















# The Company

MGA Engineering is a master designer of structural and mechanical systems deployed across the globe 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.

MGA is well versed in the requirements needed for designing a bulk material shiploader. 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 the ship loader, equipment, mechanical systems, as well as any other structures needd for the port (storage buildings, silos, foundations, etc.), MGA's team meets the design needs of the industry.

# **A Global Footprint**

MGA's head office is located in Calgary, Canada, and entails corporate, finance, project management and design functions. A large design office resides in Cairo, Egypt, and also serves as the base of operation for projects in Europe and Asia. MGA also operates several smaller satellite offices across Canada, the United States of America, and internationally (British Columbia, Quebec, Florida, New Jersey, Mexico, Brazil and Ecuador). Our footprint of past projects and active presence worldwide can be seen on a global scale.

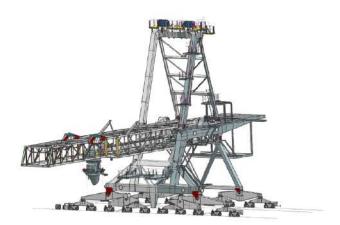




# The Importance of Shiploaders

Throughout the world, shiploaders are used for continuous loading of bulk materials, such as iron ore, coal, or grain. They are essential to the global shipping industry and vital for the inter-continental exporting of bulk materials.

Efficiency, durability and reliability are words that we associate with shiploaders, and our designs are governed by those very principals. Additionally, MGA has led several research projects specifically aimed at improving shiploaders' resilience to seismic events, so that crucial trading routes and the flow of materials is not interrupted following a seismic event.



# Shiploader Project Showcase





#### Fraser Grain Terminal Shiploader



B.C., Canada



TIMELINE 2018 - 2020



CLIENT **FWS** 



MATERIAL Grain



CAPACITY 2000 tph



SHIPLOADER TYPE Radial quadrant

SCOPE OF WORK

· Structural and Mechanical Engineer of Record



## **Pacific Coast Terminals Shiploader**



LOCATION B.C., Canada



TIMELINE 2016 & 1997



CLIENT Krupp Canada



MATERIAL Potash



SHIPLOADER TYPE Radial quadrant

SCOPE OF WORK

- Engineer for the potash conveying system
- · Design audit
- Engineer for the boom replacement



## **Hamilton Lake Terminal Shiploader**



LOCATION Ontario, Canada



TIMELINE 2016



**FWS** 



MATERIAL Grain



CAPACITY 1500 tph



SHIPLOADER TYPE Fixed

SCOPE OF WORK

· Structural Engineer of Record



LOCATION Oregon, USA



TIMELINE 2013 - 2014



CLIENT Sandvik



MATERIAL Potash



CAPACITY 6000 tph



SHIPLOADER TYPE Rail mounted

SCOPE OF WORK

· Structural Engineer of Record



#### **Westshore Terminals Shiploader**



LOCATION B.C., Canada



TIMELINE 2013 - 2018



CLIENT Sandvik



Bituminous coking coal • Structural Engineer of and thermal coal



CAPACITY 8000 tph



SHIPLOADER TYPE Rail Mounted

SCOPE OF WORK

Record



LOCATION Louisiana, USA



TIMELINE 2013



CLIENT CLIENT Sandvik



MATERIAL Bituminous and Sub-Bituminous Coal



CAPACITY 6600 to 8300 tph



SHIPLOADER TYPE Rail mounted



#### SCOPE OF WORK





#### Port of Sept-Ile Pointe-Noire Quai No. 35



LOCATION Quebec, Canada



TIMELINE 2012 - 2014



CLIENT Sandik



Material Iron Ore



CAPACITY 8000 tph



SHIPLOADER TYPE Rail mounted

SCOPE OF WORK

· Structural Engineer of Record for 2 Shiploaders + trippers



LOCATION Newfoundland, CAN



Timeline 2009



CLIENT CLIENT Sandvik



## Vale Long Harbour Processing Plant Shiploader



MATERIAL

Bulk nickel concentrates • Design audit and bulk limestone



SHIPLOADER TYPE Mobile hoppers SCOPE OF WORK

Fabrication supervision

· Site rehabilitation



# Petrozuate Shiploader



LOCATION Venezuela

TIMELINE

2001

CLIENT

Krupp Canada



SHIPLOADER TYPE Rail mounted

SCOPE OF WORK

· Fire damage investigation and troubleshooting



## llo Ship-Unloader



LOCATION llo, Peru

TIMELINE 2001

CLIENT Krupp Canada CLIENT



SHIP UNLOADER TYPE Rail mounted

SCOPE OF WORK

- · Structural evaluation of seismic damage
- · Structural design criteria
- seismic provisions



## **Aimcor Shiploader**



LOCATION Texas City, USA



TIMELINE 2001 - 2003



Oxbow/Aimcor



MATERIAL Petroleum Coke



CAPACITY 2500 tph



SHIPLOADER TYPE Radial quadrant

SCOPE OF WORK

- · Repair and rehabilitation
- · Redesign, detailing and fabrication, erection and commissioning supervision



#### Hovensa Shiploader



LOCATION St. Croix, U.S.V.I



TIMELINE 1998 - 2001



CLIENT Krupp Canada CLIENT

MATERIAL Petroleum coke



SHIPLOADER TYPE Radial quadrant SCOPE OF WORK

- Design
- Fabrication supervision
- Erection supervision



# Citgo Aruba Oil Refinery Shiploader



San Nicolas, Aruba

TIMELINE 1997 - 2000

CLIENT
ThyssenKrupp Robins

CLIENT



Material Crude oil



SHIPLOADER TYPE Fixed

SCOPE OF WORK

- Design
- Fabrication supervision
- Erection supervision



#### Collahuasi Shiploader



LOCATION lquique, Chile



TIMELINE 1996 - 1999



CLIENT Krupp Canada



MATERIAL Copper concentrates

SHIPLOADER TYPE Radial quadrant

- SCOPE OF WORK · Design audit
- Fabrication supervision
- Site rehabilitation



# **LAXT Shiploader**



LOCATION California, USA



TIMELINE 1997



CLIENT CLIENT Krupp Canada



MATERIAL Coal & petroleum coke Design audit



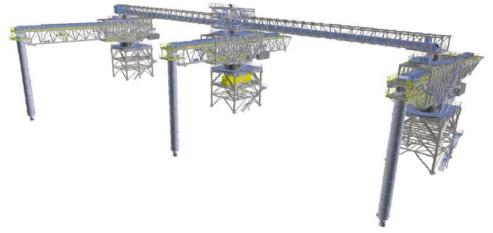




SHIPLOADER TYPE Rail mounted

SCOPE OF WORK

- Troubleshooting the hoisting system









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