MINING DIVISION



MGA Engineering Inc.

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ABOUT MGA

MGA Engineering Inc. is a master designer of structural and mechanical systems utilized across the globe in the port, mining, infrastructure, and building sectors. Founded in 1996, the firm is headquartered in Calgary, Canada, with regional offices in Canada, Brazil, Ecuador, Egypt, Mexico, and the USA. Throughout the decades, MGA has lent its expertise to asset owners & operators, and equipment manufacturers. MGA's portfolio of projects spans the globe, with a historical emphasis on the Americas, and a new focus on emerging markets in Africa, South East Asia, and Oceania.



THE BUSINESS DIVISIONS

Mining

Plants

Equipment

Transport

Storage

Port

Bulk & Cargo

Terminals & Facilities

Docks & Piers

Transport

Storage

Infrastructure

Transportation

Urban development

Water & Sanitation

Energy & Utilities

Tanks & storage

Buildings

Industrial

Commercial

Stations & Terminals

Foundations

Blast-resistant



THE MINING DIVISION

21ST century mines are among the world's most demanding infrastructure projects, with Oilsands occupying a category all of their own. Modern mine operations are the primordial gateways to constructing the world, connecting people, commodities, and product across integrated networks through which transact the wealth of nations. Their design, construction, and ceaseless 24/7 operations present exacting challenges in financing, design, building, construction, operations, and returns on investment.

The Division works with mine owners and operators to address their capital and operational requirements, always within a context that seeks to maximize their shareholders' returns on investment.



THE EXPERTISE

Plants

NI 43-101 & JORQ studies

Metallurgical process

Layout & Design

<u>Utilities & Services</u>

Tailings & ponds

Equipment

Material Handling

Crushing

Hoppers & Bins

Separation

Slurry

Transport

Rail loading & unloading

Truck loading & unloading

Weighing stations

Vehicle control

Automation

Storage

Tank farms

Stockyards

Silos & Reservoirs

Pressure vessels

Warehousing

















BULK MATERIAL HANDLING

MGA's core expertise is anchored at BHM installations typically found in the mining, marine ports, and oilsands industries. MGA 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)

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 reclaimer

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 flotation cells
- Granulators
- · Vacuum belt filters for dewatering

EXCAVATORS

- Bucket chain excavators
- Bucket wheel excavators

TRANPORT

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

FACILITIES & Buildings

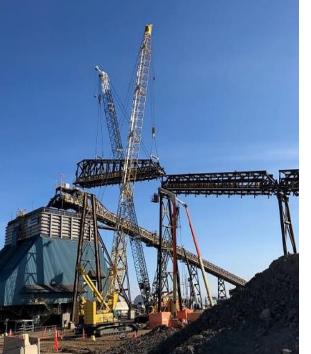
- Wagon / truck loading
- Wagon unloading / tripper
- Rapid train load-out station
- Storage pits
- Tanks and reservoirs
- Pressure vessels and bullets
- Process piping
- Pipe racks
- Steel structures





