

# Mining & Bulk Material Handling Solutions



# ABOUT US

MCI Group, established as a key player in the mining and bulk material handling sectors, has steadily built its reputation on professionalism and consistent performance. Supported by a strong team with decades of extensive industry knowledge, we specialize in delivering reliable mining and bulk material handling solutions with an expertise in the mining engineering. Our emphasis on precision engineering and client satisfaction underscores our commitment to excellence. Trust MCI for technological, efficient solutions tailored to your operational needs.

### **About MCI Group:**

Since 1962, we've grown from modest mining beginnings to a global authority in open-cast mining and heavy machinery refurbishment. Initially handling earthworks and construction, MCI now excels in open-pit coal mining and has four decades of specialization in this field. We've become experts in modernizing and refurbishing heavy open-pit mining and material handling equipment, providing cost-effective and time-saving solutions. As a result, MCI is a leading supplier of expertly refurbished mining equipment.

Our reputation in mining consulting and engineering services is built on a rich history. We offer everything from feasibility studies to custom solutions, ensuring efficient operations and meticulous supervision of machinery and plant installation and maintenance. Our project and quality management services support various mining operations, quarries, and port facilities.

MCI is expanding into designing and fabricating new mining and bulk material handling equipment, led by our team of highly experienced engineers. Our promise is to consistently deliver high-quality products and services, equipping clients with sophisticated equipment and spare parts for optimal mining operations. We're a one-stop solution for all mining needs, known for our expansive experience and unmatched competence. Trust MCI for all ambitious projects, providing everything from a single source.

### Advanced Keyturn Solutions for the following areas:

- Openpit Mining
- Stockyard and Material Handling
- Port Handling
- Fertilizers
- Cement Industry
- Power Plants



# OUR EXPERTISE

### **Openpit Mining Technology**

- IPCC In-pit Crushing System
- Bucket Wheel Excavator
- Belt Wagon
- Mobile Spreader
- Mass Distribution System
- Mobile Conveyor Bridge
- Conveyor System
- Crushing

### Refurbishments and Revamps

- Machinery inspection and concept development
- Dismantling, reconditioning and paint coating of machines.
- Mechanical refurbishment
- Hydraulic and Lubrication Revamps and upgrades
- Delivery and transport logistic
- Electrical, software and safety standards refurbishment
- · Assembly, installation and commissioning

### **Port Handling Solutions**

- Shiploader
- Feeding Conveyor
- Dedusting System

### **Automation Technology**

• In-House designed Automation Solutions



### Stockyard & Bulk Material Handling Systems

- Stacker
- Bucket Wheel Reclaimer
- Portal Reclaimer
- Bridge Type reclaimer
- Stacker-Reclaimer
- Full Automation

### **Spare Part Services**

- Electrical and automation parts
- Customer-friendly optimized spare part management concepts
- Recommendations for strategic spare parts storage
- Various mechanical spare and wear parts and full components
- Manufacturing and delivery of spare and wear parts
- Vendor-Independent spare part service

#### **Services**

- Installation, Assembly, Commissioning Service
- Dismantling and relocations
- Project site- and Technical Camp Management
- Training of Operators
- Maintenance Service
- Operation Service

### Mining Engineering

- Consultation
- Pre Project-Planning and Pre-Feasibility Study
- Front End Engineering
- Conceptual Planning
- · Revamping of Mining Machinery



### **OPEN-PIT**

### MINING TECHNOLOGY

In the area of openpit mining technology, MCI offers an impressive selection of various machines and systems, such as bucket wheel excavators for extraction of mineral resources like lignite, hard coal, overburden, sand, marl, etc. Opencast mining is a mining technique of extracting minerals from the near-surface layer of earth, these raw materials can be then used for further processing, for example, in production of metals or building materials.

Our product portfolio ranges from excavators to crushers, belt conveyors, and subsequent mobile stacking technologies until complete IPCC Systems.

At MCI, our products are backed by a team of industry-leading experts and forged through partnerships with renowned fabricators.

We are unwavering in our commitment to delivering products of the highest caliber, ensuring reliability and performance with every use. Driven by a passion for excellence, every machine and system we offer is a testament to our dedication to quality and the trust our clients place in us.

