construction that was observed during site visit and as per our observations the project is working on full swing and satisfactory progress was observed during site visit and the project is anticipated to start the commercial operations by April 2023.

PART D

PROJECT CONSULTANTS, CONTRACTORS & SUPPLIERS

The borrower has provided the list of Contractors hired in the project for project site at Hamirpur, Uttar Pradesh and Project site at Panna, Madhya Pradesh. As per the list of contractors provided to us the borrower has signed agreements amounting to Approx. Rs.1066 Crore which includes agreements signed for Hamirpur project amounting to approx. Rs.89 Crore and agreements signed for Panna project amounting to Rs.977 Crore. Details of vendors is as below:

(Amount in Rs. Crore)

AGREEMENTS FOR GRINDING UNIT AT HAMIRPUR, UTTAR PRADESH		
Description	Vendor	Agreement Amount
LOI For environment Clearance for GU at Hamirpur	Environment and technical Research centre, Lucknow	0.09
Preparation of TEFR for Under construction GU At Hamirpur, UP	Holtec consulting Pvt. Ltd.	0.08
Engg. Consultancy	Holtec consulting Pvt. Ltd.	1.55
Raw mill and Cement mill for Hamirpur	Loesche (India Part)	39.38
Raw mill and Cement mill for Hamirpur	Loesche (Foreign Part)	28.91
Boundary wall construction	M/s Vishal Enterprises	1.45
Packing plant for Hamirpur	Beumer	14.91
Engg. Services	Loesche, India	2.94
Grand Total as During 1st LIE Report		89.31

(Amount in Rs. Crore)

AGREEMENTS FOR INTEGRATED UNIT AT PANNA, MADHYA PRADESH		
Description	Vendor	Agreement Amount
Boundary wall construction	Apex Precast	0.74
Topographical Wall Construction	RK Consultants and Contractors	0.24
Consultancy for Water lifting from ken river	Vexl Environ Project private limited	0.43
Master plan , architectural , landscape design and interior design services for panna colony	R+D Studio	0.61
3.15 MVA 33.0.433 KVA Transformer	Voltamp	0.32
Supply of TMT Bar	TATA Steel	1.69
500 KVA DG Set	Sudhir Power limited	0.29
Brick masonry Boundary wall work at panna site	Jay shree mahakal contractor	0.60
Crushing system	L&T	23.64
WHRS	Thermax	99.50
ESP and Bag hOuse	Himenviro	21.25
Crushing system 2 years spare	L&T	0.96
Weigh Bridge 100 MT-4Nos.	Rice lake weighing systems India Limited	0.56
Engg. services	Loesche	4.07

Civil stacker, reclaimers, Pyro, blending and clinker silo, mech. Staker reclaimers	KEC International limited	97.71
TMT supply-4000MT/PMC Services	KEC International limited	20.64
Mechanical fabrication erection for Pyro	Hajee AP Bava	53.50
PMC services	Hajee AP Bava	1.50
Civil and structural work, WHRS, Cement Mill, packing plant, Cement mill silo and Fly ash silo	Buildwell roject india pvt. Limited	29.99
Site grading and levelling work at panna	Karni Construction	2.27
Civil consultancy order	SecMec	2.75
Road and Drainage work	Karni construction	12.83
Mech. & E&I Consultancy	Holtec	6.15
Civil work for workshop, Project office and Weighbridge	Shree ram associates	2.53
Piling works	Parul foundation	2.66
Pre-Cast Boundary wall work at panna site	Tirupati Cement articles	0.89
Cooler for Pyro	IKN engineering India Pvt. Ltd.	28.95
Raw mill and pyro	Thyssen	143.81
Raw mill and cement mill for Panna	loesche (India Part)	73.13
Raw mill and cement mill for Panna	loesche (Foreign Part)	25.97
Packing plant for Panna	Beumer	21.99
Pre-cast boundary wall work at panna site	RKB Enterprise	0.81
Precast boundary wall	Maharishi parashar Buildtech LLP	0.44
Precast boundary wall	Mohira precast Narsingpur	0.45
stacker and reclaimers	Takraf	34.55
Precast boundary wall	Tiranag precast	0.34
Construction cable	Havells india Limited	0.57
Construction of guest house and hostel block	M/s Asiatic	4.59
Civil piling work	M/s KEC	97.71
Mineral exploration in Kakra block	M/s GDS India	1.97
Procurement of steel	SAIL Jabalpur	15.22
Boundary wall construction	Amit singh Construction Borrower	0.50
BLS type ambulance	CK Motor	0.18
Water lifting arrangement from ken river	M/s aanjana pump services	3.15
hiring of hydraulic drilling rig	M/s National infra projects	0.27
Hiring of 2nd Hydraulic drilling rig	M/s National infra projects	0.27
Supply of 28mm TMT	JSPL	2.64
Supply of MS Plate	Shakti steel	0.79
Oxygen/Nitrogen plant capacity 80 Cu. M	Sanghi organisation, Mumbai	1.02
Rain protection cover	M/s ARDEE engineering	40.00
Service contract for steel procurement	Shree Ganpatlal omkarlal agarwal and borrower	1.95
Supply of Dry Fly Ash	Ramesh chand grover	0.43
Civil structural work-Plant buildings	M.s kamal Builders	15.25

Civil structural work-Crusher section	M/s Karni	9.23
Bought out items	Beumer	8.31
Bought out items	Mahindra tsubaki	5.65
Bought out items	Tsubaki	2.32
Bought out items	Beumer Germany	4.83
132 KV Transmission line	Suresh techno (India) LLP	21.00
Turbine for WHRS	Siemens	12.90
Steel supply	SAIL Indore	3.37
Site grading and levelling works	M/s Amit singh construction	0.70
Construction of Service road	M/s Amit singh construction	0.43
Supply and installation for pre-fabricated security barrack	M/s tinny Craft	0.63
Security services	SIS	1.98
Grand Total as During 1st LIE Report		976.60

Note: The above information has been incorporated on the basis of details provided by the borrower. However, due to confidentiality factor cited by the borrower, we have not received PO/ Quotations of the above listed vendors and have relied on the duly certified information provided by the borrower only. We have also physically verified some major contracts signed by them at borrower's registered office located in Kanpur on 8th December 2021. Also, as informed by the borrower, they have not signed any major agreement after the first LIE Report.



PART E

PROJECT COST & MEANS OF FINANCE

- 1. TOTAL PROJECT COST:** Jaykaycem (Central) Limited has estimated the Total Project Cost amounting to Rs.2970.29 Crore which has been proposed to be funded in DER of 1.30 i.e. approx. 43% Equity and 57% Debt. Details of Rs.2970.29 Crore is as below:

(Amount in Rs. Crore)

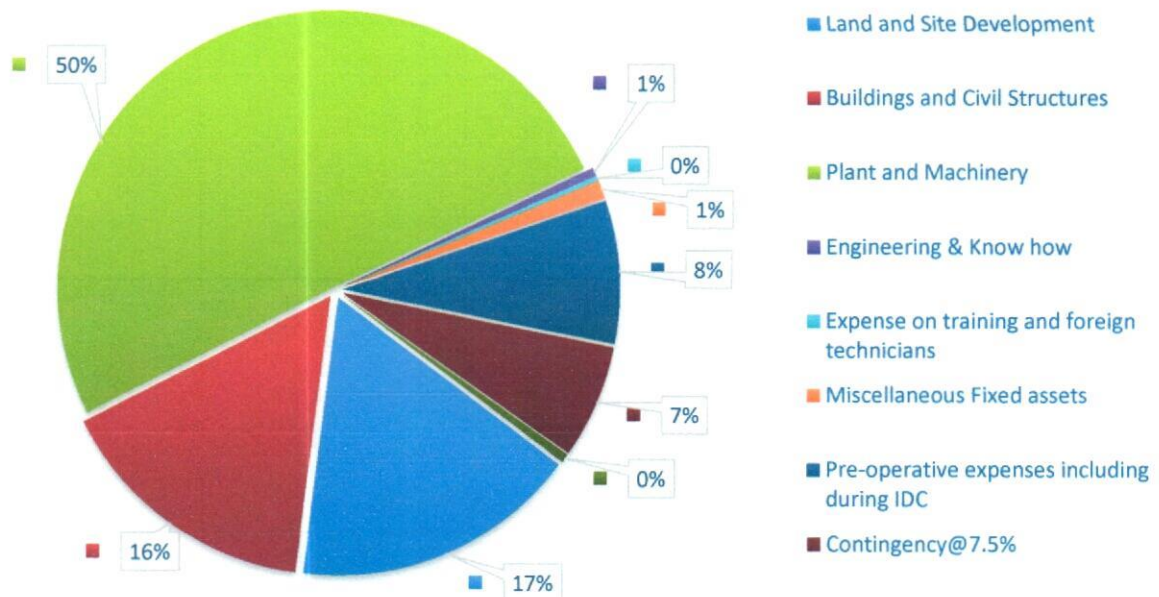
Sr. No.	Particulars	Integrated Unit	Grinding Unit	Common expenses	Amount
1.	Land and Site Development	474.95	22.70	-	497.65
2.	Buildings and Civil Structures	378.63	82.05	-	460.68
3.	Plant and Machinery	1285.24	211.63	-	1496.87
4.	Engineering & know how	11.00	4.00	-	15.00
5.	Expense on training and foreign technicians	7.50	0.50	-	8.00
6.	Miscellaneous Fixed assets	30.17	2.10	-	32.27
7.	Pre-operative expenses including during IDC	-	-	247.78	247.78
8.	Contingency@7.5%	-	-	197.10	197.10
9.	Margin money for working capital	-	-	14.94	14.94
	Total Project Cost	2187.50	322.98	459.82	2970.29

Observations & Comments:

- The basis of the above estimated cost of Project is as per the estimates provided by the Jaykaycem (Central) Limited and TEFR prepared by HOLTEC Consultancy.
- Details of Project cost are covered in PART C of this report.
- Details of Land Purchased is not provided by the borrower.



COST OF PROJECT (Rs. 2970.29 Crore)



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2. CURRENT STATUS & TOTAL EXPENDITURE INCURRED TILL DATE:

Details of the expenditure in the Table below is recorded for the expenditure incurred up to 30th June 2022.

