

# CUTTING EDGE SOLUTIONS

Engineering, Procurement,  
Construction and more







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# END TO END SOLUTIONS

MBE's ability to execute projects rests in innovation, integrity and focus on the customer. This is what helped the company carve a class for itself. The determination to deliver on-time without compromising on quality is the hallmark. MBE is unique because it brings a lot under one roof; in-house design, detailed engineering, manufacture, procurement, construction and commissioning as well as overall project management.



Copper Concentrator Plant, Konkona Mines, Zambia



Clinker Storage Silo, ACC, Jamul

MBE has successfully completed over 400 projects in many sectors. They span Bulk Material Handling, Mineral Processing, Coal Handling, Coal Washing, Ash Handling, Balance of Plant (BOP) in Power, and a number of projects in Steel, Ferrous & Non-Ferrous Minerals, Port and Shipyard, Cement, Water and Infrastructure sectors.



BOP, MPPGCL, Satpura



By Products Recovery Plant, IISCO, Burnpur

MBE has built in-house capabilities for basic and detailed engineering, project management, supply chain management, manufacturing, quality control, construction, erection, commissioning and after-sales service support including operation and maintenance.

As an expanding global player MBE has made a name for itself among international giants. Absorption of cutting edge technology coupled with a large base of highly experienced engineering professionals have been instrumental to the company's success.



# EMPOWERING TOMORROW

The Power Projects Division Business encompasses following segments

Balance of Plant, Coal Handling Plant, Ash Handling, Water Projects, Solar Power, Substation, Flue Gas Desulphurisation System and Customer Services.



CHP, Ideal Energy



BOP Singareni TPP

## Balance of Plant (BOP)

Excellent execution capability in different areas of BOP in Thermal power stations such as Coal Handling Plant, Ash Handling Systems, Water Management Systems, Piping, Fire Fighting and Protection Systems, Electrical Substation, Switchyard and Power Distribution, Instrumentation and Automation, complete Civil and Structural work. Utilities of around 2000 MW have the composite BOP systems provided by MBE, while more than 8000 MW units have different sub systems supplied by MBE like CHP, AHP etc which are in operation for decades.



Ash Silo, Singareni TPP



Demineralisation Plant, Ideal Energy



Cooling Towers, Singareni TPP

## Landmark BOP Projects

- Complete BOP on EPC basis for Ideal Energy Power Plant (1 x 275 MW)
- Complete BOP on EPC basis for Satpura TPS (2 x 250 MW)
- Complete BOP for the Singareni Collieries TPS (2 x 600 MW)



## Coal Handling Plants (CHP)

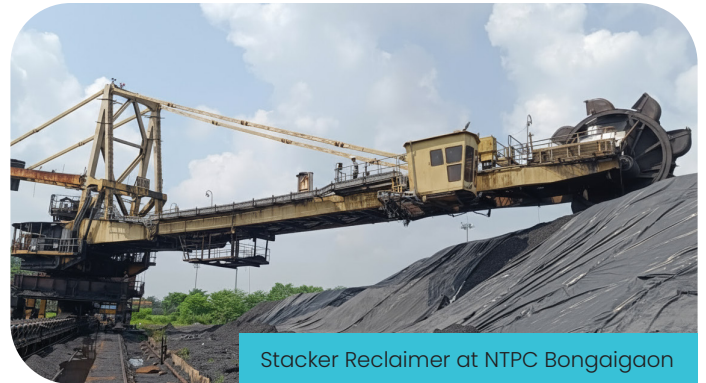
MBE is proud to execute the first cross country Coal Conveying System for the Orissa State Electricity Board, Talcher, and the first indigenously built 5,500 TPH Rapid Loading System with Silo at the Jayant Coal Handling Plant of Northern Coalfields. A pioneer in Coal Handling Plants, having executed over 150 such projects in the last 65 years, MBE has built plants of upto 3000 TPH capacity. Many utilities both run by government and private sectors have equipment and systems by MBE. They have been running satisfactorily for more than 5 decades.

### Landmark CHP Projects

- 2000 TPH Coal Handling Plant for WBPCL Sagardighi TPS Stage-II (2 x 500 MW)
- 3000 TPH Coal Handling Plant for Vedanta Jharsuguda TPS (4 x 600 MW)
- 2000 TPH Coal Handling Plant for NTPC Vindhyachal TPS Stage- V (2 x 500 MW)
- 1600 TPH Coal Handling Plant for NTPC, Ramagundam STPP (1 x 500 MW)
- 1000 TPH Coal Handling Plant for NTPC Bongaigaon (3 x 250MW)



