



A Study on Key Projects Conceptualised & Commissioned by Heavy Engineering Corporation Limited, Ranchi after the Formation of Jharkhand

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ABSTRACT

Heavy Engineering Corporation Ltd. is a major capital equipment supplier in the steel, mining, railways, power, defense, space research, nuclear, and key industries in our country. It has also completed turn-key projects from conception to completion. HEC was founded in 1958 and has amassed considerable competence in its field since then. HEC is one of India's largest integrated engineering complexes, with a single integration of its assets. It covers an area of approximately 2100,000 sq.m. Steel melting, casting, forging, fabrication, machining, assembling, and testing are all available at HEC. It has its own research and product development department to ensure that products meet the needs of customers. HEC's headquarters are in Ranchi, the capital of the state of Jharkhand in eastern India. In this research, an attempt is made to investigate the spectrum of initiatives conceptualized and implemented by HEC, Ranchi from 2001 onwards.

Introduction:

HEC Ltd. is headquartered in Ranchi, the capital city of Jharkhand in eastern India, and has manufacturing operations there as well. For cost-effectiveness, a well-matched location near customer sites and near ports for importing commodities is an extra advantage. HEC, which was founded largely to enable the indigenous manufacture of steel plant equipment, has played a significant role in the establishment, growth, and modernization of steel plants in India. With time, HEC expanded into other areas and made significant contributions to the development and distribution of import-substitute products. HEC continues to contribute to the nation-building effort after being entrusted with the task of making the country self-sufficient in heavy engineering equipment and services.

HEC Ltd's vision and mission statements are as follows:

Vision: To be India's market leader in heavy engineering, offering high-quality products and services to the steel, mining, railways, and other strategic sectors.

Mission: After modernization/upgradation of plant/facilities, the mission is to achieve a 20% increase in turnover

Board of Directors:

Dr Nalin Shinghal-CMD

Shri Mradul Kumar Saxena-Director(Personnel)

Mrs. Arundati Panda-Director(Finance)

Dr. Rana Subhasis Chakravarty-Director (Marketing) and Director (Production) (Addl. Charge)

Smt. Neelam S Kumar-CCA/ Ministry of Heavy Industries

Sh Jeetendra Singh-Joint Secretary, Ministry of Heavy Industries

Business Areas:

Steel & Metallurgical Plant equipment

Mining & Mineral Processing equipment

Machine Tools

Heavy Castings & Forgings

Defence & Strategic Sector

Objectives:

- 1.To gain a better understanding of the initiatives that HEC has commissioned.
- 2.To gain a better understanding of the projects that HEC developed and commissioned after the creation of Jharkhand in 2000.

Research Methodology:

The information in this study comes from secondary sources. This research used a variety of papers, journals, and websites.

Literature Review:

The mission-oriented character of a project distinguishes project management from corporate general management in theory. When the mission is done, the project organization is usually completed. Project management, according to the Project Management Institute, is the art of directing and coordinating human and material resources throughout the life cycle of a project using modern management techniques to meet predetermined scope, cost, time, quality, and participation satisfaction objectives.

In construction, project management refers to a set of objectives that can be met by carrying out a sequence of operations that are constrained by resources.(Erik, n.d.)

As a result, construction project management functions typically involve the following:

1. Define project objectives and plans, including scope definition, budgeting, scheduling, performance expectations, and project participant selection.
2. Increasing the efficiency of resource usage by procuring labor, materials, and equipment on a predetermined timeline and plan.
3. Coordination and control of numerous activities throughout the process, including planning, design, estimating, contracting, and construction.
4. Establishing effective communication and conflict-resolution processes among the various players.

KEY HEC Ltd., Ranchi HEC undertakes several projects in the core industries from concept to commissioning in diverse sectors such as mining, power, steel, and so on.