SR. NO.	PARTICULARS	TOTAL ESTIMATED COST	INCURRED TILL 30.06.2022	CURRENT STATUS OF WORK AND REMARKS
		(All figures in cr.)		
1.	Land & Site Development	Allocated Amount	497.65	The borrower has estimated an expenditure amounting to Rs.497.65 Crore towards Land and site development. As per the CA certificate dated 09 th August 2022 with UDIN. 22424004AOQULC5196 the borrower has made an expenditure amounting to Rs.316.26 Crore towards land and site development. Details of expenditure were sought from the borrower. However, the same is not provided because of which we are unable to analyze the cost incurred towards Land and have relied on CA certificate provided by the borrower for the expenditure incurred towards land and site development.
		Expenses incurred up to last LIE report	272.11	
		Incurred up to period ending June 2022	316.26	
		Expenditure approved under his head	NA	
2.	Building & Civil Structures	Allocated Amount	460.68	The borrower has estimated an expenditure amounting to Rs.460.68 Crore towards Building and civil structures. However as per the breakup of expenditure mentioned in CA certificate dated 09 th August 2022 with UDIN. 22424004AOQULC5196, no separate expenditure has been shown towards Building and Civil structures and Plant and Machineries. Therefore, we have relied on the expenditure given by CA for the expenditure incurred towards Building & civil
		Expenses incurred up to last LIE report	1198.44	
		Incurred up to period ending June 2022	1663.14	
		Expenditure approved under his head	NA	

				cost and purchase/Fabrication of machineries.
1.	Plant and Machinery	Allocated Amount	1496.87	The borrower has estimated an expenditure amounting to Rs.1496.87 Crore towards Plant and machinery. However as per CA certificate and our subsequent discussion with the borrower the cost incurred towards plant and machinery has been clubbed in Building and civil structures only.
		Expenses incurred up to last LIE report	NA	
		Incurred up to period ending June 2022	NA	
		Expenditure approved under this head	NA	
2.	Engineering and Now How	Allocated Amount	15.00	The borrower has estimated an expenditure amounting to Rs.15.00 Crore towards Engineering know how. As per CA certificate dated 09 th August 2022 with UDIN. 22424004AOQULC5196 the borrower has incurred Rs.74.95 Crore towards engineering know how which also includes expenses towards training and foreign technicians. The same is considered as per CA Certificate only.
		Expenses incurred up to last LIE report	57.30	
		Incurred up to period ending June 2022	74.95	
		Expenditure approved under his head	NA	
3.	Expense on training and foreign technicians	Allocated Amount	8.00	The expenditure towards the same is already included in expenses shown towards engineering know how.
		Expenses incurred up to last LIE report	NA	
		Incurred up to period ending June 2022	NA	
		Expenditure approved under his head	NA	
4.	Miscellaneous Fixed assets	Allocated Amount	32.27	The expenditure towards the same is already included in expenses shown towards Building and civil cost.
		Expenses incurred up to last LIE report	NA	
		Incurred up to period ending June 2022	NA	

		Expenditure approved under his head	NA	
5.	Pre-operative expenses including during IDC	Allocated Amount	247.78	The expenditure towards preoperative expense is already included in expenses shown towards engineering know how. However as per CA certificate the borrower has paid Rs.18.05 Crore towards Interest During Construction in the quarter ending June 2022.
		Expenses incurred up to last LIE report	7.47	
		Incurred up to period ending June 2022	18.05	
		Expenditure approved under his head	NA	
6.	Contingency@ 7.5%	Allocated Amount	197.10	No expenditure has been incurred towards this head.
		Expenses incurred up to last LIE report	NA	
		Incurred up to period ending June 2022	NA	
		Expenditure approved under his head	NA	
7.	Margin money for working capital	Allocated Amount	14.94	No expenditure has been incurred towards this head.
		Expenses incurred up to last LIE report	NA	
		Incurred up to period ending June 2022	NA	
		Expenditure approved under his head	NA	
5.	Total	Allocated Amount	2970.29	Details of expenditure, Copies of Invoices/PO's/WO's are not provided to us citing confidentiality factor by the borrower. Therefore, we have not analyzed the cost incurred on the project till date. We have given a general overview of the project based on expenses shown by chartered accountant in their CA certificate dated 09 th August 2022 with UDIN. 22424004AOQULC5196 and
		Expenses incurred up to last LIE report	1535.32	
		Incurred up to period ending June 2022	2,072.40	
		Expenditure Approved	NA	

				<p>construction progress observed during site visit.</p> <p>Based on construction progress observed during site visit the project is progressing in full swing with good progress. Sufficient number of labours were observed to be working during site visit and project is anticipated to start the commercial operations by April 2023.</p>
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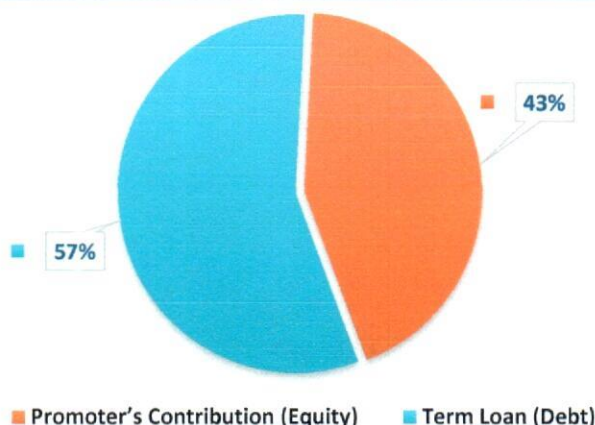
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3. SOURCES OF FINANCE & UTILIZATION OF FUNDS: The Project cost mentioned above has been planned to be covered from following resources:

(Amount in Rs. Crore)

PARTICULARS	ENVISAGED MEANS OF FINANCE
Promoter's Contribution (Equity)	1,290.29
Term Loan (Debt)	1,680.00
TOTAL	2,970.29

MEANS OF FINANCE (Rs.2970.29 Crore)



(Amount in Rs. Crore)

PARTICULARS	PLANNED AMOUNT	AMOUNT INFUSED UP TO 30.06.2022	BALANCE
Promoter's Equity	1,290.29	1167.09	123.2
Term Loan from Bank	1,680.00	840.50	839.5
SUB-TOTAL	2,970.29	2007.59	962.7
Less: (Balance in Bank Account)	-	24.36	24.36
Net Total	2,970.29	1983.23	987.06
Others (Project Creditors)	-	89.17	-89.17
Grand Total	2,970.29	2072.40	897.89

Source: As per CA Certificate dated 09th August 2022 with UDIN: 22424004AOQULC5196.

Comments:

As per CA Certificate the borrower has made an expenditure on the project amounting to Rs.2072.40 Crore on the project till 30th June 2022 which includes Project creditors amounting to Rs. 89.17 Crore.

PART F

STATUTORY & REGULATORY APPROVALS, CLEARANCES & NOC

INTEGRATED UNIT (IU) PROJECT SITE, PANNA, MADHYA PRADESH				
Sr. No.	NAME OF LICENSE/ REGISTRATION	PURPOSE	DATE OF ISSUE	Current Status
	ISSUING AUTHORITY		LICENCE NO.	
1.	Building Plan Approval Letter	Approval of building plans	13/05/2022	Approval for the Building Plan is obtained by the Company from the competent Authority.
	State PWD		-	
2.	Environment Clearance	Approval as per environment guidelines in the area	14/10/2020	As on date the clearance is valid and will be valid up to 13/10/2027
	Ministry of Environment, Forest and Climate Change		F. No. IA-J-11011/224/2016-IA.II(I)	
3.	Consent to Establish	Approval as per Pollution norms applicable in that area	17/12/2020	As on date the clearance is valid and will be valid up to 30/09/2025
	MP State Pollution control board		CTE-52637	
4.	Provisional Fire NOC	Approval of fire protection technique in the project	-	Will be obtained before starting the commercial operations in the project.
	State Fire authority		-	
5.	Groundwater Abstraction Clearance	Approval for groundwater abstraction for construction purpose	05/02/2020	As on date of CA certificate the NOC is active and was valid up to 30/01/2022. The company has applied for the renewal of approval vide application No. 21-4/863/MP/IND/2019.
	Central Groundwater Authority		CGWA/NOC/IND/ORIG/2020/7350	
6.	IEM Certificate	Industrial Entrepreneurs memorandum	05/08/2021	As on date IEM Certificate is valid.
	Ministry of Commerce and Industry		1407/SIA/IMO/2016	



7.	Power Connection	Power connection for construction works	-	Borrower is currently using DG sets for power supply. They have already applied for 35MVA of power supply from Patera Substation and transmission lines for the same are in their nascent stage.
	State Power Authority		-	

Observations & Comments:

- Approvals to be obtained by the Jaykaycem (Central) Limited-All approvals including approvals/consents required under local regulations, building codes and approvals required from the Distribution Utility etc. relating to installation of integrated unit are listed above.
- The Approved Plan for the Integrated Unit is already obtained by the Company. The copy of the same is provided to us. Regarding the provisional Fire NOC, the company has informed that they will obtain the Fire NOC before the commissioning of the plant.

GRINDING UNIT (GU) PROJECT SITE, HAMIRPUR, UTTAR PRADESH

Sr. No.	NAME OF LICENSE/ REGISTRATION	PURPOSE	DATE OF ISSUE	CURRENT STATUS
	ISSUING AUTHORITY		LICENCE NO.	
1.	Building Plan Approval Letter	Approval of building plans	28/02/2022	As informed by the borrower and the document Provided to us. The borrower has obtained the Building Plan approval from the assistant director of Factories, U.P.
	State PWD		Site Plan No. PBP00000185	
2.	Environment Clearance		29/09/2021	



	Ministry of Environment, Forest and Climate change	Approval as per environment guidelines in the area	202/Parya/SEIAA/6109/2021	As on date the clearance is valid and will expire on 28/07/2028
4.	Consent to Establish	Approval as per	01/09/2021	As on date the NOC is valid and will expire on 29/08/26.
	UP State pollution control board	Pollution norms applicable in that area	133698/UPPCB/Banda (UPPCBRO) /CTE/Hamirpur/2021	
3.	Provisional Fire NOC	Approval of fire protection technique in the project	20-04-2022	The Company has obtained the Provisional Fire NOC from the competent Authority
	State fire Authority		UPFS/2022/48495/HRP/HAMIRPUR/78/CFO	
4.	Groundwater Abstraction Clearance	Approval for groundwater abstraction for	Dated 08/01/2022	As on date the NOC is active and will be valid up to 15/12/2026
	Central Groundwater Authority	construction purpose	NOC No.: NOC031442	
5.	IEM Certificate	Industrial	13/01/2021	As on date the IEM Certificate is valid
	Ministry of Commerce and Industry	Entrepreneurs memorandum	54/SIA/IMO/2021	
6.	Power Connection	Power connection for construction works	13/04/2021	Borrower has obtained temporary Power connection for 20 KW load.
	State Power Authority		-	

Observations & Comments:

- Approvals to be obtained by the Jaykaycem (Central) Limited: All approvals including approvals/consents required under local regulations, building codes and approvals required from the Distribution Utility etc. relating to installation of grinding unit are listed above.
- The borrower has obtained Building plan approval and Provisional Fire NOC from the competent authority in this quarter.