Coal Handling Plant, CESC



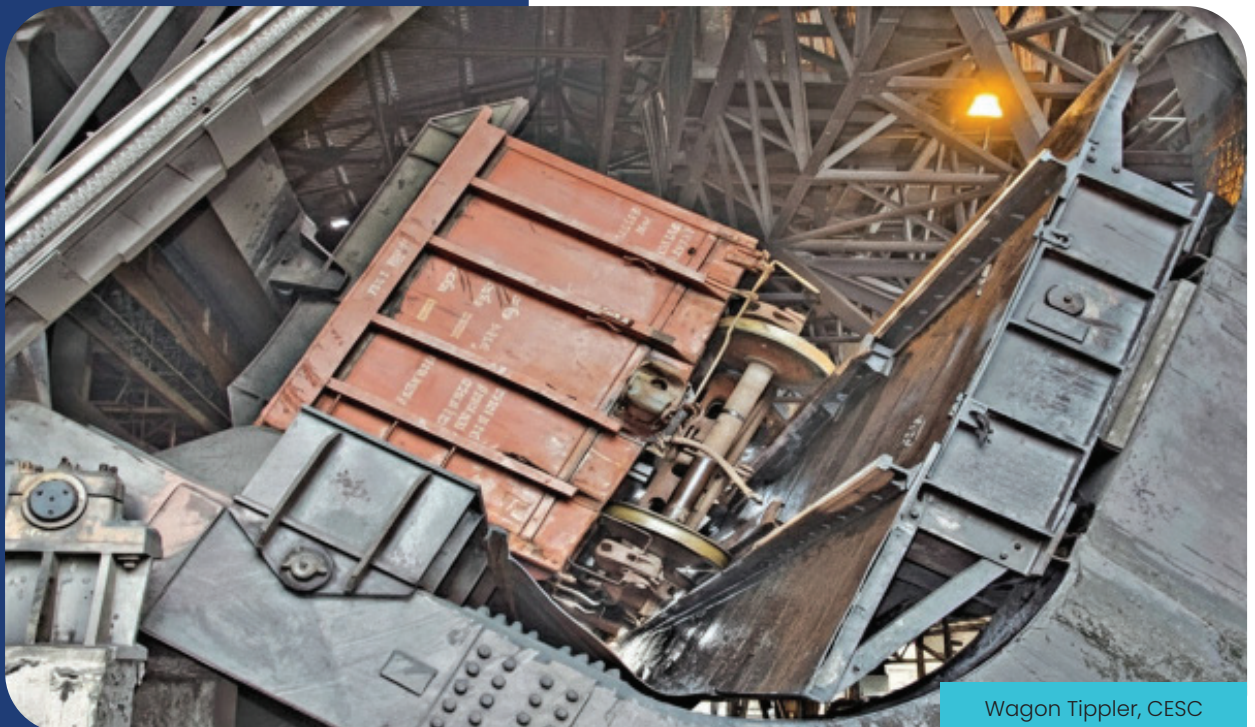
Stacker Reclaimer at NTPC Bongaigaon



CHP with RLS at BAROUD, SECL



MBE supplies almost all the equipment required for CHPs like Wagon Tippler with Side Arm Charger, Track Hopper with Paddle feeder, Long Distance Conveyors (troughed and piped), Stacker Reclaimers, Crushers, Impactors, Screens, Feeders, Travelling Trippers, and Wagon loading with RLS



Wagon Tippler, CESC



## Ash Handling System

MBE forayed into Ash Handling Systems for thermal power stations after acquiring EWB, Hungary, a world leader with a strong presence in Europe and South East Asia. We are considered a leader in handling powdered material using Mechanical, Hydraulic, Pneumatic, Dense Phase and Lean Phase Transport along with storage and unloading. The company offers complete solutions, from concept to commissioning for these projects. One of the preferred vendors for power utility companies and consultants in India, MBE has earned a name through consistent hardwork. The clientele includes **NTPC, BHEL, DVC, Neyveli Lignite Corporation, HPC, NALCO, MSPGCL, CESC, GMDC, Jindal Power, Vedanta Aluminium**. Most of them are our repeat customers which speaks about the Quality, Reliability and Performance of our system.



Transporter Surge Hopper, Rihand 2



Ash Silo, Bhavnagar Energy

## Major Projects

- Complete Ash Handling system for Rihand STPP (2 x 500 MW)
- Complete Ash Handling system including HCSD for Mouda STPP (2 x 660 MW)
- Complete Ash Handling system including HCSD for Kudgi STPP (3 x 800 MW)
- Complete HCSD system for Talwandi Sabo TPS 3 x 660 MW
- Complete Ash Handling system for Lignite based Bhavnagar Energy Power Plant (2 x 250 MW)



Ball Mill for limestone, Bhavnagar Energy

## Flue Gas Desulphurisation

MBE is deeply dedicated to caring for the environment. The company provides different Equipment and System for milling/crushing, conveying of limestone and gypsum.



Ash Transporters under ESP, GMDC, Akrimota





100 MW Grid Connected PV Power Project, at Tadipatri, Anantapuramu District in Andhra Pradesh on EPC Basis



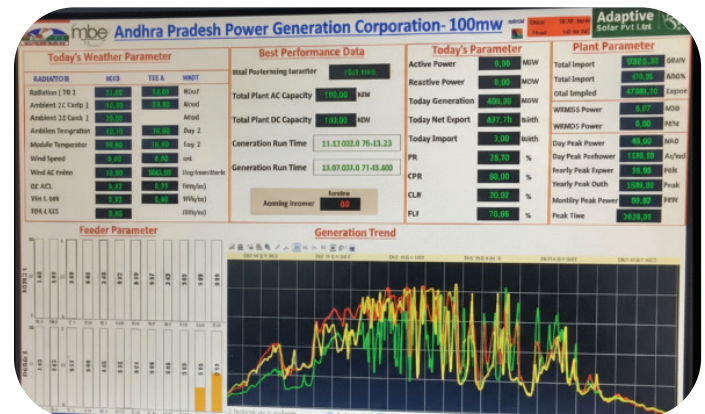
## Substations

McNally Bharat Engineering Company Limited offers for EHV Substations, the entire portfolio of Design, Engineering, Supply, Project Management, Erection, Testing, Commissioning and Maintenance Services. The EHV Substation Business unit is operated by a team of highly experienced professionals with profound experience in both green field and brown field jobs including Civil and Structural work. The division is executing a number of 132kV/220kV/400kV substations in both AIS and GIS versions including railway's feeding substation projects all over India, many of which have already been working satisfactorily after successful commissioning. Many of the substations are equipped with state-of-the-art SCADA system, which have been engineered and developed by MBE's in house engineering team.



## Solar Projects

In line with the government's increased focus on Renewable Energy sector, MBE has built its presence in the sector by providing Solar EPC services for large solar PV projects developed by private players and Government Bodies. MBE provides Design and Engineering, Project Execution, Project Management, Bid Management, Project Feasibility Analysis across large-scale Solar Photovoltaic Power Plants in India.



## These Include

- Project Feasibility Analysis across large-scale Solar Photovoltaic Power Plants
- Design and Plant Engineering
- Project Management and Execution
- Supply of Key Performance Equipment for Solar PV Plant
- Supply of Structures for Fixed Tilt and Tracking Systems
- Complete Civil Works
- O&M Services



## MBE's Experience Includes

- Concept to commissioning of High Voltage Air Insulated Substations (AIS) up to 765 kV and Gas Insulated Substations (GIS) up to 765 kV and Hybrid Substations as per various National and International standards
- Major customers are PGCIL, WBSETCL and major Transmission and Distribution Utilities.
- Complete turnkey solutions for Balance of Plant and Industrial Electrification.



## Water Projects

Over the years MBE has gained knowledge and expertise in building large water projects on turnkey basis comprising design, engineering, construction, supply, mechanical erection, piping, electrical, instrumentation and automation work in various industrial sectors.

MBE's Water projects experience includes large intake comprising Pumping Stations, Construction of Intake Well and Bay, Stop Lock Gates and Penstock Valves, Screens; Water Pre-Treatment Plant comprising Stilling Chamber, Cascade Aerator Basin, Large Clariflocculators, High Rate Solids Contact Clarifiers, Large Chlorination System, Gravity Sand filtration and other tertiary treatments including Demineralization Plant, Ultra Filtration etc.