Fields of specialization:

- Handling of Materials Plants for Coal Handling
- Coal Washing Plants
- Site selection and feasibility studies
- Process Flow Sheets, Energy and Material Balance are all part of basic engineering.
- Plant and Process Equipment Specifications in Depth
- Plant and equipment manufacturing, erection, testing, and commissioning

Project & features	Capacity	Year of Completion
<p>New Coal Handling Plant, PKG-062 BSP Bhilai Planning, Design, Engineering, Construction, Fabrication, Supply, Erection, Trial run and Commissioning of New Coal Handling Plant on Turnkey basis.</p> <p>Major Items: Wagon Tippler, Side Arm Charger, Belt feeders, Weigh feeders, Electric Pusher Cars(3 Nos.), Stacker cum Reclaimer (5 Nos.), complete utilities etc. Conveyor system up to 1500 TPH capacity of approx. 7.5 km length</p>	1500 TPH	2019
<p>Ore Handling Plant, Part- A, PKG-060 BSP Bhilai Planning, Design, Engineering, Construction, Fabrication, Supply, Erection, Trial run and Commissioning of Ore Handling Plant on Turnkey basis.</p> <p>Major Items: Wagon Tippler, Side Arm Charger, Electric usher Car, Twin Boom Stacker, Bucket Wheel Reclaimer,</p>	1500TPH	2017

complete utilities etc. Conveyor system of 1500 TPH capacity of approx. 5.0 km length.		
Ore Bedding & Blending Plant (OBBP) PKG-090 RSP Rourkela Planning, Design, Engineering, Construction, Fabrication, Supply, Erection, Trial run and Commissioning of Ore Bedding and Blending Plant & Base Blending facilities on Turnkey basis. Major Items: Wagon Tippler, Side Arm Charger, Paddle feeder, Apron feeder, Hammer Crusher, Double Roll Crusher, Screens, Twin Boom Stacker, Bucket Wheel Reclaimer, Blender Reclaimer, Transfer Car, complete utilities etc. Conveyor system of 1500 TPH capacity of approx. 14.0 km length.	1500 TPH	2015
Coal Handling Plant (Ph-II), Nigahi, Northern Coal Fields Ltd. Planning, Design, Engineering, Construction, Fabrication, Supply, Erection, Trial run and Commissioning on Turnkey basis. Major Items: Gyratory Crusher, Apron Feeder, EOT Crane, complete utilities etc. Conveyor system of length approx. 4.0 km 3000T Silo with rapid wagon loading system of 5500 TPH.	1600TPH	2009
Second Launching Pad, ISRO 400 / 60 EOT Crane, 200 / 30 T EOT Crane 10T Tower Crane, FCVRP, SD Clean Room Mobile Launching Pad		2006
Raw Material Handling System, NINL Turnkey: Design to commissioning Hammer Crusher, Feeders & screen, Conveyor (10.5 Km) Up to	100TPH	2001
Coal Preparation Plant, Kedla, Central Coalfields Ltd. Consultancy services for project & detailed engineering, construction, erection & commissioning of washery including CHP Conveyors (4 Km)	650TPH	2001

There are many projects still under execution:

1. RMD/SAIL, Meghahatuburu Iron Ore Mines (MIOM)
2. BCCL- Madhuband Washery at Dhanbad
3. Coal Handling Plant at NCL, Krishnashila
4. Conveyors and Allied Equipment for Second IOSA Reclaiming Stream and Fifth Ore & Flux Stacking Stream of RMHP – RINL

It is also to be noted that Heavy Engineering Corporation Ltd (HEC) in November 2021 bagged a 527-crore project for constructing a coal handling plant on a Turnkey basis at Magadh Open cast project of Cantal Coalfields Limited in Chatra.

Conclusion and Discussion

This study reflects that's a significant number of projects have been conceptualised and executed by HEC Ltd. and many are in the process of being executed by HEC Ltd,since the formation of Jharkhand .Most of the projects executed by HEC Ltd are in coal,mining and steel domain.

Delimitation

The study was only limited to post 2000 due to data constraints Also. Lot of data is picked up directly from the website of the company.

Scope for further Study:

A comparative study before and after 2000 can be done to understand the number and value of projects executed by HEC Ltd.Ranchi

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