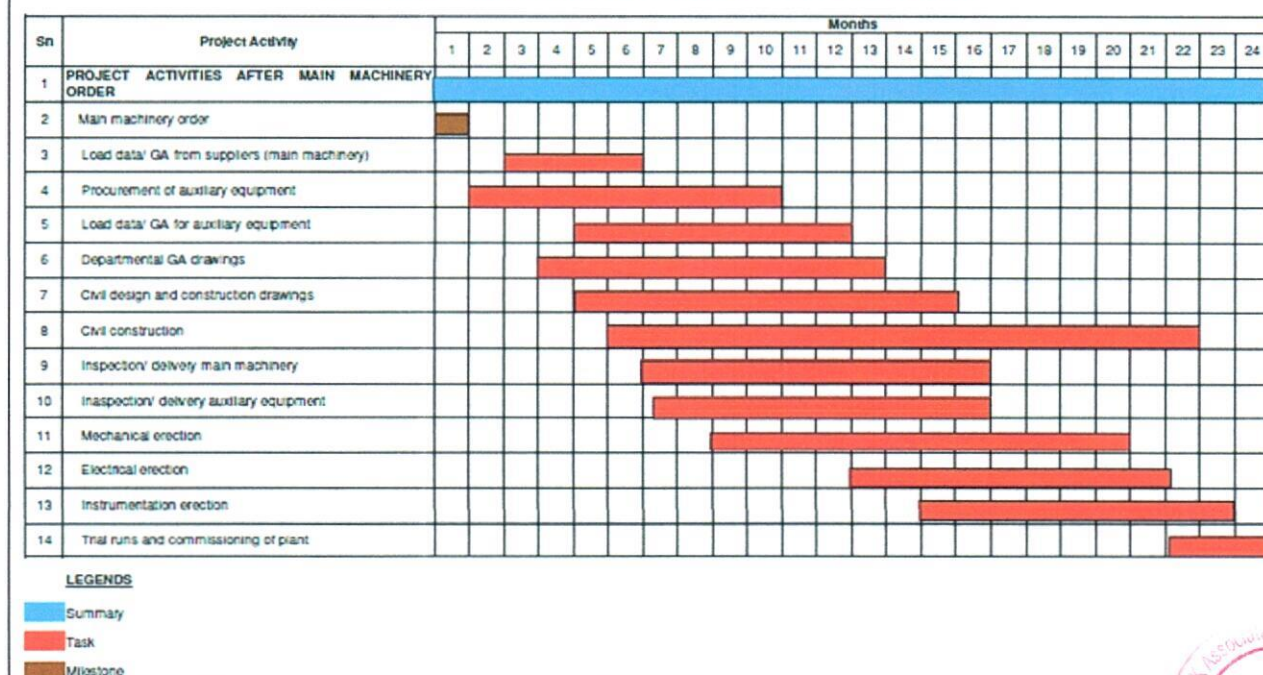
PART G

PROJECT SCHEDULE & CURRENT STATUS

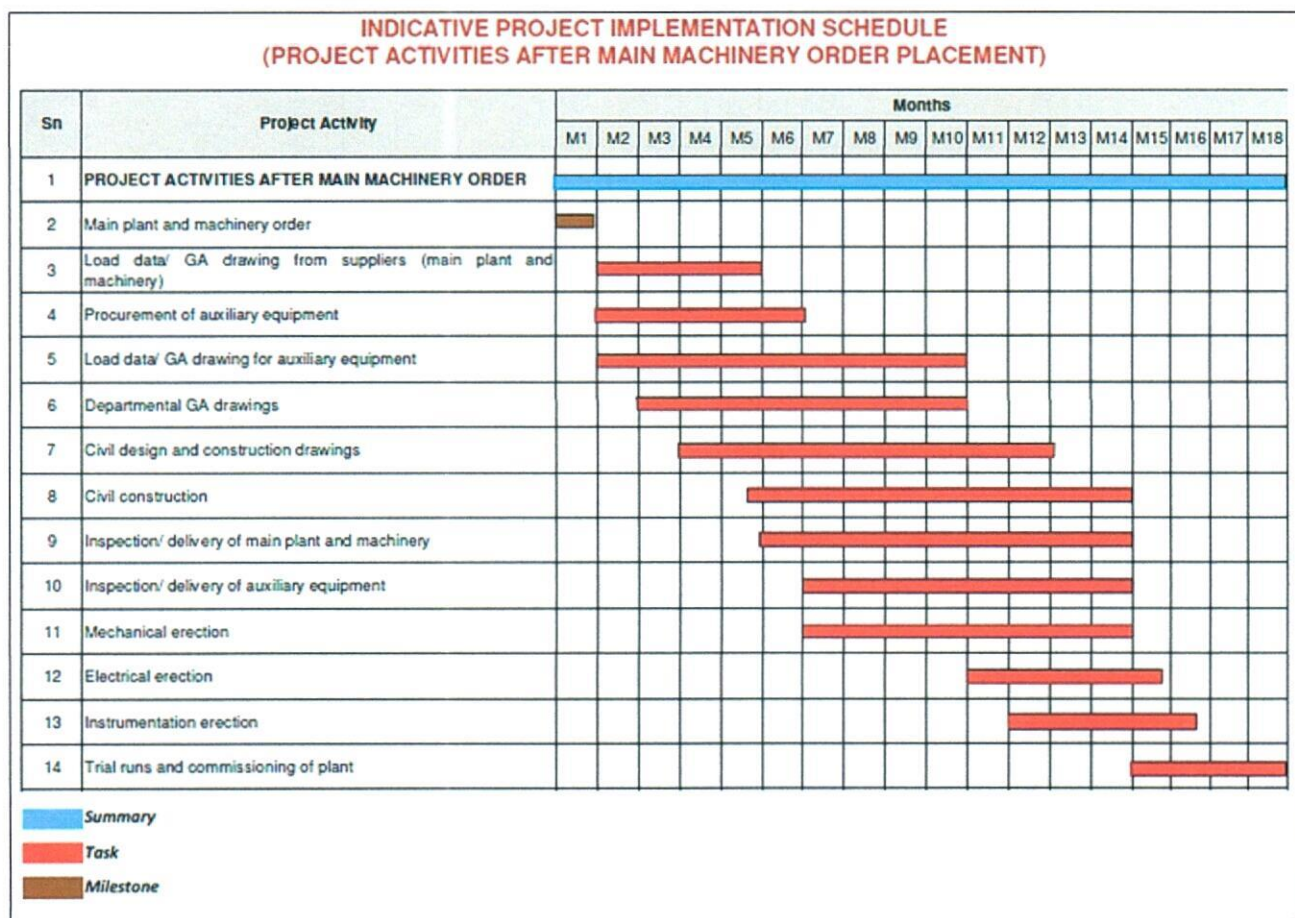
IMPLEMENTATION SCHEDULE OF INTEGRATED UNIT (IU), PANNA, MADHYA PRADESH

Sr. No.	Particulars	Start	End	Current Status
1.	Land and Site Development	Land allotment done		As per the discussion with the borrower, it has been verbally informed that the land allotment has been done.
2.	Project Statutory Approvals	During Project tenure		Majority of preliminary statutory approvals are in place latest included Approved Plan in this Quarter.
3.	Building and Civil works	Sep-21	Feb-23	Building and civil works are currently in progress and are anticipated to complete by December 2022. Building wise site progress is already shown above and as per visual observation site progress was good and project was progressing in full swing.
4.	Order of Plant and Machinery	Apr-21	May-21	As per our discussion with the borrower, they have already ordered the major machineries required for the project. However, due to confidentiality factor cited by the borrower we have not been Provided with the copies of purchase orders.
5.	Delivery of Machineries	Oct-21	Jul-22	Most of the machineries are already delivered to the site of the project.
6.	Installation of Machinery	Dec-21	Mar-23	Fabrication of machineries is started in the project.
7.	Trial runs and Commissioning of Plant	Feb-23	Apr-23	As per pace of work observed during site visit the Project is anticipated to start the Commercial operations in April 2023.

**IMPLEMENTATION SCHEDULE - IU
PROJECT ACTIVITIES AFTER MAIN MACHINERY ORDER PLACEMENT**



IMPLEMENTATION SCHEDULE OF GRINDING UNIT (GU), HAMIRPUR, UTTAR PRADESH			
Particulars	Start	End	Current Status
Land and Site Development	Land allotment done		As per the discussion with the borrower, it has been verbally informed that the land allotment has been done.
Project Statutory Approvals	During Project tenure		Majority of statutory approvals are in place
Building and Civil works	Sep-21	May-22	Building and civil works are currently in progress and are anticipated to complete by October 2022.
Order of Plant and Machinery	Apr-21	May-21	As per our discussion with the borrower, they have already ordered the major machineries required for the project. However, due to confidentiality factor cited by the borrower we have not been Provided with the copies of purchase orders.
Delivery of Machineries	Sep-21	May-22	Delivery of machineries has started in the project.
Installation of Machinery	Oct-21	Jul-22	Installation of machineries is started in the project.
Trial runs and Commissioning of Plant	Feb-23	Apr-23	Project is anticipated to achieve Commercial operations date in April 2023.



PART H

OBSERVATIONS & COMMENTS

1. Based on visual observation and subsequent discussions held with the engineers accompanying our team during 4th site visit it appears that approximately 85% of the essential civil structures like (Preheater building, Cooler Building, Raw mills, Coal mill building, Cement mill building, Switchyard control room, CCR Building, Clinker Silo, fly ash silos, Cement silos, packing plant in Integrated unit and Packing plant, Bag house & De dusting building, Cement recirculation building, Fly ash silo, CCR, Cement hopper building, Clinker silo, Additive shed, Bulk reception unit and switchyard in Grinding unit) is completed and around 70% of essential machineries are installed at site.

However overall project's progress may vary due to ancillary works and site development works which are yet to take shape or commence. Therefore, physical progress of the works can't be efficiently ascertained due to vastness of the project.

2. As per our discussion with the company they have approximately achieved 85% machinery progress. Unsigned Supporting document of the same is also provided to us.

However, based on our visual inspection during site visit, they have obtained approx. 70% essential machineries progress. This difference was clarified from the company. Accordingly, the company has informed us that in the process of assessment of percentage progress of various works they also consider the progress of soft works like consultancy Ordering and Tendering and progress of machineries delivered to the site but not erected. Therefore, the difference in assessment seems reasonable. Also, we can't assess the physical progress of consultancy, ordering and tendering and machineries delivered to the site but not installed due to very high numbers of machineries at site and type of project. Thus, general progress analysis is covered in our assessment.

3. The physical progress of the machineries has been tracked as per random verification of based on the package material (PM) number mentioned in the list of machineries delivered to the site provided by the borrower. However, during site visit we have observed the erection of major Machinery at the site in both the units. However, still a majority of the machineries were in packed condition since they were to be used in due course and required protection. Therefore, we were unable to verify the equipment's/machineries from inside in those packages and the Physical progress captured is based on approximate visual observations and taking reference from the list of machineries provided by the

borrower and our subsequent discussions held with the engineers with whom the site visit was conducted. Thus, the above progress may vary from 5%-10%.

4. Appropriateness of progress comparison vis-à-vis with the expenditure made and appropriateness of related transactions couldn't be verified at our end because of unavailability of key information/ data/ inputs in terms of break-up of expenditure head wise, unavailability of vendor wise payments made, vendor contracts & agreements, unavailability of RA Bills for quantity estimates citing confidentiality factor by the borrower. However as per discussion with the lender all the payments are being released by the lender only after proper due diligence of the parties involved.
5. As per CA certificate dated 09th August 2022 with UDIN. 22424004AOQULC5196 the borrower has made an expenditure on the project amounting to Rs.2,072.40 Crore. However as per the breakup of expenditure mentioned in CA certificate no separate expenditure has been shown towards plant and machinery.
6. Copies of Invoices/PO's/WO's is not provided to us by the borrower citing confidentiality factor. Therefore, we have not analysed the cost incurred on the project till date and have given a general overview of the project based on expense shown by chartered accountant in their CA certificate dated 09th August 2022 with UDIN. 22424004AOQULC5196. However, based on construction progress observed during site visit the project is progressing in full swing with good progress. Sufficient number of labours were also observed to be working during site visit and the project is anticipated to start the commercial operations by April 2023.
7. This is the 4th LIE Report of the project and as per CA certificate showing expenditure in the project up to 30th June 2022, Term loan amounting to Rs.840.50 Crore has been disbursed by the lender up to 30th June 2022.
8. As per pace of work observed during site visit the Project is anticipated to start the Commercial operations in April 2023.
9. Detailed physical progress of both the grinding unit as well as integrated unit section wise is covered in Clause 2.1 and Clause 3.2 of the report. Overall progress of the project including machinery erection may vary since the machinery can't be physically counted and verified due to the vastness of the project.