Clarifier, Ideal Energy



CW Pump, Satpura BOP

MBE provide comprehensive solutions for Total Water Management.

### Raw Water Treatment Systems

- Large Industrial Water Treatment Plant.
- Municipal Water Treatment Plant.
- Drinking Water Treatment Plant.

### Advanced Tertiary Water Treatment Systems

- Sea Water Desalination
- Tertiary Water Treatment Plants with MF/ NF/ UF – RO/ DM – MB/ EDI/ EDR

### Wastewater Treatment Systems

- Conventional Sewage Treatment Plant
- Advanced Sewage Treatment with SBR/ MBBR/ MBR technology
- Large Effluent Treatment Plant

### Water/Sewerage Transmission and Cross-country Piping

- Under Ground Drainage and Cross-country pipelines
- Water Intake, Pumping, Transmission and Distribution Systems
- Elevated/ Ground Level Service Reservoirs (ESR/ GSR)

The impressive client list includes BHEL, DVC, BCCL, HINDALCO, HZL, Ideal Energy, KMC, MPPGCL, NLC, Ahmedabad Municipality, NMDC, NTPC, RUIDP, SAIL, TN Water Board, OTPC, BSES, BCCL.



Aerator, Satpura TPP RO Plant



RO Plant, Ideal Energy





CHP Controlroom, KSK

## Customer Service

MBE is a trusted provider of Operation and Maintenance, Health Study, Retrofitting & Renovation and Modification Services in Power Plants, Refinery, Ports, Steel Plants, Mining, Aluminum Plants and Material handling Systems. Our Operation and Maintenance Services include complete material handling (Ash Handling Systems, Coal Handling Plants, Mill Reject Handling Plants, Coke Handling Plants, etc), Balance of Plant, Boiler and Turbine for Thermal Power Stations. Conveyor systems including equipment for Mining & Raw material Handling Plants, Heavy Stockyard Bulk Cargo Machinery and Port Handling System including Complete Berth.

MBE is executing various comprehensive O&M Contracts all over India. Some of the key projects being executed are the three prestigious comprehensive KPI (Key Performance Indicator) based O&M contracts of CHP, AHP, Coal Washery and BOP. The KPI scope includes coal quality loss, belt utilization factor, preventive maintenance compliance, equipment availability, system availability, spare consumption pattern, various standard documentation, Occupation Health Safety and Statutory Compliance (zero accident), coal unloading (zero demurrage) and coal yard management. MBE's performance in O&M services has earned the trust of customers like DPL, WBPDC, Adani Power Limited, HPCL – Mittal Energy Limited, KSK Energy Ventures Limited, Bajaj Power Limited, MPPGCL, APGENCO, NLC, MSPGCL, CSPGCL, ESSAR Power Limited, Vedanta, JSL, India Bulls, LPGCL, CGPCL and so on.



Wagon Loading, HPCL Mittal Energy



O & M Team at Adani Tiroda



# CEMENT, STEEL, MINING AND PORT BUSINESS

## Steel

MBE has a strong presence in the Steel sector in Material Handling Systems since decades. The company's activity has been further strengthened by strategic tie-ups with global technology providers in packages for Steel Plants like UKR – GIPROMEZ / TPE (Russia), DMT (Germany), Siemens VAI, Austria SMS Meer, Germany and also with Danieli Corus (Netherland) through TPL.

### MBE offers turnkey solutions in the following areas

- Sinter Plant
- Coke Oven By-Product Plant
- Pickling Line and Tandem Cold Rolling Mill
- Rolling Mills
- Stock House for Blast Furnace

MBE has built the largest Sinter Plant in RINL-VSP which is running successfully. Along with DMT, the company has introduced Pollution free Claus Process in Coke Oven By-Product Plant for the first time in India at SAIL-ISP and the plant is operating successfully. MBE has designed inhouse and constructed Pipe Conveyor System for SAIL-RSP.



By Products Recovery, IISCO, Burnpur



Sinter plant III, RINL, Vizag

### Some of the landmark projects completed

- Sinter Plant 3 (408 m<sup>2</sup>) for Rashtriya Ispat Nigam Limited, Visakhapatnam Steel Plant, in association with UKR – GIPROMEZ / TPE (Russia) at Visakhapatnam.
- Coke Oven By-Product Recovery Plant for Battery 11 for SAIL – IISCO in association with DMT, Germany at Burnpur
- Blast Furnace Stock House (BF – 5) for SAIL – Rourkela Steel Plant • Pickling Line and Tandem Cold-Rolling Mill for SAIL– Bokaro Steel Plant in association with Siemens VAI, Austria
- Raw Material Handling System – Ore Handling Plant for SAIL – IISCO at Burnpur
- Inter Plant Transportation facilities for SAIL – Rourkela Steel Plant at Rourkela
- Coal Handling Plant (Coke Oven Battery 6) for SAIL – Rourkela Steel Plant at Rourkela
- Sinter Screening and Conveyor station for Blast Furnace Stock House for SAIL – Durgapur Steel Plant (SAIL –DSP) at Durgapur
- Raw Material Handling System – Ore Handling Plant for SAIL – Durgapur Steel Plant at Durgapur
- Coke Oven By-Product Plant (BPP-3 for COB-11 and BPP-1 for COB-1 to 6) for SAIL-Bhilai Steel Plant with DMT, Germany at Bhilai
- Manufacture, assembly, supply of Technological structures, cross transfer equipment for Universal Rail Mill for SAIL– Bhilai Steel Plant at Bhilai.
- Supply of Plant & Equipment for Coke Oven Plant and By-Product Plant for Bhusan Power & Steel Limited at Rengali, Odisha
- External Water Supply System for B.O.F. and C.C.P. for Expansion of SAIL – IISCO at Burnpur



## Coal and Mining

The company has built the first 6 major Coal Washeries in the country and the first indigenously designed 700 TPH Coal Washery at Sudamdih. With the acquisition of Coal and Mineral Technologies Division of KHD Humboldt Wedag, Germany, MBE possesses state of-the-art Coal Washing Technology for executing Coal Preparation/Washing Plant of any capacity on EPC basis. Cutting edge technology in Iron Ore Beneficiation and Pelletization and expertise for Ore Beneficiation through Gravity Separation Technology as well as Magnetic Separation Process is all in MBE's scope. The company has upgraded several Iron Ore Beneficiation Plants with latest equipment for use as Sinter Grade fines as well as production of Concentrates used for Pelletization Plant. Complete Berth.