- IPCC In-pit Crushing System
- Bucket Wheel Excavator
- Belt Wagon
- Mobile Spreader
- Mass Distribution System
- Mobile Conveyor Bridge
- Bulk Conveyor System
- Crushing
- Full Automation









# PERFORMANCE TAKES SHAPE IN THIS MOMENT

## **BULK MATERIAL**

# HANDLING SYSTEMS

In a world where bulk material management defines the pace of industry, your stockyard can be at the forefront of technology.

The management and distribution of diverse bulk materials are essential operations within the logistics chains of the bulk material management sector. To achieve excellence and streamlined operations, these storage areas thrive when enhanced with cutting-edge machinery.

At MCI, we always offer customized, future-oriented solutions tailored to elevate your operations.

From stackers and reclaimers to conveyor systems and beyond, our products are designed with tomorrow's technological advancements in mind. Our expertise in Port Handling Systems, like Shiploaders, coupled with our capability to fully integrate automation, means that with us, you're always a step ahead.

Our advanced suite of stockyard and port equipment, includes conveying systems, a variety of stackers, reclaimers, shiploaders and bucket wheel devices. Let's shape the future of bulk material management together.

### Stockyard & Bulk Material Handling Solutions

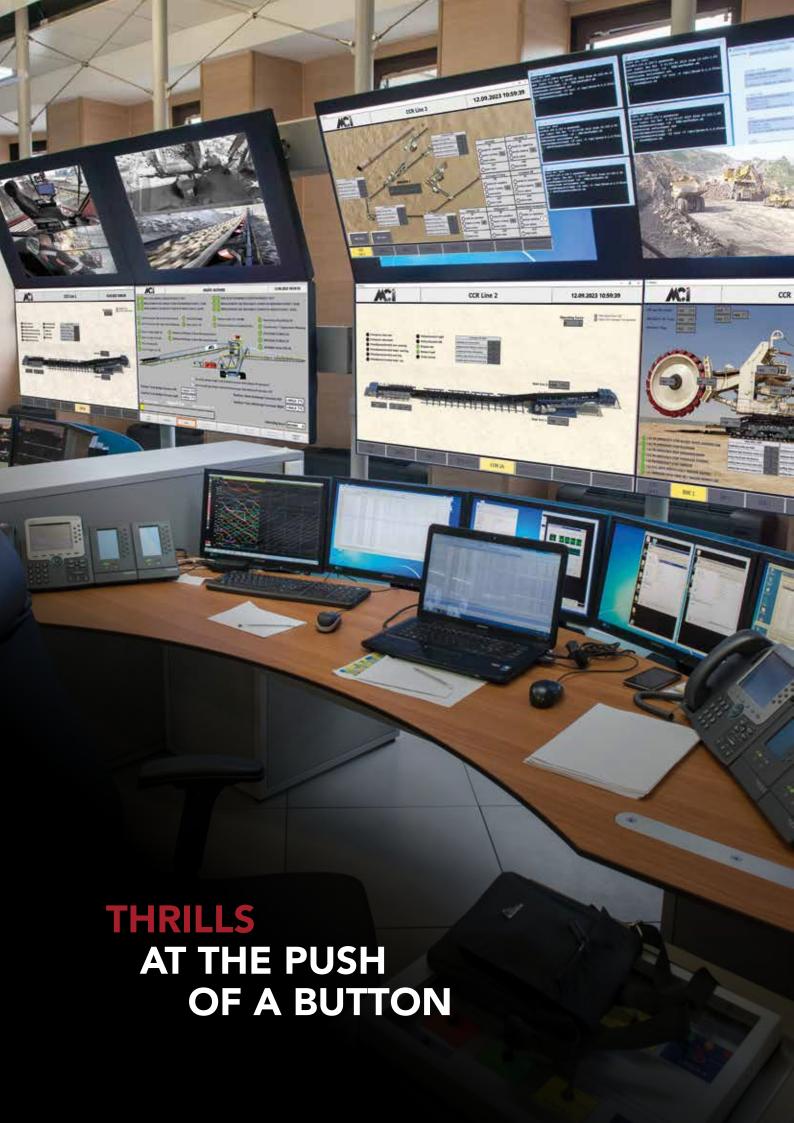
- Stacker
- Bucket Wheel Reclaimer
- Portal Reclaimer
- Bridge Type reclaimer
- Stacker-Reclaimer
- Bulk Conveyor Systems

## Port Handling Solutions

- Mobile Shiploader
- Stationary Shiploader
- Versatile Shiploader
- Feeding Conveyor
- Dedusting System







# INTRODUCING THE FUTURE OF MINING & BULK MATERIAL HANDLING:

### ADVANCED AUTOMATION SOLUTIONS

Step into the future with our cutting-edge automation services tailored for mining, industrial, and bulk material handling equipment. We specialize in harmonizing your operations with the gold standards of automation such as Siemens, Rockwell, and B&R.