PART I

DISCLAIMER

1. No employee or member of R.K Associates has any direct/ indirect interest in the Project.
2. This report is prepared based on the copies of the documents/ information which the Bank/ Borrower has provided to us out of the standard checklist of documents sought from them and further based on our assumptions and limiting conditions. The client/owner and its management/representatives warranted to us that the information they supplied was complete, accurate and true and correct to the best of their knowledge. All such information provided to us has been relied upon in good faith and we have assumed that it is true and correct in all respect. I/We shall not be liable for any loss, damages, cost or expenses arising from fraudulent acts, misrepresentations, or wilful default on part of the owner, borrower, its directors, employee, representative or agents. Verification or cross checking of the documents provided to us from the originals or from any Govt. departments/ Record of Registrar has not been done at our end since this is beyond the scope of our work. If at any time in future, it is found or came to our knowledge that misrepresentation of facts or incomplete or distorted information has been provided to us then this report shall automatically become null & void.
3. Legal aspects for eg. investigation of title, ownership rights, lien, charge, mortgage, lease, sanctioned maps, verification of documents, etc. have not been done at our end and same has to be taken care by legal expert/ Advocate. It is assumed that the concerned Lender/ Financial Institution has satisfied them with the authenticity of the documents, information given to us and for which the legal verification has been already taken and cleared by the competent Advocate before requesting for this report. I/ We assume no responsibility for the legal matters including, but not limited to, legal or title concerns.
4. This report is a general analysis of the project based on the scope mentioned in the report. This is not an Audit report, Design document, DPR or Techno feasibility study. All the information gathered is based on the facts seen on the site during survey, verbal discussion & documentary evidence provided by the client and is believed that information given by the borrower is true best of their knowledge.
5. All observations mentioned in the report is only based on the visual observation and the documents/ data/ information provided by the client. No mechanical/ technical tests, measurements or any design review have been performed or carried out from our side during Project assessment.
6. Bank/FII should ONLY take this report as an Advisory document from the Financial/ Chartered Engineering firm and its specifically advised to the creditor to cross verify the original documents for the facts mentioned in the report which can be availed from the borrowing borrower directly.



7. In case of any default in loans or the credit facility extended to the borrowing borrower, R.K Associates shall not be held responsible for whatsoever reason may be and any request for seeking any explanation from the employee/s of R.K Associates will not be entertained at any instance or situation.
8. The documents, information, data provided to us during the course of this assessment by the client is reviewed only upto the extent required in relation to the scope of the work. No document has been reviewed beyond the scope of the work.
9. This report only contains general assessment & opinion as per the scope of work evaluated as per the information given in the copy of documents, information, data provided to us and/ and confirmed by the owner/ owner representative to us at site which has been relied upon in good faith. It doesn't contain any other recommendations of any sort including but not limited to express of any opinion on the suitability or otherwise of entering into any transaction with the borrower.
10. We have relied on data from third party, external sources & information available on public domain also to conclude this report. These sources are believed to be reliable and therefore, we assume no liability for the truth or accuracy of any data, opinions or estimates furnished by others that have been used in this analysis. Where we have relied on data, opinions or estimates from external sources, reasonable care has been taken to ensure that such data has been correctly extracted from those sources and /or reproduced in its proper form and context, however still we can't vouch its authenticity, correctness or accuracy.
11. This Report is prepared by our competent technical team which includes Engineers and financial experts & analysts.
12. This is just an opinion report and doesn't hold any binding on anyone. It is requested from the concerned Financial Institution which is using this report for taking financial decision on the project that they should consider all the different associated relevant & related factors also before taking any business decision based on the content of this report.
13. All Pages of the report including annexures are signed and stamped from our office. In case any paper in the report is without stamp & signature then this should not be considered a valid paper issued from this office.
14. Though adequate care has been taken while preparing this report as per its scope, but still we can't rule out typing, human errors, over sightedness of any information or any other mistakes. Therefore, the concerned organization is advised to satisfy themselves that the report is complete & satisfactory in all respect. Intimation regarding any discrepancy shall be brought into our notice immediately. If no intimation is received within 15 (Fifteen) days in writing from the date of issuance of the report, to rectify these timely, then it shall be considered that the

report is complete in all respect and has been accepted by the client upto their satisfaction & use and further to which R.K Associates shall not be held responsible in any manner.

15. Defect Liability Period is **15 DAYS**. We request the concerned authorized reader of this report to check the contents, data and calculations in the report within this period and intimate us in writing if any corrections are required or in case of any other concern with the contents or opinion mentioned in the report. Corrections only related to typographical, calculation, spelling mistakes, incorrect data/ figures/ statement will be entertained within the defect liability period. Any new changes for any additional information in already approved report will be regarded as additional work for which additional fees may be charged. No request for any illegitimate change in regard to any facts & figures will be entertained.
16. R.K Associates encourages its customers to give feedback or inform concerns over its services through proper channel at valuers@rkassociates.org in writing within 15 days of report delivery. After this period no concern/ complaint/ proceedings in connection with the Financial Feasibility Study Services will be entertained due to possible change in situation and condition of the subject Project.
17. Our Data retention policy is of **ONE YEAR**. After this period, we remove all the concerned records related to the assignment from our repository. No clarification or query can be answered after this period due to unavailability of the data.
18. This Lender's Independent Engineer report is governed by our (1) Internal Policies, Processes & Standard Operating Procedures, (2) Information/ Data/ Inputs given to us by the client and (3) Information/ Data/ Facts given to us by our field/ office technical team. Management of R.K Associates never gives acceptance to any unethical or unprofessional practice which may affect fair, correct & impartial assessment and which is against any prevailing law. In case of any indication of any negligence, default, incorrect, misleading, misrepresentation or distortion of facts in the report then it is the responsibility of the user of this report to immediately or at least within the defect liability period bring all such act into notice of R.K Associates management so that corrective measures can be taken instantly.
19. R.K Associates never releases any report doing alterations or modifications from pen. In case any information/ figure of this report is found altered with pen then this report will automatically become null & void.

SURVEYED BY

Er. Abhishek Sharma and Er. Manas Upmanyu

PREPARED BY

Er. Abhishek Sharma

REVIEWED BY

Er. Tejas Bharadwaj

Date: 26th August and 27th August

Date: 6th September 2022


Date: 6th September 2022

DEFECT LIABILITY PERIOD - In case of any query/ issue or escalation you may please contact Incident Manager by writing at valuers@rkassociates.org. We ensure 100% accuracy in the Calculations done, Rates adopted and various other data points & information mentioned in the report but still can't rule out typing, human errors or any other mistakes. In case you find any mistake, variation, discrepancy or inaccuracy in any data point of the report, please help us by bringing all such points into our notice in writing at valuers@rkassociates.org within 30 days of the report delivery, to get these rectified timely, failing which R.K Associates Valuers Techno Engineering Consultants (P) Ltd. won't be held responsible for any inaccuracy in any manner. Also if we will not hear back anything from you within 30 days, we will assume that report is correct in all respect and no further claim of any sort will be entertained thereafter. We would welcome and appreciate your feedback & suggestions in order to improve our services.

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ENCLOSURE 1: CA CERTIFICATE DATED 09th Aug 2022

R. K. PARMARTHI & CO. CHARTERED ACCOUNTANTS			518, "Kalpana Plaza", Birhana Road, Kanpur - 208 001 (M) 9839085297, 9415128481 E-mail : parmardidurgesh@gmail.com parmardidurgesh@yahoo.co.in
<p>The Board of Directors Jaykaycem (Central) Limited Kamla Tower Kanpur</p>			
<p>We, M/s. R.K. Parmarthi & Co. Chartered Accountants have been requested by M/s. Jaykaycem (Central) Ltd. ("Company") to certify infusion of promoters' equity, disbursement of loans (fund based and non-fund based) from Lenders, utilization of funds and debt to equity ratio in respect of 4.0 Mn tpa Grey Cement Project at Panna and Hamirpur as mentioned in Common Loan Agreement dated 18th November, 2021.</p>			
<p>1. Based on our examination of books of accounts of the Company and other records produced before us, we hereby certify the source of funds and utilization of funds till 30th June, 2022 is as follows</p>			
<p>A. Source of Funds:</p>			
S.N.	Particulars	Rs. in Crores	
1	Promoters' Contribution	1167.09	
2	Loan Disbursement	840.50	
3	Total (1) + (2)	2007.59	
4	Balance in Bank Accounts / FDRs	24.36	
5	Total (3) - (4)	1983.23	
6	Others (Project Creditors)	89.17	
	Total (5) + (6)	2072.40	
<p>B. Utilization of Funds / Total Investment cost (Rs in Crore):</p>			
Item	Expenses incurred	Estimated Project Cost as per Holtec Report	
Land and Site Development	316.26	497.65	
Plant & Machinery / Building & Civil Structures / Miscellaneous Fixed Assets	1,663.14	1,989.83	
Pre-Operative Expenses / Engineering & Knowhow / Training & Foreign Technician Expenses	74.95	140.46	
Interest during Construction Period	18.05	130.31	
Contingency	-	197.10	
Margin Money for Working Capital	-	14.94	
Total Cost	2,072.40	2,970.29	



R. K. PARMARTHI & CO.
CHARTERED ACCOUNTANTS



518, "Kalpana Plaza", Bithana Road, Kanpur - 208 001
(M) 9639085297, 9415128481
E-mail: parmardidurgesh@gmail.com
parmardidurgesh@yahoo.co.in

2. We hereby confirm that Debt Equity Ratio is as under (considering funds infused by the Company till 30th June, 2022).

Particulars	Amount (Rs. / Crores)
Debt	840.50
Equity contribution	1,167.09
Debt Equity Ratio	0.72

We further confirm that the aforesaid Promoters' Contribution has been utilized by the Company towards setting up the Project mentioned in Common Loan Agreement dated 18th Nov. 2021.

