



EQUIPMENT PORTFOLIO





Pacific Coast Terminals Shiploader, British Columbia, Canada



Minera Antucoya Conveyor, Chile



Impala Burnside Terminal Wharf Conveyor, Louisiana, USA



The Company

MGA Engineering is a global leader in designing structural and mechanical systems in the infrastructure, building (commercial and industrial), mining, energy, and marine industries. Founded in 1996, MGA now staffs 65 highly experienced engineers, providing an exceptional level of technical expertise and innovative engineering solutions to commercial and industrial clients.

Using state of the art design and computing tools, MGA completes work compliant with North American and European standards. From initial project conception via Design Basis Memoranda, through Front End Engineering and Design (FEED) studies to detailed design of equipment, buildings, and material storage structures with the necessary foundation systems, MGA's team meets the design needs of the industry.

A Global Footprint

MGA's headquarters is situated in Calgary, Canada, overseeing corporate, project management, financial, and design functions. Additionally, a significant design office is located in Cairo, Egypt, serving as the operational hub for projects in Europe and Asia. MGA also maintains several smaller satellite offices across Canada and the United States (British Columbia, Quebec, Florida, and New Jersey), as well as internationally, in Mexico, Brazil, and Ecuador. Our extensive footprint of past projects and ongoing global presence underscores our commitment to delivering exceptional engineering solutions worldwide.





Bulk Material Handling

MGA's core expertise is anchored at Bulk Material Handling installations typically found in the mining, marine ports and oilsands industries. MGA's expertise is available in CAPEX and OPEX:

- **CAPEX: New equipment**
(needs analysis, planning, design, design-build, erect, commission)
- **OPEX-A: Equipment in operation**
(repairs, troubleshooting, modifications, alterations, senescence)
- **OPEX-B: Inspection, Testing & Certification**
(maximization of economic life of operating assets)

The Applications

Bulk Transfer

- Single-boom spreaders
- Mobile stacking bridges
- Transport crawlers
- Stacker and reclaimers (single & combined)
- Bucket wheel reclaimer (boom & bridge)
- Scraper, drum, and portal reclaimers
- Portal and bridge-type scraper reclaimers
- Ship loaders & unloaders
- Grab type ship unloader
- Circular storage with stacker/bridge reclaimers

Bulk Treatment

- Crushing plants
- Breakers and high-pressure grinding rolls
- Roll crushers and double roll crushers
- Belt linear screens
- Hard rock sizers
- Slurries plant and tailings
- Primary separation cells and floatation cells
- Granulators
- Vacuum belt filters for dewatering

Excavators

- Bucket chain excavators
- Bucket wheel excavators

Transport

- Apron feeders
- Belt conveyors
- Belt feeders
- Mobile conveyor bridges
- Mobile transfer conveyors
- Tube conveyor
- In-plant conveyor systems
- Pipe conveyor systems
- Steel conveyors

Facilities & Buildings

- Wagon / truck loading
- Wagon unloader / tripper
- Rapid train load-out station
- Storage pits
- Tanks and reservoirs
- Pressure vessels and bullets
- Process piping
- Pipe racks
- Steel structures



CAPEX Expertise

CAPEX engagements encompass:

- Concepts: Feasibility studies, equipment and layout options
- Definition: Selection, constraints, scoping (budgets & timelines)
- Conception: Design, layouts, execution planning
- Procurement: Purchases, contracts, leases, logistics
- Realization: Fabrication, transportation, construction, erection, commissioning, certification, start-up
- Operations: Field support, troubleshooting, modifications

OPEX-A Expertise

OPEX-A engagements keep the assets operating profitably:

- Assessments of structural and mechanical integrity
- Failure analysis and prevention
- Fracture and fatigue assessments, detection, and mitigation
- Design of alterations, modifications, upgrades and repairs
- Design assessments of performance enhancements, capacity increases, reliability improvements and automation opportunities

OPEX-B Expertise

OPEX-B engagements extend the economic life of assets:

- In-situ inspections of equipment under static and operating conditions for detection of structural, mechanical and operational problems, concerns or issues.
- Corrosion, erosion and structural degradation detection, and progress monitoring
- Testing, troubleshooting, and identification of remedial options & opportunities for improvements and/or degradation mitigation
- Certification of operational & structural compliance to Codes, Standards, and Permit requirements
- Risk mitigation: risks of failure, to productivity, to health, safety and the environment, to reliability, to budgets, and to shareholders' returns on investment.
- Design options for extending the economic life of operating or idle equipment.



Ridley Terminal Stacker-Reclaimer Upgrade

 LOCATION B.C., Canada	 EQUIPMENT TYPE Stacker/Reclaimer	SCOPE OF WORK • Structural and Mechanical Engineer of Record
 TIMELINE 2018	 CAPACITY 8000 tph	
 CLIENT FLSmith	 MATERIAL Coal	



Proyecto Antucoya Conveyor

 LOCATION Chile	 EQUIPMENT TYPE Conveyor	SCOPE OF WORK • Structural and Mechanical Engineer of Record for two conveyors
 TIMELINE 2012-2014	 CAPACITY 9000 tph	
 CLIENT Takraf-Tenova	 MATERIAL Copper	



Kearl Supplementary Crushers ('KSC') Project (KID+KEP)

 LOCATION Alberta, Canada	 EQUIPMENT TYPE Conveyor/Crusher	SCOPE OF WORK • Several multi-scope projects • Structural Engineer of Record • Convert the design to NA standards, optimize
 TIMELINE 2018-2020	 CAPACITY 14000 tph	
 CLIENT FAM Canada	 MATERIAL Oil sands	



Canpotex Portland Shiploader

 LOCATION Oregon, USA	 EQUIPMENT TYPE Shiploader	SCOPE OF WORK • Structural Engineer of Record
 TIMELINE 2013 - 2014	 CAPACITY 6000 tph	
 CLIENT Sandvik	 MATERIAL Potash	



Horizon Primary Separation Cells

 LOCATION
Alberta, Canada

 EQUIPMENT TYPE
Vessel

SCOPE OF WORK:
• Structural design
• Piping test analysis
and design

 TIMELINE
2011 - 2015

 MATERIAL
Synthetic crude oil

 CLIENT
ThyssenKrupp



Kearl Lake Slurry Preparation Plant

 LOCATION
Alberta, Canada

 EQUIPMENT TYPE
Plant

SCOPE OF WORK
• Detailed structural and
architectural design
• Design of mechanical
equipment (pump boxes,
chutes etc.)
• Pipe stress analysis

 TIMELINE
2008-2011

 MATERIAL
Oil Sand

 CLIENT
ThyssenKrupp



Surge Bin Feed Conveyor

 LOCATION
Alberta, Canada

 EQUIPMENT TYPE
Conveyor

SCOPE OF WORK
• Structural design

 TIMELINE
2005

 CLIENT
ThyssenKrupp



Westshore Terminals

 LOCATION
B.C., Canada

 EQUIPMENT TYPE
Shiploader

SCOPE OF WORK
• Structural Engineer of
Record

 TIMELINE
2013 - 2018

 CAPACITY
7 100 tph

 CLIENT
Sandvik

 MATERIAL
Coal



Rotary Breaker



Rod Mill Hopper and Screw Feeder



Hopper



13
Overflow Dump Pond



Chute



Hovensa Shiploader, St. Croix, US Virgin Islands



Horizon Primary Separation Cells, Alberta, Canada



Minera Antucoya Conveyor, Chile

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