### **Empower Your Operations with Advanced Automation**

- 1. Elevated Performance & Efficiency: Streamline your operations for maximum output with minimal input through state-of-the-art HMI designs.
- 2. Cost Optimization: Significant reduction in operational costs, with a quicker ROI.
- Enhanced Safety Protocols: With a dedicated CCR, monitor every aspect of your operations ensuring risks are minimized.
- 4. Sustainable Operations: Experience better fuel efficiency contributing to a greener planet.
- **5. Maximized Productivity:** With reduced unscheduled maintenance, keep your operations running seamlessly.
- **6. Improved Working Environment:** Happy workers are efficient workers. Reduced driver fatigue and attrition means enhanced job satisfaction.
- 7. Optimal Vehicle Utilization: Get the most out of your fleet with our advanced algorithms.

### Features & Benefits:

- Turnkey Control Systems with Advanced HMI: Fully automated control systems with intuitive Human Machine Interfaces designed for mining machines, industrial operations, and port facilities.
- Centralized Oversight from the CCR: Monitor and manage all aspects of your operations from the heart of your enterprise the Central Control Room.
- Intuitive Fault Detection: Swiftly identify and analyze any operational anomalies for prompt rectification.
- Real-time Monitoring: Stay informed with autonomous monitoring of the operational status round-the-clock.
- Beyond Boundaries with Teleoperation: Remote control and comprehensive monitoring ensure you're always in command, irrespective of your location.
- **User-Centric Design:** Interfaces crafted with the user in mind, ensuring ease of use and optimized performance.
- Thorough Start-Up & Testing: We don't just implement; we test rigorously with start-up controls and signal tests to ensure flawless performance.
- And Much More: Our solutions are vast and ever-evolving. Connect with us to discover the full spectrum of what we offer.



# REFURBISHMENTS & REVAMPS

MCI is the leading equipment supplier of used and fully refurbished heavy mining and port machinery like Bucket Wheel Excavators, Beltwagon-, Spreaderand Conveyor Systems, Stackers, Ship-loaders and -unloaders etc. for over 25 years.

We are and professional service provider from one-ofrepairs to complete key-turn projects. From refurbishment in all technical demands to the complete modernization of the facility MCI has positioned itself as a leading supplier in this field of expertise with already more than 30 refurbished and sold machines of this scale.

By nearly halving the costs and delivery time with the same performance compared to new machines, the demand for overhauled heavy machinery at our company has risen sharply in recent years.

- Machine inspection and expert opinions
- Concept development for refurbishment, transport, assembly and commissioning
- Refurbishment and repair of mechanical and technical components
- Installation of new wear parts on the whole machinery Planning and installation of new electrical system on the whole machinery or facility
- Replacement and repair of hydraulic and lubrication system and components
- Sandblasting and painting
- New automation equipment installation and software programming
- Modernization of the facility to meet today's technical and safety standards
- Transport Logistic via as ocean-, airfreight, rail or truck Spare parts supply





Dismantling, reconditioning and paint coating



Mechanical Refurbishment



Revamps and Upgrades



Delivery and transport logistic



Electrical, software and safety standards refurbishment



Assembly, installation and commissioning



# **SERVICES**

Based on more than 20 years of experience, MCl has maximum competence in supervision and execution of installation / assembly and disassembly work and carry out commissioning engineering work of mining machines and complete plants. Maintenance, repairs and spare parts supply are included in our service portfolio to designed to minimize downtimes. From delivery, assembly and commissioning to machine handover, we ensure that quality standards are met and a guarantee can be ensured.

Fault analysis as well as performance improvements in the electrical, software and mechanical systems are detected by us and specic corrective measures are put on the table.

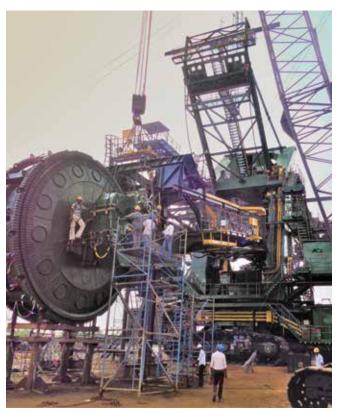
We guide mining and port facilities through their entire lifecycle to maintain function and maximize lifetime.