For R.K. Parmarthi & Co.
Chartered Accountants
Firm Regn. No. 001121C

(Arvind Awasthi)
Partner
(Membership No. 424004)

Date: 09.08.2022
Place: Kanpur

UDIN: 22424004AOQULC5196





SITE PHOTOGRAPHS

INTEGRATED UNIT-PANNA



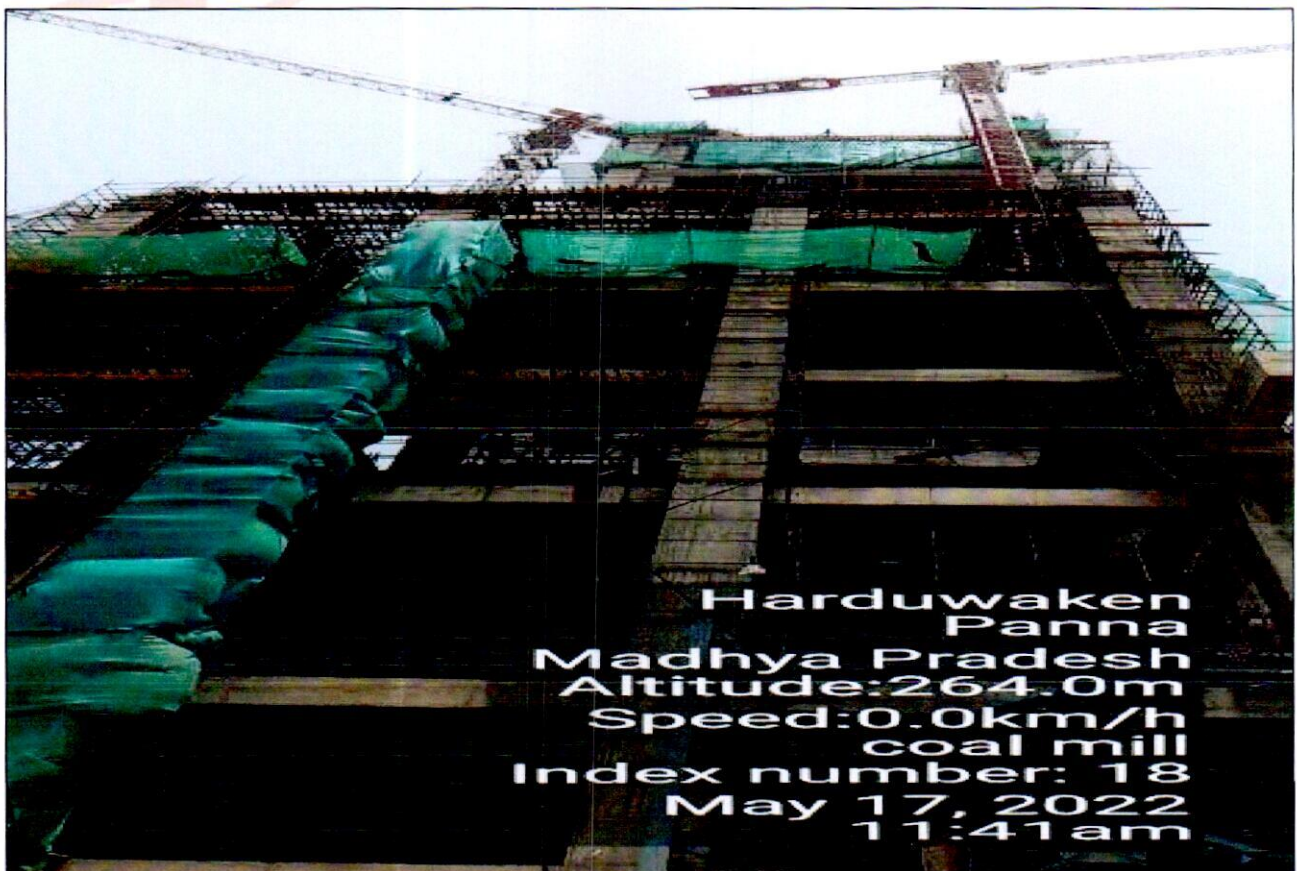
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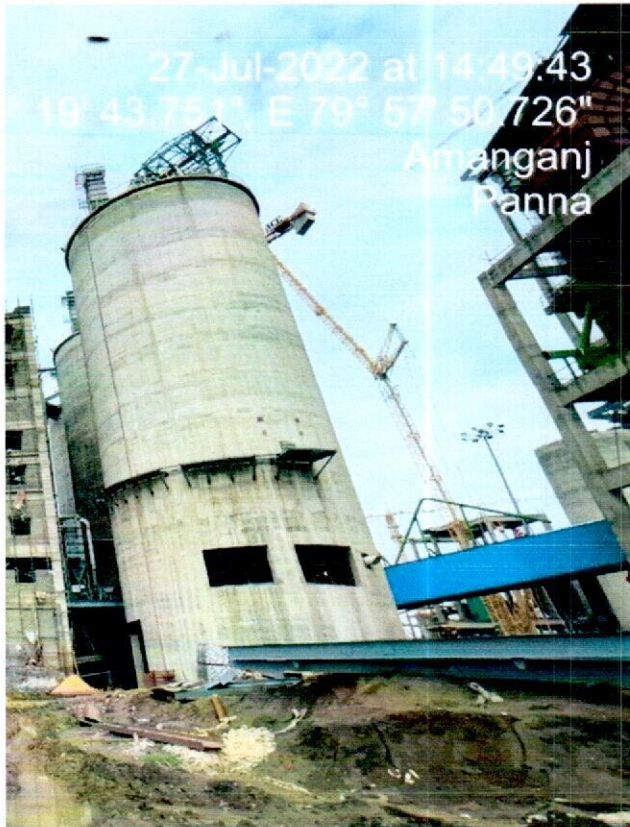
Cement Mill Hopper Building

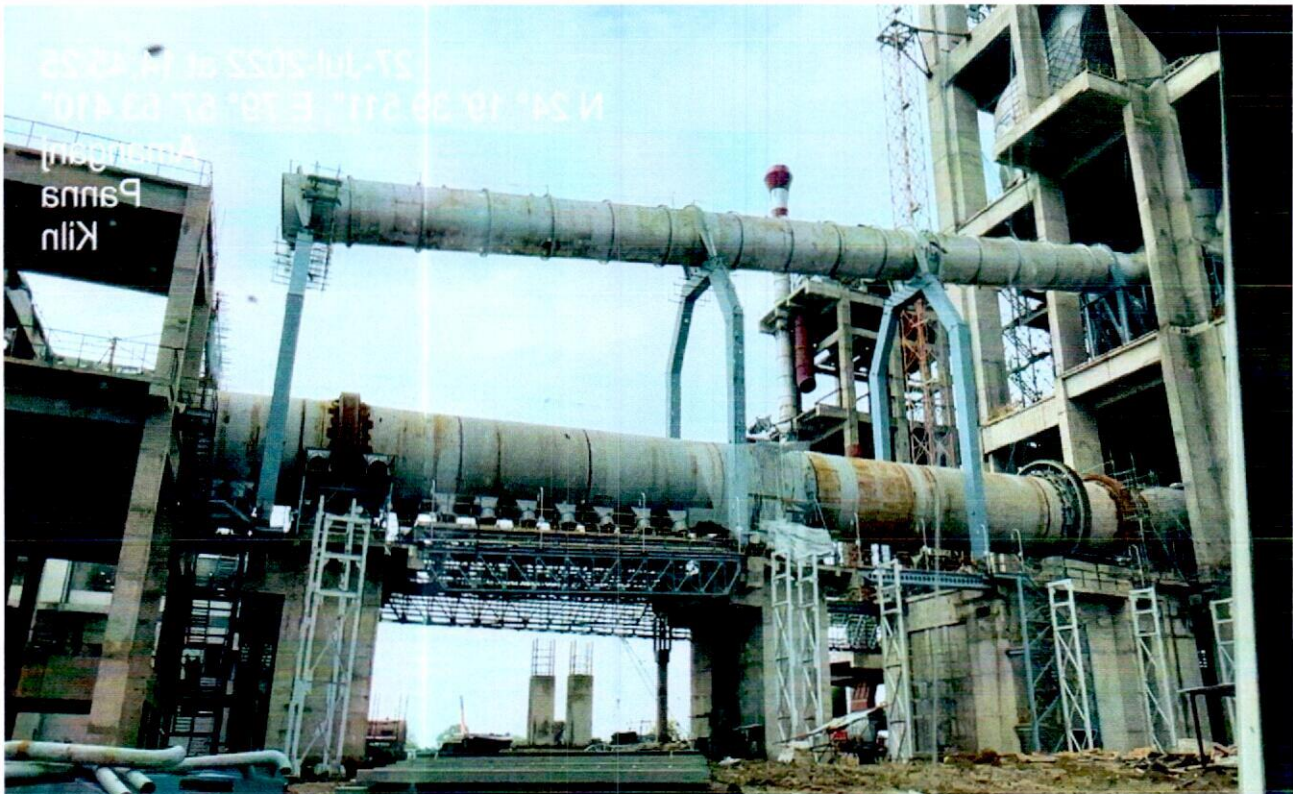


Preheater Building

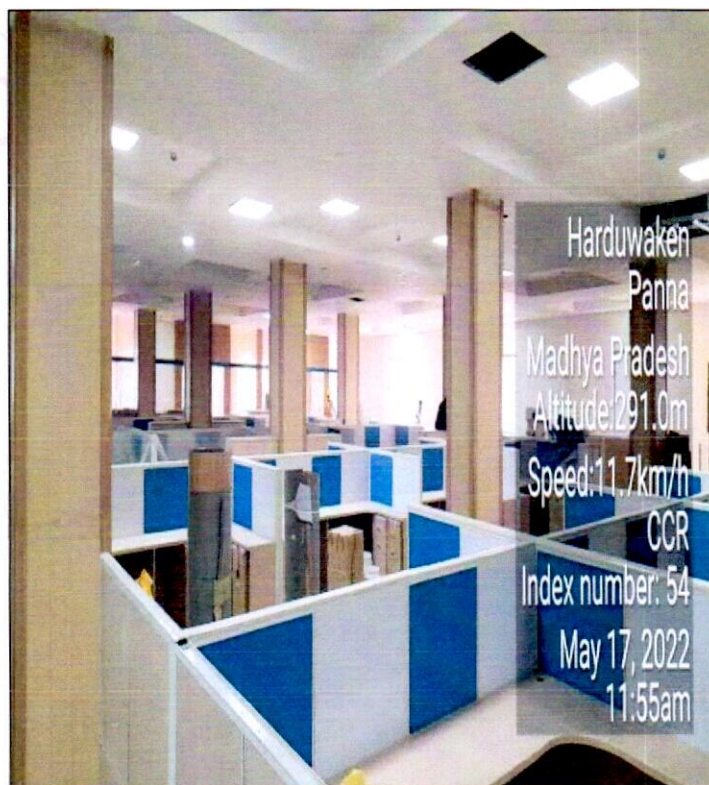
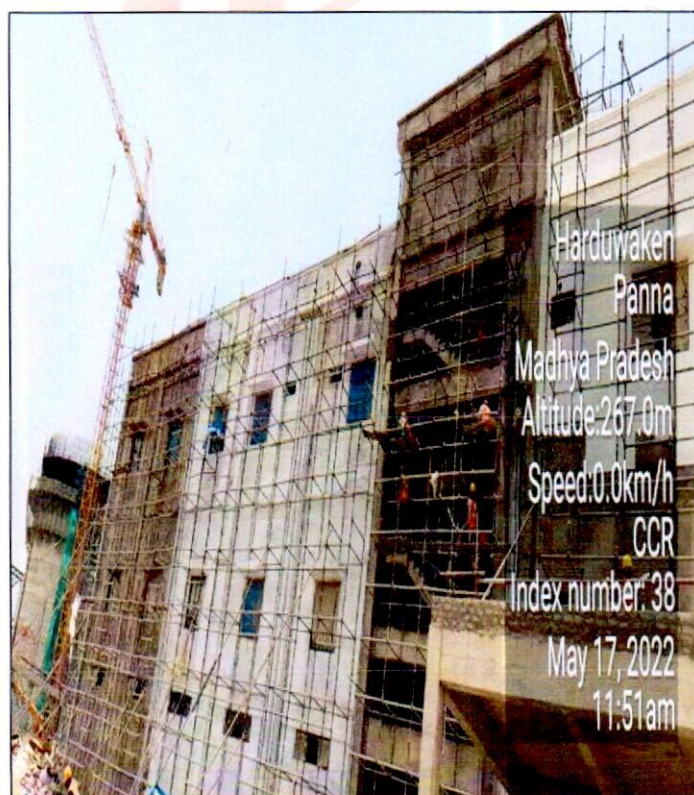