Iron Ore Beneficiation, Fomento, Goa



Coal Washery, Sarshethali

### Some of the Coal Washeries built till date

- 1.5 MTPA Coal Washery at Sarsethali, Asansol, West Bengal for CESC Limited, Kolkata
- Fine Coal Treatment Pilot Plant for Central Fuel Research Institute (Dhanbad)
- 100 TPH Coal Washery at Barora Colliery for Bharat Coking Coal Limited (Dhanbad)
- 150 TPH Coal Washery at Mohuda for Bharat Coking Coal Limited (Dhanbad)
- 700 TPH Coal Washery at Sudamdih Colliery for Bharat Coking Coal Limited (Dhanbad)
- MBE is a pioneer in building Coal Handling Plants with Rapid Loading System and has constructed the following Plants with Rapid Loading System
- 5500/6000 TPH Rapid Loading System at Bharatpur for South Eastern Coalfields Limited, Bilaspur
- 5500 TPH Rapid Loading System (twin silo) at Gevra for Western Coalfields Limited, Nagpur (through McNeill and Magor Limited, Kolkata)
- 4500 TPH High Speed Rapid Loading Station with Silo at Jayant Coal Handling Plant for Central Coalfields Limited, Ranchi (now renamed Northern Coalfields Limited, Singrauli)
- Coal Handling Plant with silo loading arrangement at Bharatpur for Mahanadi Coalfields Limited, Sambalpur



CHP & Silos, Bharatpur, Mahanadi Coalfield





Cement Storage Silos, ACC

## Cement

MBE is the only EPC Company in the country to have built a Cement Plant on turnkey basis. The company has a strategic tie-up with KHD Humboldt Wedag, Germany, a globally renowned company for process technology and critical equipment for cement plants. In association with KHD, MBE has built a world class 9000 TPD Cement Plant at Jamul, Chhattisgarh. This has state-of-art technology and is highly appreciated by ACC Group and other cement manufacturers.

### Some of the Coal Washeries built till date

- Detailed Engineering including Process, Mechanical, Civil, Structural, Electrical, Utility, Automation and Instrumentation  
Cement Storage Silos, ACC Pyro Processing Section, ACC 9000
- Supply of major critical equipment like Pyroprocessing Kilns, Raw Mills, Coal Mills, Cooler, Crusher and Stacker/ Reclaimer. In the event the Clinker Grinding Mills are procured by clients directly, MBE can ensure interfacing of the equipment with the plant system including their installation work
- Sourcing of other equipment from reputed suppliers and co-ordination with them for engineering, quality and timely delivery
- Construction including civil and structural work and erection of plant and equipment by in-house construction group
- Overall project management by an experienced project management team for timely completion of project
- Pre-commissioning trials, commissioning and performance guarantee of the plant
- Providing after-sales service including supply of spares and operation and maintenance support



Pyro Processing Section, ACC



9000 TPD cement plant, ACC Jamul





6000 TPH, Stacker Reclaimer, Adani Port Goliath Crane,



Goliath Crane, Mazagaon Dock 15

## Port

MBE has a strong presence in port and shipyard handling equipment, as well as machinery for mines and shipyards.

## Cranes

MBE had collaboration with world famous Kone cranes, Finland supply a number of large cranes used in ports and shipyards. These include Electric Level Luffing Cranes up to 100 T capacity, Goliath Cranes up to 2000 T capacity, Ship Unloaders for coal and iron ore of 2500 TPH free digging capacity, single and twin lift Rubber Tyred Gantry Cranes, Ship to Shore Cranes and so on.

MBE is an indigenous manufacturer of large Goliath Gantry cranes, having supplied the nation's biggest Goliath cranes to major shipyards under Ministry of Defence.

- 300 tonne capacity with 95 meters span and 70 meters lift height at Cochin Shipyard Limited
- 250 tonne with 116 meters span and lift of 60 meters height at Garden Reach Shipbuilding Engineers
- 300 tonne capacity with 138 meters span and 75 meters lift height at Mazagon Dock Limited
- The company also supplied five high capacity Electric Level Luffing Cranes of 25 tonne and 16 tons to Kandla Port Trust and three 45 T cranes to Goa Shipyard Limited. MBE is executing a 80 tonne capacity Level Luffing Tower Type crane for the Indian Navy in Vizag Naval Dockyard. MBE has supplied eight Barge Unloaders of 750 TPH free digging capacity to Mormugaon Port Trust and two 40 T capacity container handling Rail Mounted Quay Cranes (Ship to Shore Cranes) to Haldia Dock.

## Stockyard and Mining Machinery

In collaboration with Poltegor Engineering, Poland, MBE supplied to Neyveli Lignite Corporation (NLC) the following equipment

- Three 3460 cum per hour capacity crawler mounted Bucket Wheel Excavators
- Two 4420 cum per hour capacity crawler mounted Spreader
- Two systems of 1600 mm width conveyor for a total length of 7 km with a conveying capacity of 6000 TPH
- Four 2400 mm width conveyor with 5.2m/sec speed for a total length of 6 km with a conveying capacity of 2000 T per hour

In design collaboration with M/S Poltegor, MBE has supplied more than 50 Stacker Reclaimers in India including 6000 tph Stacker Reclaimers to Adani Port, 4000 tph Stacker reclaimers to Karaikal Port with 48 m boom length and several others to clients like Paradip Port Trust, NTPC, BHEL, ACC, WBPDCL, APSEZL, and Essar Group.



45T Level Luffing crane, Goa Shipyard

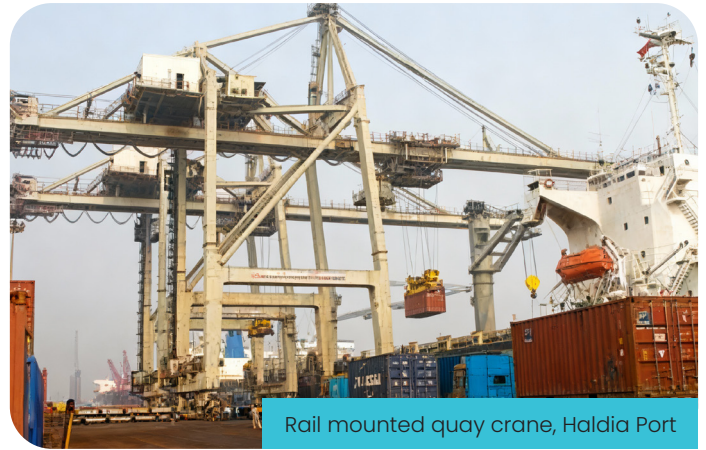


## Wagon Tippers and Paddle Feeders

MBE developed its first Rotaside Wagon Tippler along with side arm charger in 2008 and since then has supplied more than 15 wagon tippler sets to reputed clients like SAIL, ISP, NTPC, Sterlite Group, ACC, WBPDC, BHEL as per RDSO G-33 norms.