# 360° SERVICE

#### **Maintenance Services**

- Full time maintenance
- Minimizing downtimes and which turn in lower maintenance costs
- Performance scheduling maintenance, field support by MCI technicians
- Creation of maintenance costs
- Recording of maintenance measures completed

### Installation, Assembly, Commissioning Service

- Detailed planning of assembly and reconstruction measures based on proved technologies, or implementation of new technologies
- Supervision of assembly preparation and execution with, knowledgeable and experienced staff.
- Commissioning, ramp up and performance testing of machines and full facilities
- Relocation of single machines and complete facilities
- Revamping of Mining Machinery like capacity upgrades
- Project site- and technical camp management support and full service
- Quality management and assurance of assembly process with necessary documentation
- Guarantee of meeting the international safety and quality standards, as well as delivery dates.
- Professional dismantling and decommissioning



**SOLUTION WITH A PURPOSE** 



### Spare parts

We offer worldwide, comprehensive spare and wear parts management for opencast mining plants and machines, conveyor systems, crushing and milling plants and storage facilities. More on page 17









#### **Automation**

- Developing of concepts for automatic operation of mining and material handling systems
- Programming of customized control software
- Fault detection and analysis in operation and service
- Installation of advanced control systems for automatic operation
- Teleoperation-Service
- Remote control access to control software and equipment
- Start-up of controls and signal tests

### **Operation Service**

- Operational Management of opencast mining and quarrying facilities
- Operation of single heavy mining machines up to complete facilities
- Planning and consulting for mining and sequences from front to end

### **Training of Operators**

- Preparation of specific training programs in compliance with client needs
- Skilled training and instruction of operators and maintenance personnel
- In-depth theoretical and practical training sessions with various necessary training documents
- Training by highly qualified instructors



# SPARE PARTS

To maintain the operation optimized running, it is necessary to be equipped with the most strategic and common spare and wear parts. MCl is partner in supplying various spare parts for opencast mining and port facilities for various equipment like Bucket Wheel Excavators, Stackers, Conveyors, Crushers and Mills, Ship-loaders or -unloaders, etc. With a customer friendly service support and short delivery times we supply several kinds of electrical and mechanical parts and components with European quality.

### All kind of spare parts

- Slew bearings
- Gearboxes
- Bearings
- Pulleys
- Idlerss
- Conveyor Belts
- Belt-Cleaners
- E-Motors
- Electrical parts and systems
- Automation PLC, HMI
- Cables
- and much more

### **Optimized Spare Parts Strategy and Support**

- Customer-friendly optimized spare part management concepts
- Recommendations for strategic spare parts storage
- Various mechanical spare and wear parts and full components
- Manufacturing and delivery of spare and wear parts
- Vendor-Independent spare part service









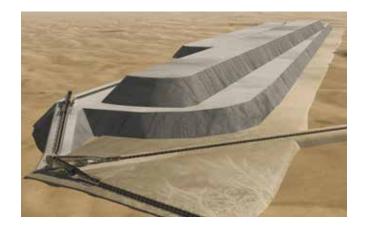


# MINING ENGINEERING

In order to make a mining operation successful and economical, you need a competent partner with the appropriate know-how.

MCI offers complete consulting, engineering and planning services for mining operations, plants and quarries. Whether you are increasing your existing production flow or starting from starch with the opening of a new mine operation, our engineers provide the full expertise in consultation the most economic approach. From feasibility studies to equipment dimensioning and 3D modelling we provide a flexible and client orientated engineering solutions.

- Consultation for opencast mining and quarrying procedures
- Pre Project-Planning and technical feasibility checks and studies
- · Continuous Mining Machinery, such as Bucket Wheel Excavators and Spreader
- Fixed-, Semimobile- and fully mobile- In-Pit Crushing and Conveying Technology
- Deposit modelling and visualization of mining progress supported by 3D tendering
- Front End Engineering with selection and dimensioning of equipment and installations
- Detailed technical planning of single components
- Development of mining procedure, considering strip mining dimension
- Dumping sequence for overburden and tailings disposal area
- Preliminary site layout with optimized location of mining equipment, conveyor routing and service areas
- · Calculation of capital and operational expenditure
- Conceptual Planning, risk analyses and planning protection
- · Revamping engineering of mining machinery









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