Coal Mill Building

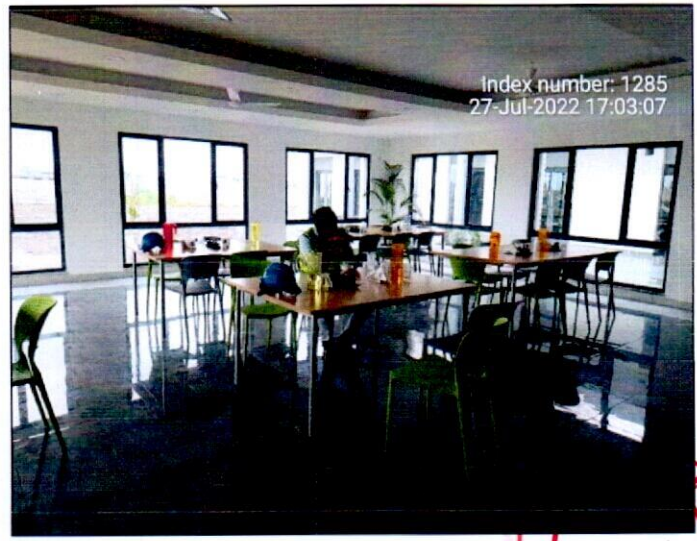
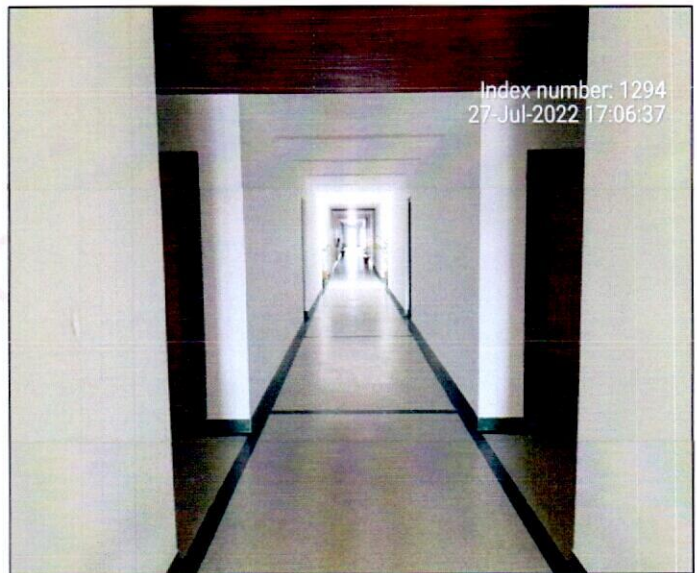


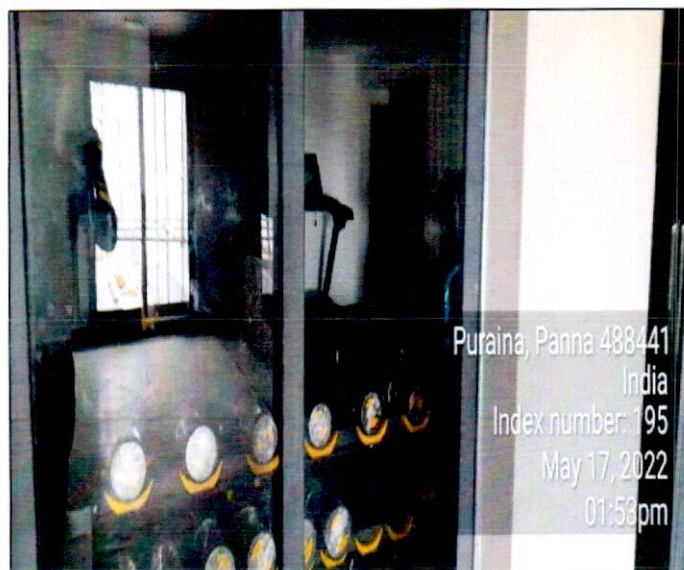
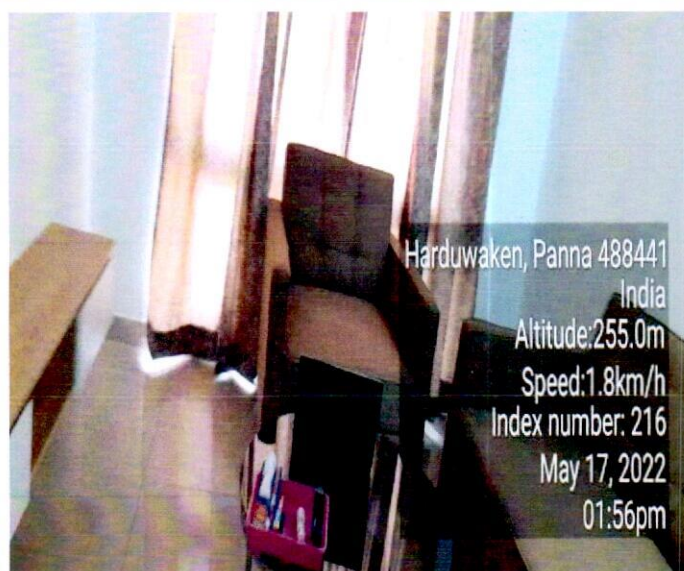