Wagon Tippler, Vedanta, Jharsuguda



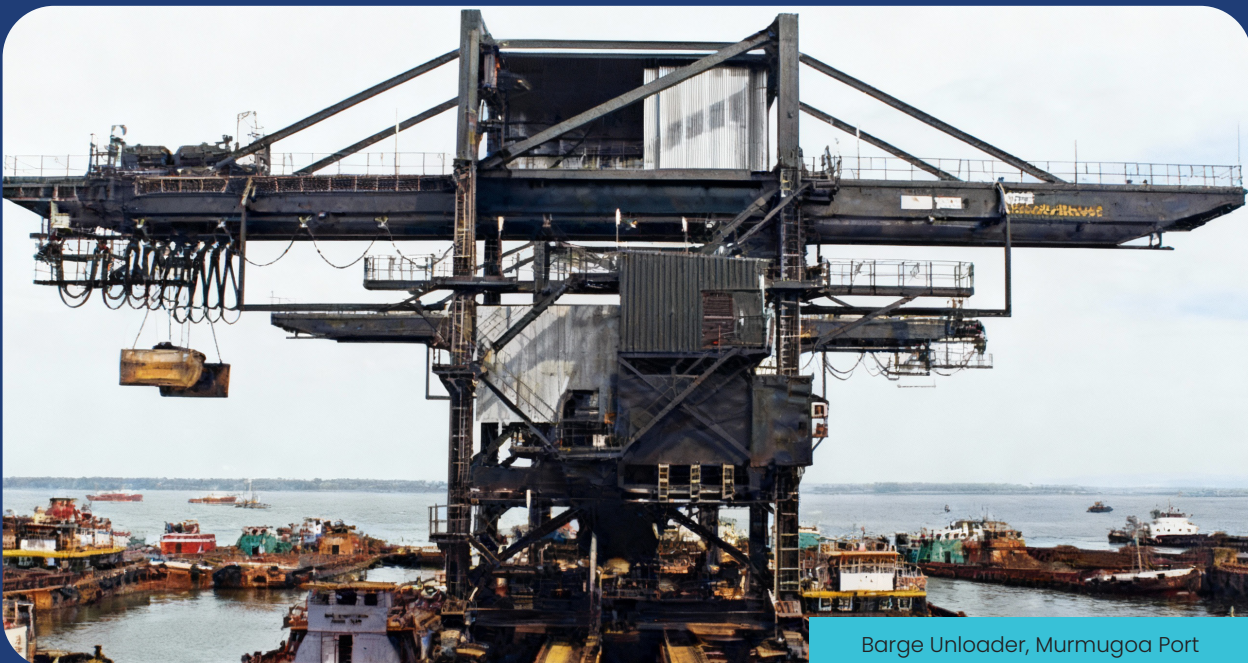
Rail mounted quay crane, Haldia Port

## Complete material handling system in Ports on EPC basis

MBE is capable of undertaking complete mechanization of material handling system on the berth and stackyards in ports including design, supply and erection commissioning of complete material handling facility from loading/ unloading of cargo, conveying the cargo by conveyors either directly to the rapid loading stations/ from wagon tipping stations for loading in trucks or in rakes/ships or stocking into the stackyards by stackers. The company has already supplied such Stacker Reclaimer system along with conveyor package with rapid loading system to Karaikal Port Trust for import of coal.



Bucket Wheel Excavator, Neyveli Lignite



Barge Unloader, Murmugoa Port



# INFRASTRUCTURE PROJECTS

MBE has substantial capability in executing large construction projects, having a capacity for fabrication and erection of over 250,000 MT of structural steel works and erecting over 150,000 MT of equipment annually. In the area of structural concrete MBE has the capability for 500,000 cubic meters concreting and 60,000 MT of reinforcement steel works annually. Construction activities undertaken are not limited to industrial construction but also include high rise buildings (Commercial/Residential/Institutional/Industrial), Sewerage and Drainage, Water supply, Transportation (roads and bridges), WTP, STP, ETP. Over 1000 engineers are engaged in various construction projects supported by a huge task force of contractors to execute projects of any size within contractual completion time with emphasis to safety and quality. MBE owned inventory constitutes construction equipment such as automatic high capacity Batching Plants, concrete pumps including Boom Pumps, Transit Mixers, Hydraulic Piling Rigs, Excavators, Rock breakers, Dumpers, Compactors, Gantry cranes, Tower cranes, Mobile cranes and Hydras. The infrastructure division consists of the following major verticals.

- Industrial Construction
- Building Construction
- Public Health Engineering
- Transportation



ACC Cement Plant Jamul



Structural Works, BPCL, Mahul

## Industrial Construction



ACC Cement Sindri



## Building Construction

Apart from industrial construction MBE has substantial credentials in construction of high rise buildings (Commercial/Residential/Institutional). The building construction credentials is not only limited to civil structural works but also include Electrical, HVAC, BMS, Fire fighting, Sanitary plumbing, Area development work, Finishing works. Presently MBE is exploring the green building, low cost construction technology and will soon implement the same in booming mass housing construction.



Riverdale, Howrah



Active Acres, Ruchi



Tata Consulting Engineers

## Public Health Engineering Sectors

MBE has executed good number of Water Transmission and Distribution and Sewerage Projects for Ahmedabad Municipal Corporation, Tamil Nadu Water Supply and Drainage Board, RUIDP, NTPC, KMC and DVC. MBE has left its mark as a successful implementer of River water intake systems, Pre-treatment plants, Filtration and softening plants, Water treatment plants, Effluent treatment plants and Sewage treatment plants.



Gajol Hilli Road



Effluent Treatment Plant

## Transportation Sectors

MBE forayed into transportation sector through esteemed clients like Delhi Metro Rail Corporation, JUSCO, RVNL, NHAI and State PWDs and bagged valuable credentials in the field of roads, bridges, elevated metro stations and more.



