

## THE COMPANY

MGA Engineering Inc. is a master designer of structural and mechanical systems, utilized across the globe in the marine, mining, energy, infrastructure, and building sectors. Founded in 1996, the firm is headquartered in Calgary, Canada, and operates regional offices in Canada, USA, and Egypt. Throughout the decades, MGA has lent its expertise to owners, operators and fabricators of large-scale bulk materials handling equipment such as conveyors, ship loaders, stackers/reclaimers, crushers, storage tanks, vessels and transfer stations.

## THE EXPERTISE

MGA's design acumen is complemented by a world-class engineering knowhow in extreme design conditions including severe seismic & vibratory loads, combined extreme pressure & temperature, and non-competent soil behavior. MGA gets involved throughout a project's lifecycle, from concept to installation, all the way to post-construction technical support.

## THE APPLICATIONS

### Materials handling (land & marine)

- Conveyor systems
- Ship loaders & unloaders (static)
- Ship loaders & unloaders (rail-mounted)
- Bucket wheel stacker-reclaimers
- Surge bins, chutes and hoppers
- Tanks, vessels and silos
- Loading & unloading facilities
- Bulk gravel facilities

### Oilsands and Mining

- Crushing plants & apron feeders
- Slurry preparation plants
- Primary separation cells
- Surge facilities and Pump boxes
- Rotary breakers
- Double roll crushers
- Tank farms and pressure vessels
- Ore processing systems
- Mobile sizing stations
- Equipment erection

### Commercial buildings

- Shopping centers
- Entertainment complexes
- Building & construction technologies
- Code compliance verification
- Complex steel beams
- Glass structures
- Modularization

### Bulk materials

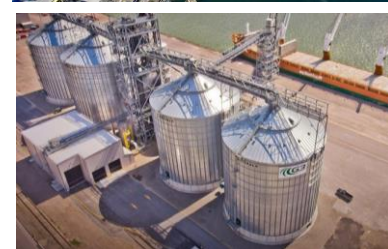
- Copper and gold concentrates
- Coal and petroleum coke
- Sulphur
- Potash
- Grain
- Grave/ and crushed stone
- Iron ore
- Overburden

### Oil and Gas

- Piping and pipe racks
- Tanks and tank farms
- Pressure vessels
- Hydrogen plants
- Sulphur pouring towers
- Heat recovery systems
- Civil works and site preparation
- Steel structures
- Packaged equipment (analysis)
- Equipment erection

### Infrastructure

- Port facilities
- Airport facilities
- Foundations (buildings)
- Foundations (equipment)
- Rail and truck transfer facilities
- Grain handling facilities
- Desalination plants



## EXPERTISE

### Structural Engineering

- Finite Element Analysis (FEA)
- Design for extreme conditions
- Dynamic analysis
- Design of plate structures
- Stability studies
- Large-span structures
- High and low temperature design
- Metal fatigue assessment
- Welding

### Mechanical Engineering

- Machine design
- Process plant pipe stress analysis
- ASME Section VIII Divisions 1 and 2 pressure vessels
- API 620/650 storage tanks
- Piping design and equipment layout
- API 579 fit-for-purpose analyses
- TC44 / CSA B626 portable tank design
- Mining equipment and systems
- Dynamic loading

### Building Engineering

- Building layouts
- Foundations, concrete and masonry
- Steel superstructures
- Static and mobile roofs
- Deep underground utilities
- Piping, HVAC and electrical layouts
- Civil infrastructures
- Vibration mitigation systems

### Asset development

- Concept and feasibility studies
- DBM and FEED
- Modularization studies
- Detailed design
- Code compliance
- Standard development
- Estimate development
- Procurement and logistics
- Construction oversight
- Project management

## A GLOBAL FOOTPRINT

The company's head office entails corporate, finance, and project management functions. Design and engineering reside principally in the company's Cairo (Egypt) office. A second project management office will be opened in New Jersey, in 2020. Three more satellite project offices are contemplated as well in 2020-2021: Quebec City, Vancouver and Buenos Aires (Argentina). Staff headcount numbers close to 70 and should double by the end of 2020.



## CONTACT

Steven J. Keays, M.A.Sc., P.Eng.  
Vice President  
[Steven.keays@mga-ind.com](mailto:Steven.keays@mga-ind.com)  
D: +1 587-393-6690  
C: +1 587-433-1504