Klin, Kiln Piers & TA Duct
and support structure



Central Control Room Building







ESP Building



WHRS & ACC Building

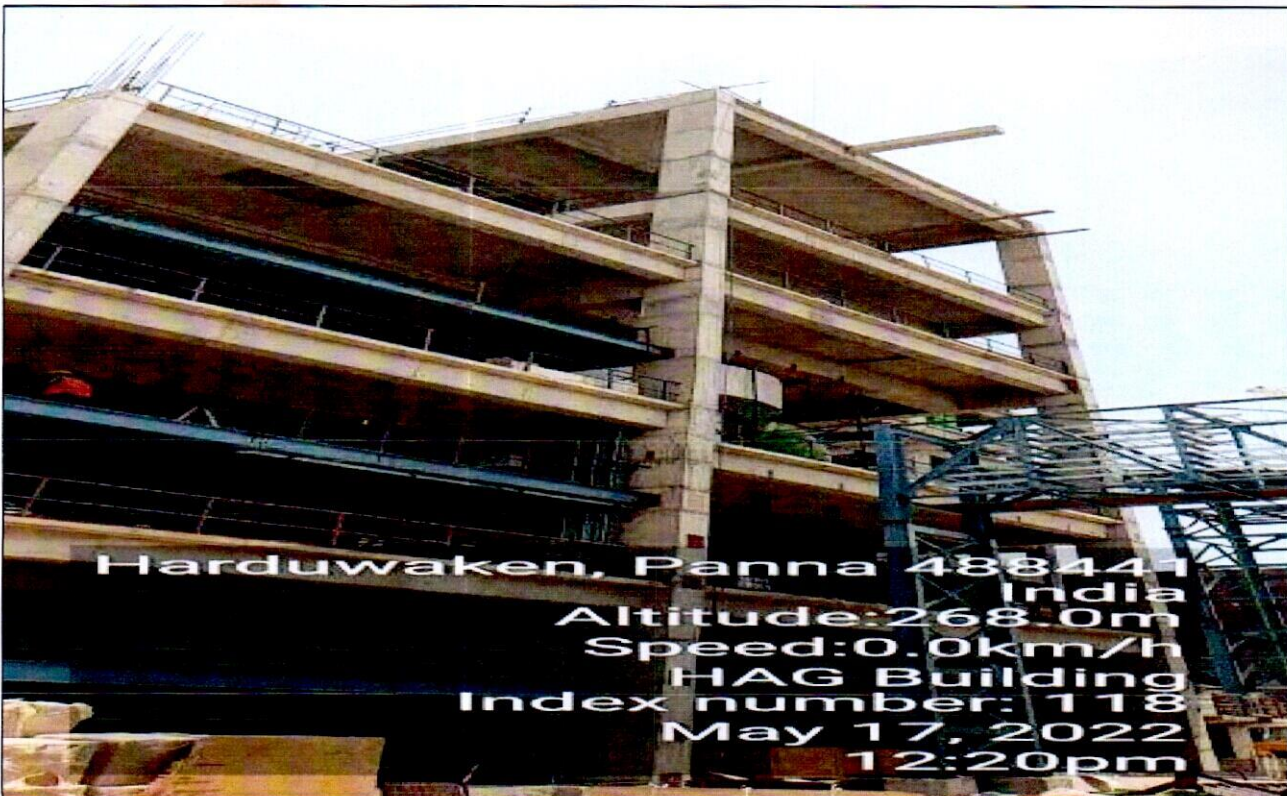




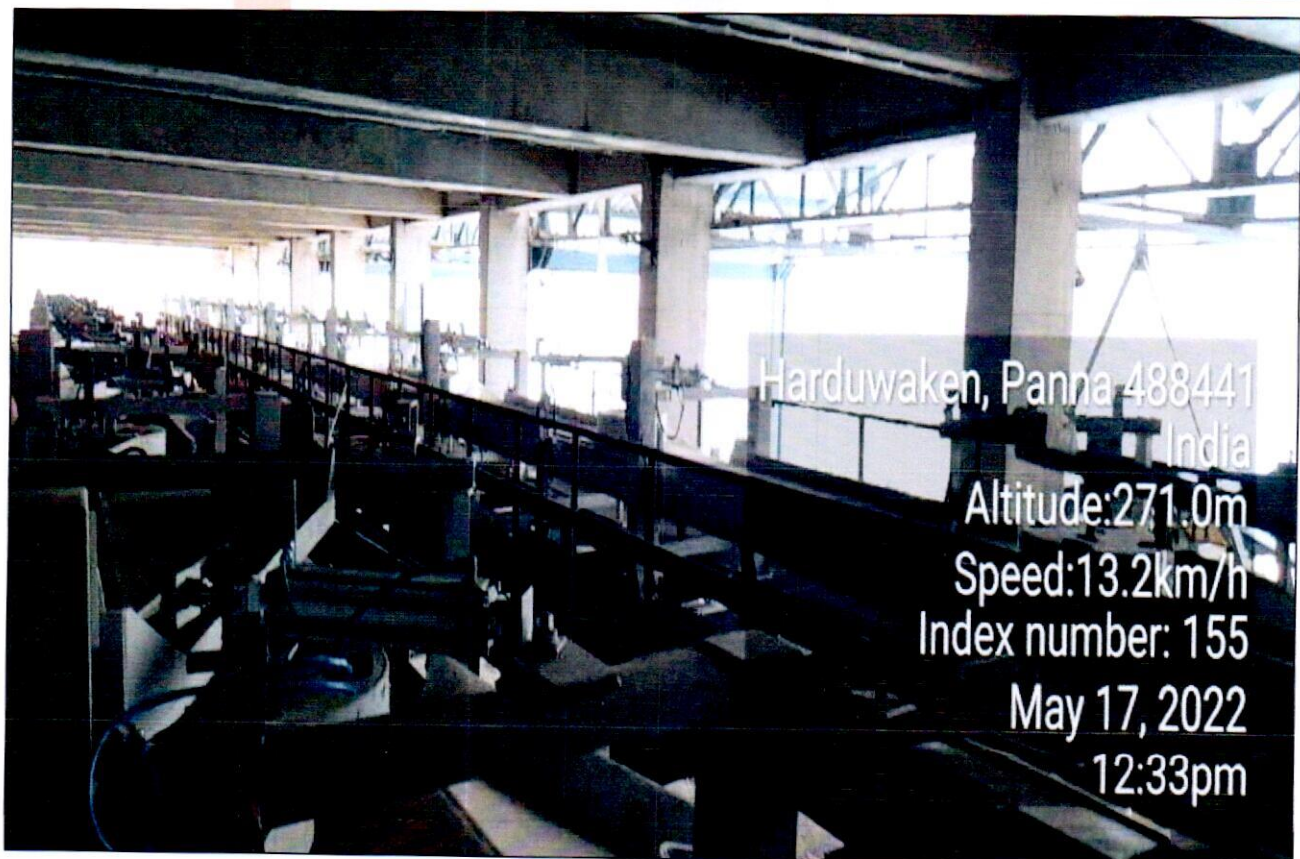
Packing Plant



Clinker Load out Hoppers



HAG Building



Packing Plant Building



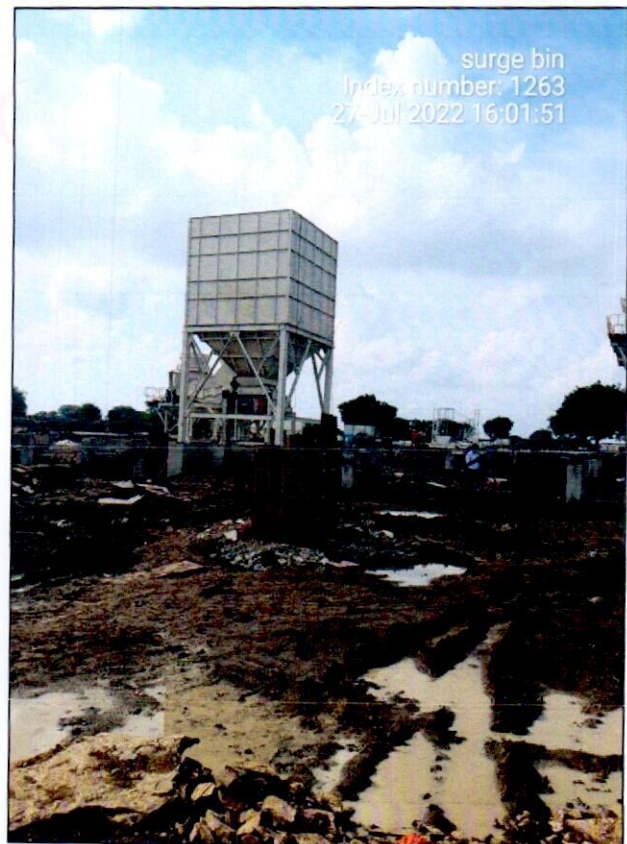
Coal VRM



Coal Storage Shed



Administration Building



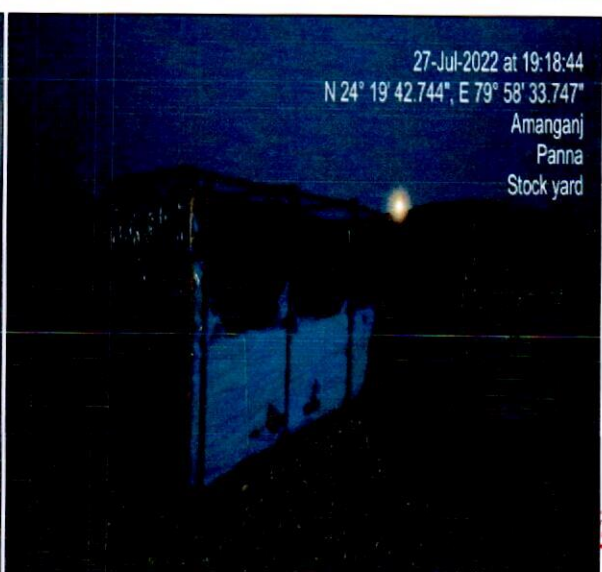
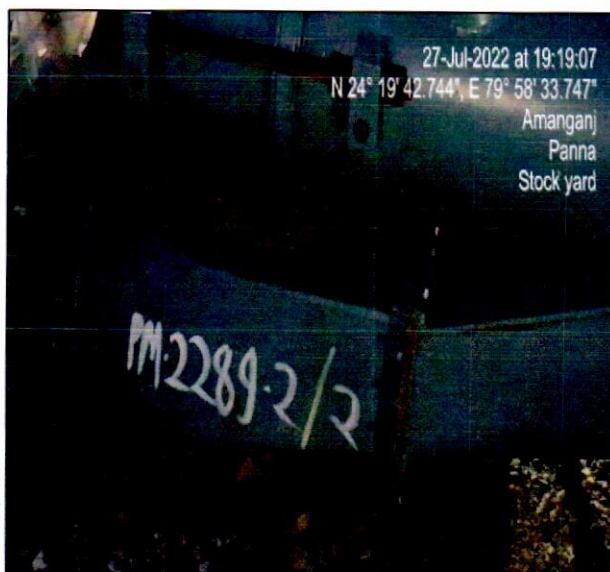
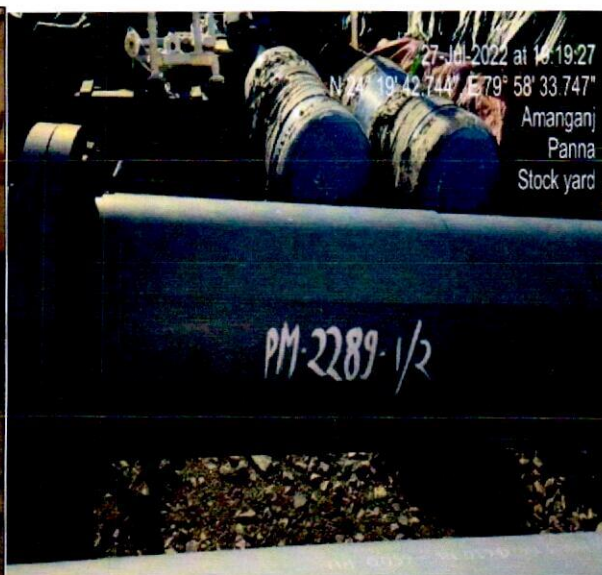
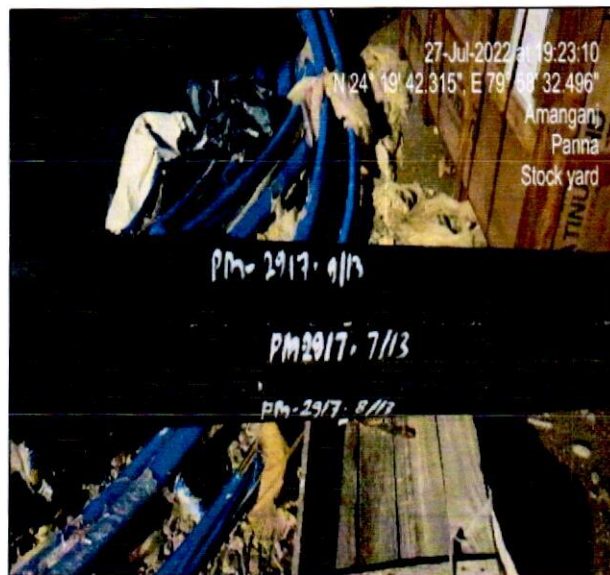
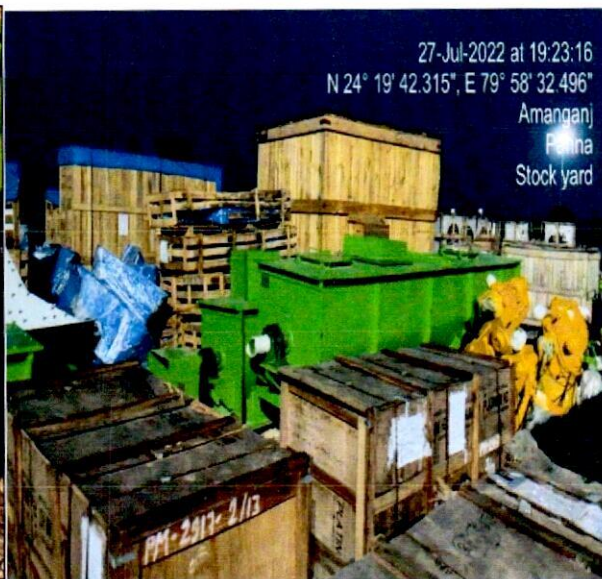
Limestone Crusher