# PROCESS PROJECTS

Non Ferrous Mineral Processing, Oil and Gas, Chemicals and Fertilizers and Aluminium



Mill House & Fine Crushing Building, UCIL

## Non-Ferrous Mineral Processing

MBE is a pioneer in the construction of Mineral Processing Plants in the country. The first indigenously designed and built mineral processing plant in the country, the Fluorspar Beneficiation Plant for GMDC was built by MBE. Most of the major mineral beneficiation plants in the country catering to various minerals like zinc, lead, copper, uranium, iron, fluorspar, gold and rock phosphate were built by MBE.

### Some of the prestigious projects executed

- Lead-Zinc beneficiation Plant for Hindusthan Zinc at SK Mines and Rampura Agucha Mines.
- For Vedanta, Konkola Mine, Zambia, executed a 330 TPH West Mill Concentrator Plant and a East Mill Flotation circuit for copper ore.
- 3000 MT per day crushing, grinding and thickening plant of uranium ore for UCIL, Tummalapalle, Andhra Pradesh.
- Mine Pastefill and Hydrofill plants at SK Mines
- 2.7 MTPA Lead-Zinc Beneficiation Plant at Zawar Mines for HZL.



Mills, HZL, Rampura Agucha



VEDANTA, Konkona Mines, Zambia, Copper Concentrator



## Oil and Gas Sector

MBE has forayed into this sector and has executed the following projects

- Civil and Structural work for CDU-4 Project at BPCL, Mahul Refinery
- Mechanical works for offsite 1 for Brahmaputra Cracker and Polymer Limited at Lapetkata, Assam

The Petcoke Handling System under execution on turnkey basis as part of upgradation project of Chennai Petroleum Corporation Limited includes Pipe conveyor and Trough conveyor with Circular Stocker Reclaimer having dome shaped circular stock pile.



Offsite Pipework, Brahmaputra Refinery

## Aluminium

In the Aluminium sector MBE has been involved in the Smelter and Refinery section in association with international technology providers. In the refinery, the company executes complete turnkey projects for Bauxite Grinding and Storage System, Evaporation Package for Aluminate liquor concentration and Red Mud Thickening and Disposal Systems. In the Smelter, MBE executes on turnkey basis Pre Baked Green Anode Plant (GAP), Carbon Recycling (Butt Handling), Bath Processing with Autogenous Mill, Anode storage, Baking Furnace, Fume Treatment plant for Baking Furnace and Rodding shop.

The company offers Alumina unloading and storage system, Gas Treatment Centre for Pot line and Hyper Dense Phase System for Pot Feeding. MBE has built the largest number of Anode Paste and Prebaked Green Anode Plants in India. Carbon Paste Plants have been built for INDAL in Hirakud and Belgum, BALCO in Korba and NALCO in Angul.

Green Anode Plants have been built for NALCO in Angul, BALCO in Korba, Vedanta in Orissa. The 35 TPH capacity Green Anode Plant in Korba has been built by MBE in 19 months, which is a world record for early completion. Some of the other projects executed are

- Evaporation Plants for Alumina Refinery for NALCO, Damanjodi and Utkal Alumina, Rayagada
- Hyper Dense Phase System for NALCO, Angul and Indal, Hirakud
- 80,000 TPY Carbon Recycling System and 97,500 TPY Bath Handling System for NALCO, Angul



NALCO, Damanjodi, Evaporation Plant



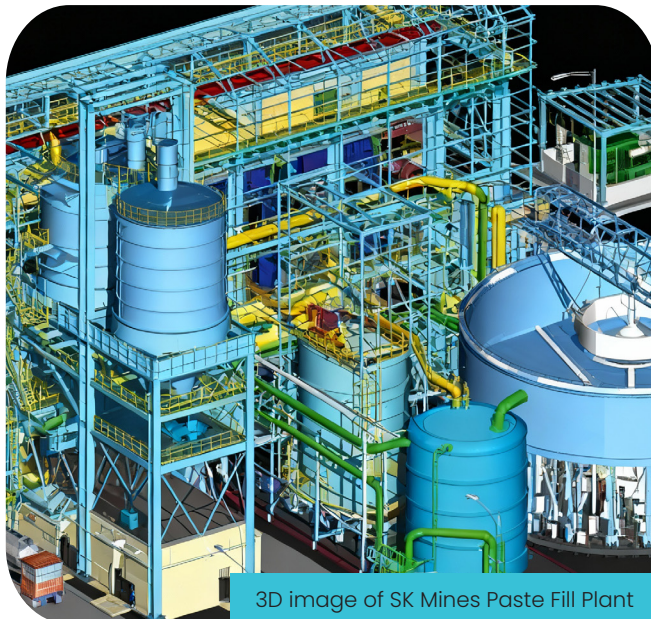
VEDANTA, Green Anode Plant

## Design Engineering capability

Engineering is the core strength of McNally Bharat and we consider engineering as the key function which ensures flawless execution of EPC projects as well as continuous development of the existing systems and equipment. The engineering department is centralized to ensure proper utilization of the manpower as well as to enrich the vast knowledge and experience gathered over the years by sharing among designers with versatile perspectives. The engineering capability of MBE has been recognised due to following factors

- Enriched in-house engineering setup.
- MBE is equipped with the latest engineering software
- Vast experience and knowledge pool for setting up large plants across various Industries.
- Access to state-of-the-art technology through strategic alliance and collaboration.
- Closely associated with reputed design firms and R&D organizations for critical analysis of developmental products or system.

The in-house engineering department is capable of carrying out both Basic and Detail Engineering of EPC projects from scratch. MBE also provides engineering support for developing the system parameters and criteria to satisfy requirement of end users.



The Centralized engineering department has the following disciplines

- Process and Mechanical
- Piping and Utility
- Electrical
- Instrumentation and Automation
- Civil
- Structural

## Project Management

Project management is planned through ERP (Oracle) system after an order is received by the company. Project milestones, plan and execution strategy are finalised based on project requirement and objectives which are further developed including preparation of

- Execution plan in project scheduling software like MS Project and Primavera covering
- Engineering plan and Document Control System
- Ordering package and Procurement schedule
- Area-wise construction plan
- Cost budget
- Revenue budget
- Cash flow budget

## Quality Management Systems

MBE is dedicated to delivering high-quality products and services that consistently meet or exceed customer expectations. Our Quality Management System (QMS) focuses on continuous improvement and total customer satisfaction, ensuring all quality aspects are met through to the final handover of products that fulfil both stated and implied requirements.