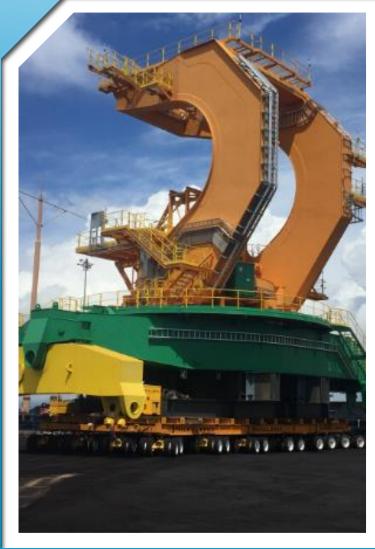


EQUIPMENT - CONVEYORS













EQUIPMENT – STACKERS AND RECLAIMERS







EQUIPMENT –
PRIMARY CRUSHING SYSTEMS



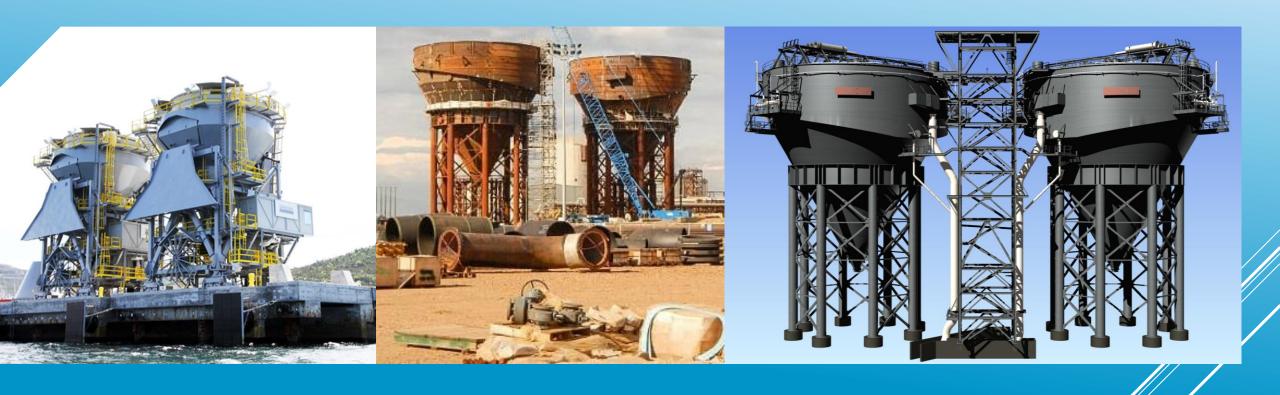






EQUIPMENT – HOPPERS AND SURGE FACILITIES





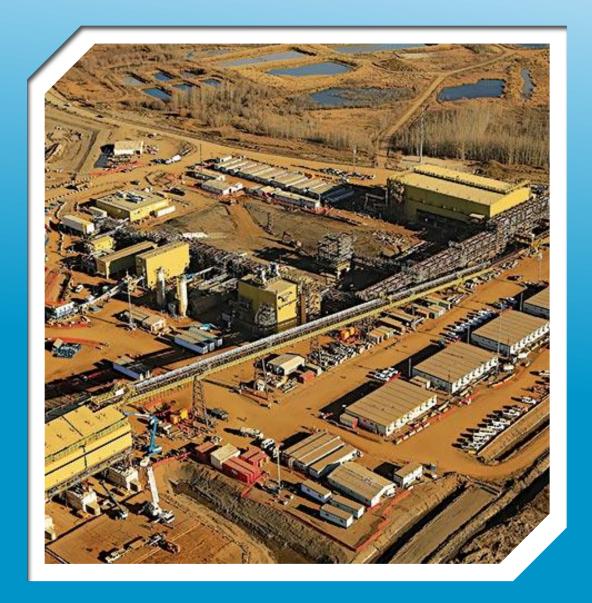
EQUIPMENT - PRIMARY SEPARATION CELLS





EQUIPMENT – SLURRY PREPARATION PLANTS





EQUIPMENT –
MATURE FINE
TAILINGS
CENTRIFUGING
PLANT







STORAGE





Canada

Head Office

Suite 2800, 817 – 15th Avenue SW Calgary, AB T2R 0H8

2828 Boulevard Laurier, Suite 734, Tour 1 Norton-Rose Québec City, QC G1V 0B9

USA

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MGA USA ENGINEERS LLC 1 American Dream Way East Rutherford, NJ 07073

Egypt

MGA Technology 30 Samir Mokhtar St. 9th & 10th Floor Ard El Golf Heliopolis, Cairo

Mexico

Calle Jacarandas #8, Balcones De Loma Linda Mazatlán, Sinaloa, CP 82000

Ecuador

The Scot Group (MGA Agent) Ave. Pedro Menendez Gilbert, Puerto Santa Ana, Edificio The Point, Piso 26, .Ofc. 2611 Guayaquil

Brazil

JJ Infraestrutura e Engenharia Ltda (MGA Agent) Avenida Mato Grosso 676, Anápoli Goiás, Zip Code 75.113-170

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