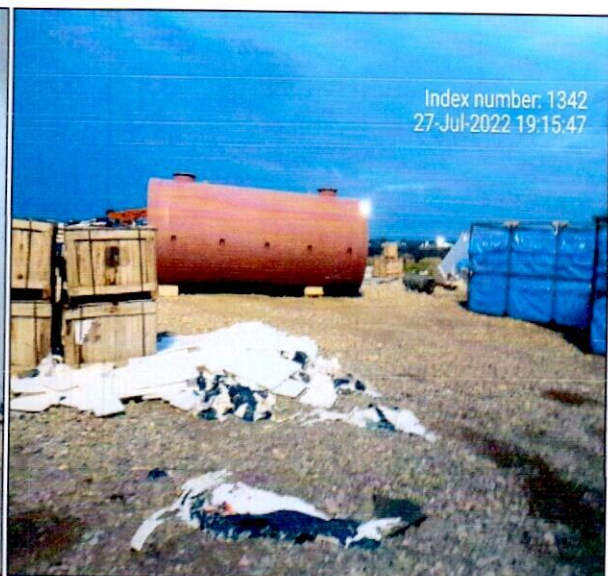
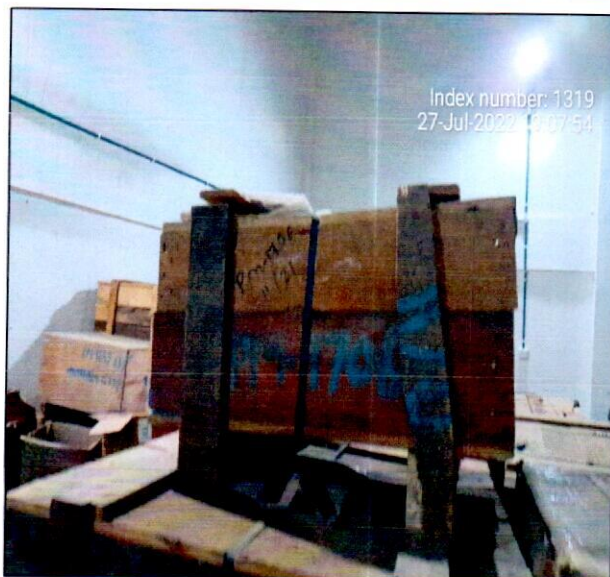
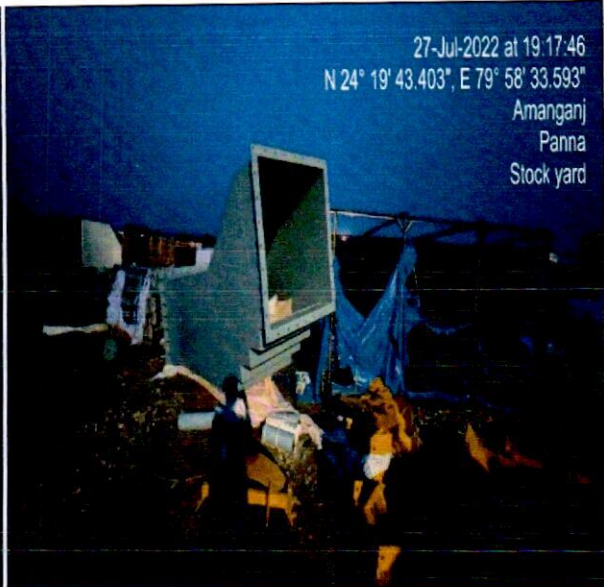
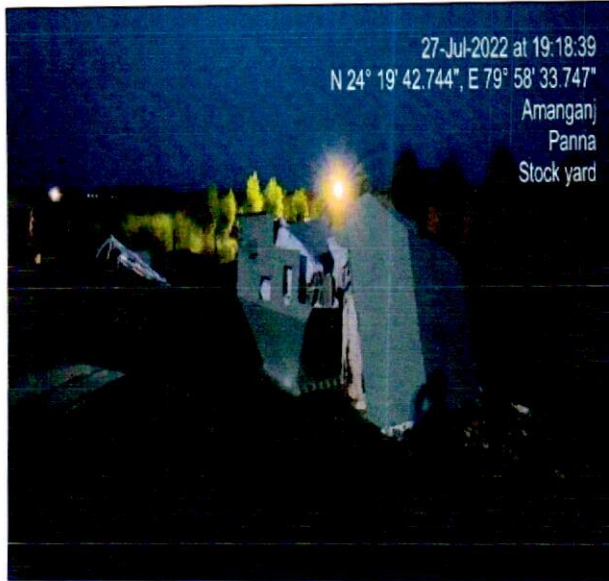


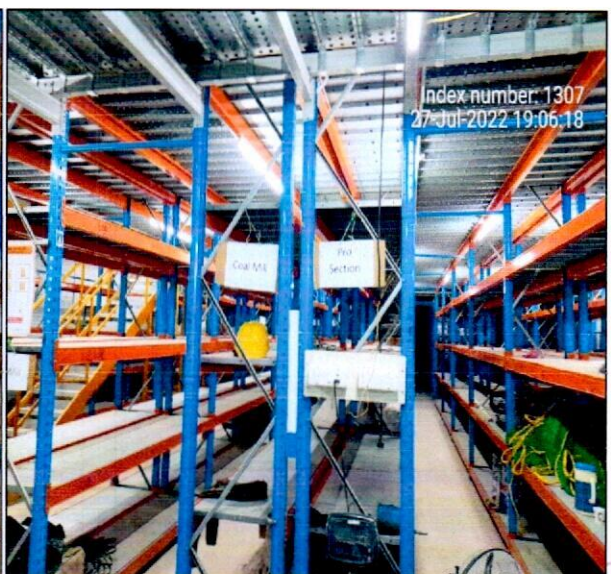
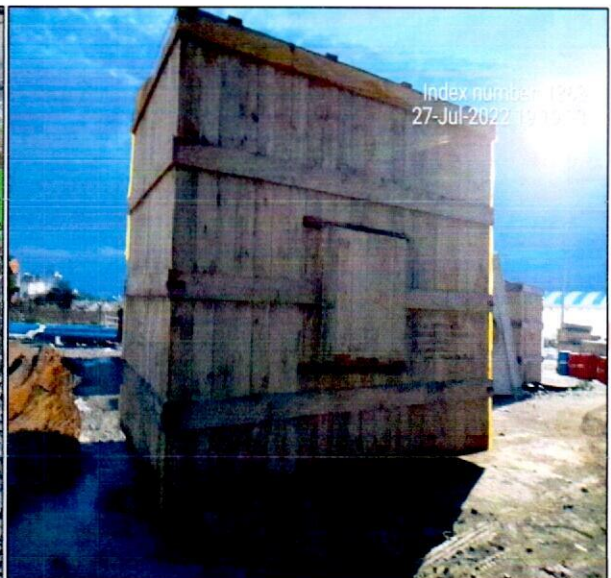
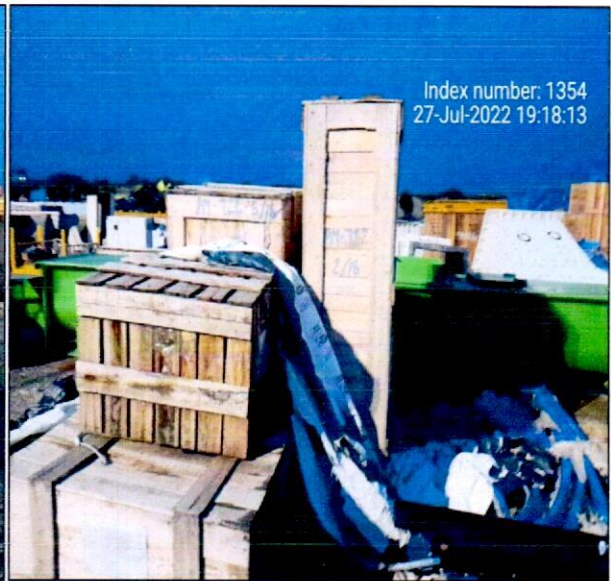
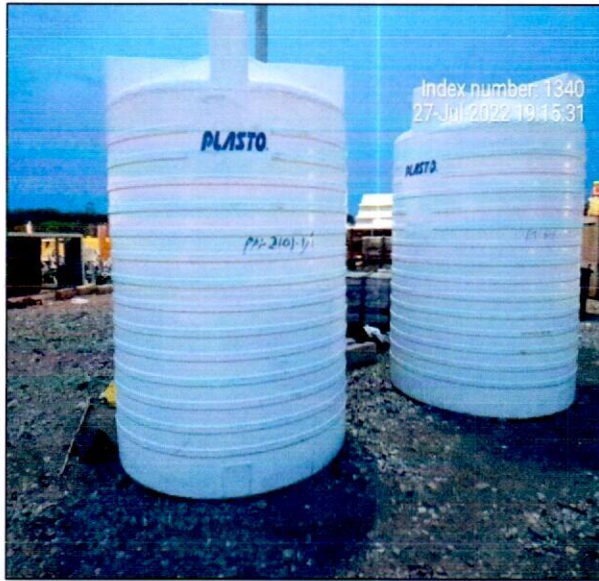
AQC Boiler



MACHINERIES AT INTEGRATED UNIT:







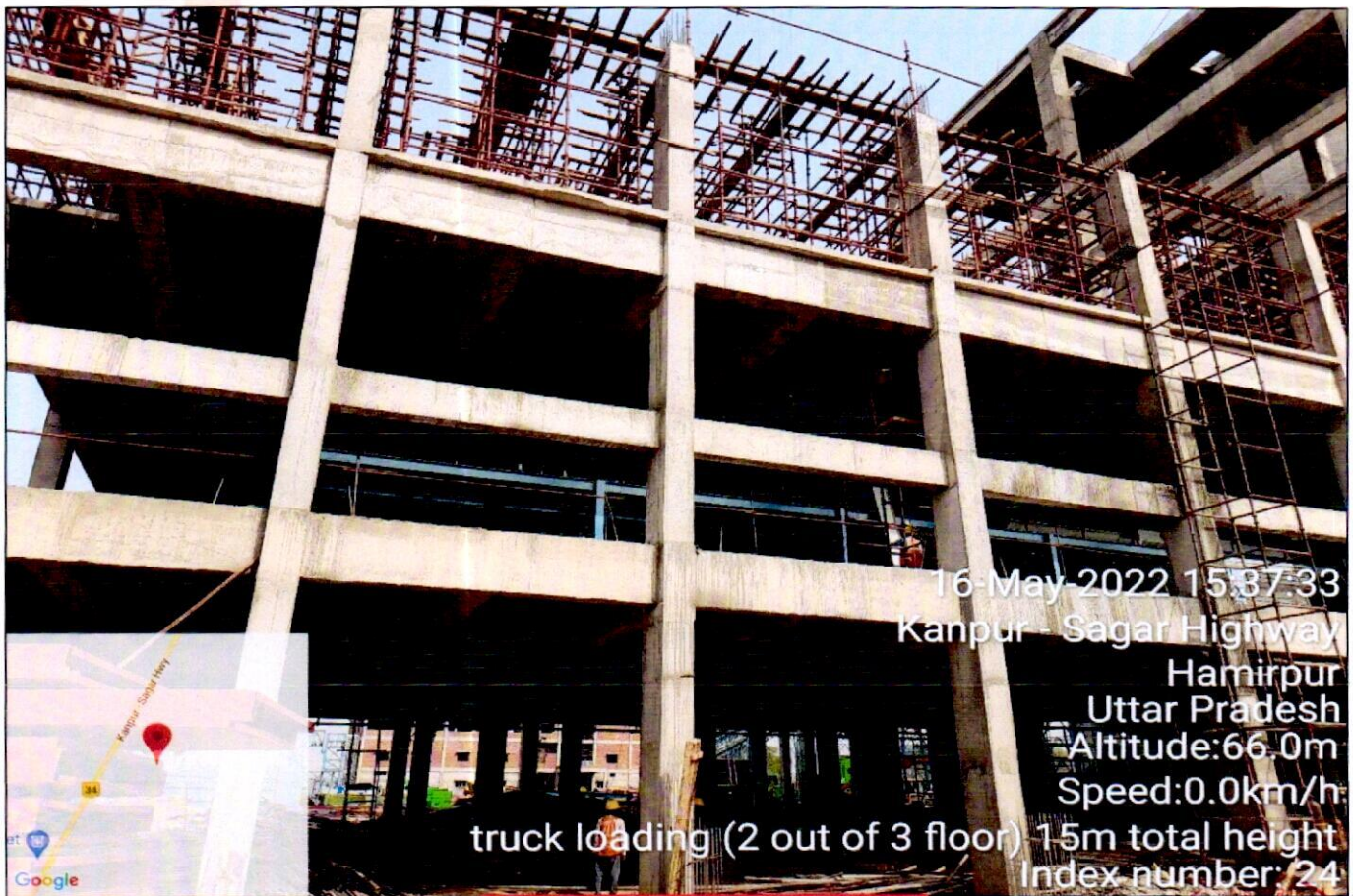
GRINDING UNIT- HAMIRPUR



Cement Silo-1



Bag House & Compressor Building



Packing Plant Building



VRM





Truck Tippler



Additive Shed



Clinker Silo



Cement Mill Building



Dry Fly ash Silo



Machineries Photos at Site-Hamirpur