MBE's Management System is supported by internationally recognized certifications:

- ISO 9001 – Quality Management System
- ISO 14001 – Environmental Management System
- ISO 45001 – Occupational Health and Safety Management System

Most QA/QC engineers are certified internal auditors for QMS standards. Quality Assurance and Control

- A team of qualified QA engineers operates across the head office and project sites to ensure effective QA/QC implementation.
- QA Engineers are well-versed in major national and international codes and standards, including IS, BS, ASME, ASTM, AWS, ISO, EN, and DIN, as per customer requirements.
- QA engineers are certified in various Non-Destructive Testing (NDT) methods—RT, UT, MT, VT, and PT—in accordance with ASNT/ISNT guidelines.
- MBE operates an in-house NABL-accredited NDT Laboratory in Kolkata, compliant with ISO/IEC 17025:2005 standards.
- To handle large inspection volumes, MBE collaborates with reputed Third-Party Inspection Agencies such as Bureau Veritas (BV), Lloyd's Register, TÜV, and IRS.
- MBE's extensive range of measuring and testing equipment is calibrated with national and international traceability.





## Occupational Health and Safety

McNally Bharat Engineering Company Limited carries out operations in a manner that provides a safe and healthy workplace for all employees, stakeholders,



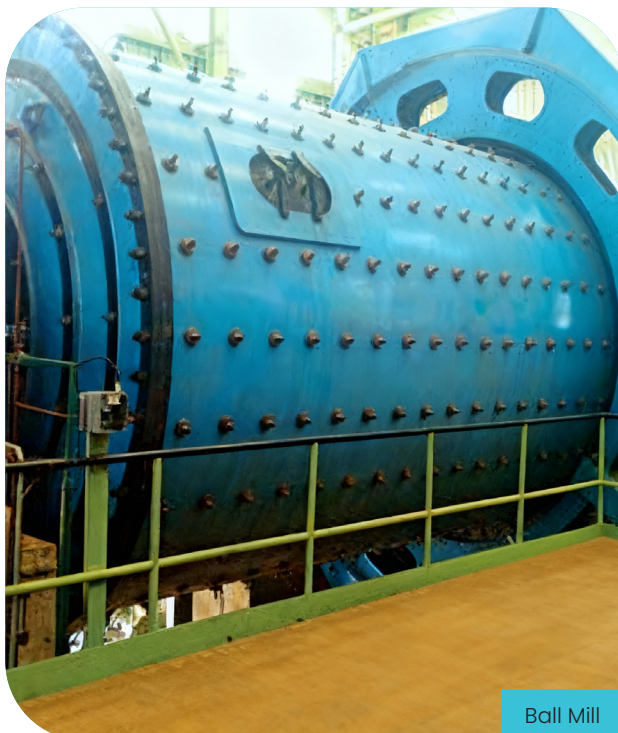


The company has built the first 6 major Coal Washeries in the country and the first indigenously designed 700 TPH Coal Washery at Sudamdih. With the acquisition of Coal and Mineral Technologies Division of KHD Humboldt Wedag, Germany, MBE possesses state of-the-art Coal Washing Technology for executing Coal Preparation/Washing Plant of any capacity on EPC basis. Cutting edge technology in Iron Ore Beneficiation and Pelletization and expertise for Ore Beneficiation through Gravity Separation Technology as well as Magnetic Separation Process is all in MBE's scope. The company has upgraded several Iron Ore Beneficiation Plants with latest equipment for use as Sinter Grade fines as well as production of Concentrates used for Pelletization Plant. Complete Berth.

# PRODUCT RANGE

## Grinding Mills

MSEL designs and manufactures Grinding Mills for any material and any required capacity. Our manufacturing range includes Ball, Rod and Vibrating Tube Mills. These mills are manufactured, based on in-house design and knowhow.



Ball Mill

## Feeding Equipment

MSEL is a leading manufacturer of Feeders. The manufacturing range includes

- Paddle Feeder
- Apron Feeder
- Reciprocating Feeder
- Vibratory Feeder
- Disc Feeder
- Grizzly Feeder
- Belt Feeder



Travelling Tripper



Paddle Feeder



Apron Feeder



## Material Handling Equipment

MBE is one of the foremost companies in the material handling sector, with a wide product range backed by world class technology. Our product range includes

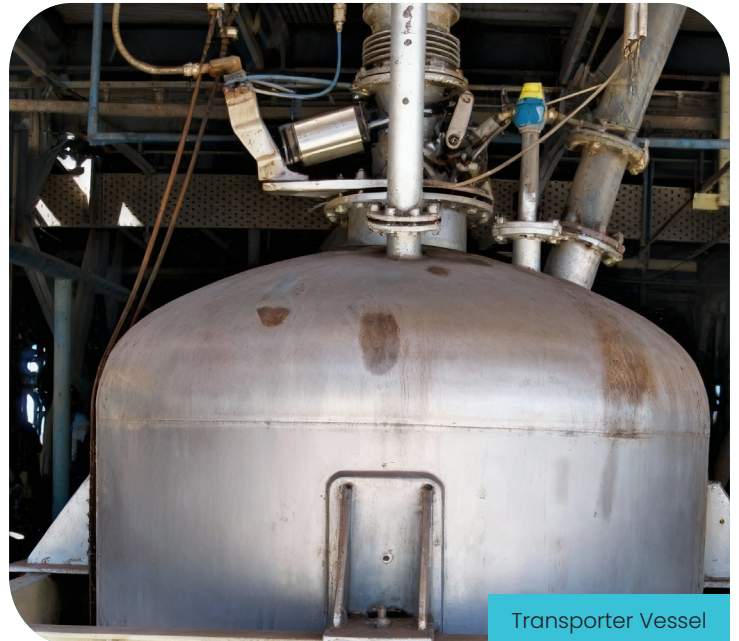
- Wagon Tippler
- Side Arm Charger
- Stacker Reclaimer
- Bucket Elevator
- Tripper
- Belt Conveyors and components
- Screw Conveyor
- Gravity Roller Conveyor
- Powered Roller Conveyor
- EOT crane



Waggon Tippler

## Ash Handling Equipment

MSEL manufactures a wide range of Ash Handling Equipment, Transporter Vessels, Air Receivers, Clinker Crusher, Mixer, Scraper Chain Conveyor, Special Valves, Screw Conveyors, Air Slide Conveyor and Bag Filters.



Transporter Vessel

# MBE COAL AND MINERAL TECHNOLOGY HOLDING GmbH

MBE Coal and Mineral Technology (The Coal & Mineral Division of erstwhile KHD Humboldt Wedag India Private Limited) is known globally for its cutting-edge technology.

The name has gained prominence for over 155 years in the Coal and Mineral beneficiation sector. After having enjoyed worldwide success, KHD Humboldt Wedag forecast the increasing demand of washed coal in India and an Indian subsidiary was formed in 1967 with headquarters in Kolkata. Soon after its formation, the subsidiary became one of the big names in the country serving almost all the big corporates in various sectors like Cement, Steel, Power Plants, Sponge Iron, Mine developers and Coal traders



In the year 2009 McNally Bharat Engineering Company Limited acquired the Coal and Mineral Division of the then KHD Humboldt Wedag globally and in the process, took over the entire Coal and Mineral division across the globe.

Since its inception MBE Coal and Mineral Technology has been associated with setting up the majority of Coal Washeries and Mineral beneficiation plants in the country. With the technical backup of MBE Coal & Mineral Technology GmbH, it is also one of the few organizations in the world who have the expertise in both the proven technologies of beneficiation: Jigging & Heavy Media Process.

The company manufactures and markets world leading equipment like BATAC® Jig, ROMJIG®, Pneumatic Flotation (PNEUFLOT®), PALLA® Vibrating Mill, JONES® WHIMS, USL®, USK®&VSL® Vibrating Screens, VBL® Vibrating Feeders and Crushers. German engineering supported by a strong R&D unit together with indigenous manufacturing facility gives the client a winning combination for their projects.



Coal deshaling plant, NCL Bina



Iron Ore Beneficiation Plant, MSPL Hospet

## Skills and competence

- Coal Preparation/ Washery Plant
- Beneficiation of other ores viz. iron ore, manganese, chrome, phosphate
- Raw Material Screening and Crushing Plant
- Recovery of metals from Ferro Chrome Slag and un-burnt coal from char produced in kilns
- Dewatering of Effluent, Sludge, Waste water,
- Pharmaceuticals, Food and Beverage
- Coal char beneficiation
- R&D and pilot scale testing for developing flow sheet for coal and mineral beneficiation



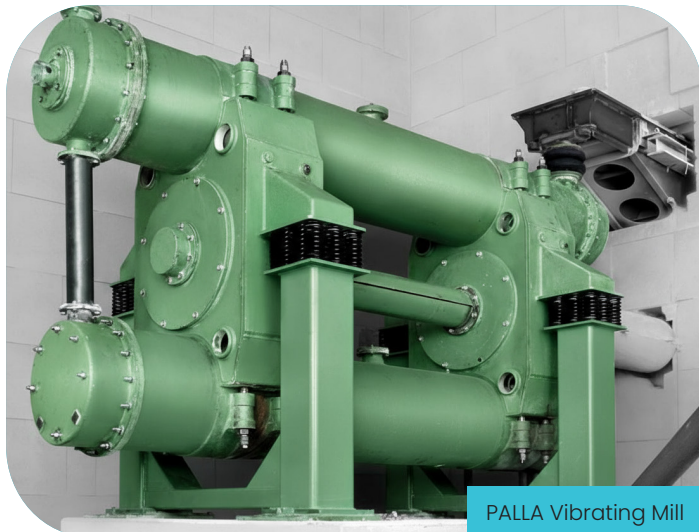
Permos (MIMS)

MBE-CMT has a well-equipped, modern production unit at Kharagpur, to manufacture their proprietary processing equipment.



## Scope of services

- Basic and Detail Engineering
- Manufacturing and Supply of Process equipment
- Installation and Commissioning/Supervision of Erection and Commissioning
- Project Management and Monitoring
- Refurbishing/Upgradation of existing beneficiation plants
- After Sales and Service
- Plant Operation and Maintenance
- Annual Maintenance Contracts







Balance of Plant, Singareni TPP (2 x 600 MW)

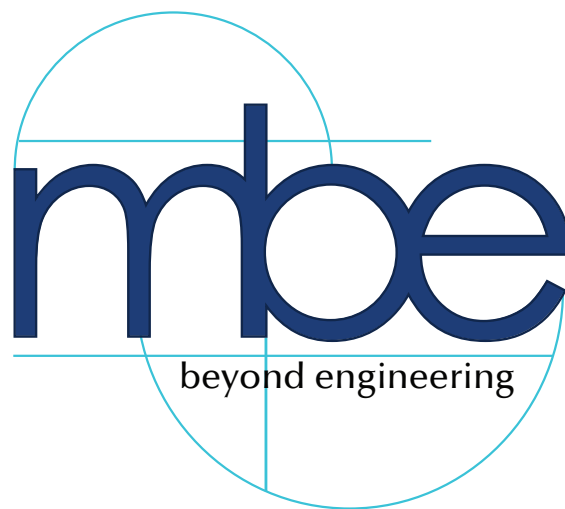


9000 TPD Cement Plant, ACC, Jamul









## **McNally Bharat Engineering Company Limited**

### **Registered & Corporate Office**

Ecospace Business Park Campus 2B 11F/12 New Town Rajarhat  
North 24 Parganas Kolkata 700 160 India  
T: +91 33 68311001/+91 33 68311212  
✉ [mbe.corp@mbecl.co.in](mailto:mbe.corp@mbecl.co.in) | [mcnallybharat.com](http://mcnallybharat.com)

### **Partner Companies**

#### **MBE Coal and Minerals Technology Holding GmbH**

T: +49 2241 8455118 M: +49 1577 7206839  
✉ [sales1@mbe-cmt.com](mailto:sales1@mbe-cmt.com); [inquiry@mbe-cmt.com](mailto:inquiry@mbe-cmt.com)  
Industriestr. 41a, 53721 Siegburg, Germany  
🌐 [www.mbe-cmt.com](http://www.mbe-cmt.com)

#### **MBE EWB kft**

Budapest H-1132 Victor Hugo u.18-22 Budapest Hungary  
T/F: +36 1 3496141 / 3497980 / 3506500  
✉ [center@ewb.hu](mailto:center@ewb.hu) | [ewb.hu](http://ewb.hu)