

**PATRICK**  
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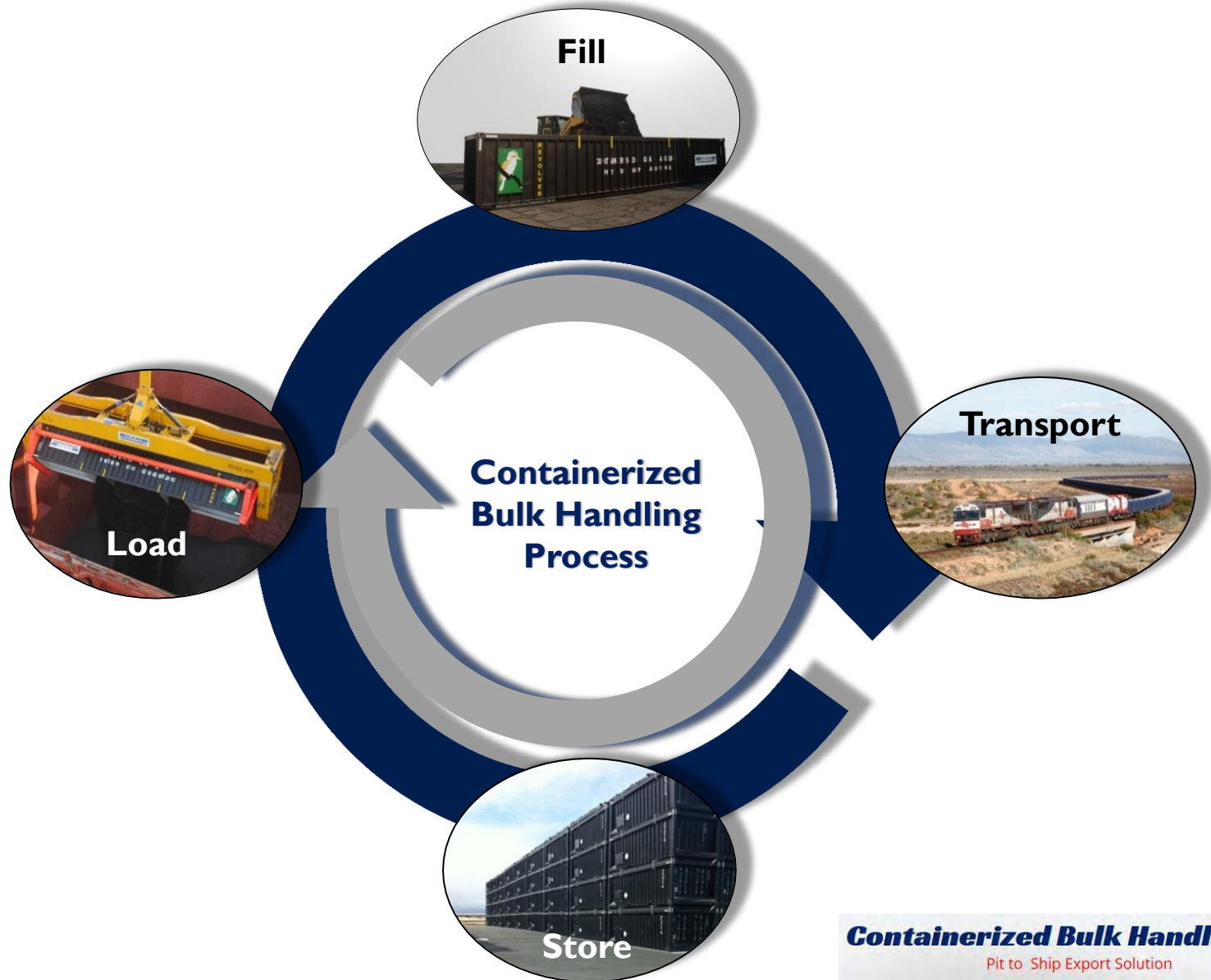
**RAM**  
**SPREADERS**

**LOW CAPITAL  
DUST FREE BULK EXPORT  
USING SHIPS GEAR**

**Case Studies**



# PROCESS



# **AN INNOVATIVE SOLUTION**

**Uses Ships Crane to handle bulk containers**

**Capital Expenditure < 1 million USD**

**Containers leased at \$ per day rate**

**Free of dust & material loss**



# SYSTEM SPECIFICATIONS

**40 tonne ships gear**

**8 tonne revolving spreader**

**3 tonne box**

**29 tonnes of copper concentrate**

*Cost* ✓

*Dust free* ✓

*Fast* ✓

# PRODUCTION



**15 Lifts per hour**

**400 Tonnes per crane per hour**

**2 Cranes**

**18000 Tonnes per day**

# CONTAINER SPECIFICATIONS

**3 Tonne tare weight**

**38 Tonne capacity**

**6K cost (USD)**

**Automated lid removal**



***“Patrick was able to utilize this new revolving spreader technology to export copper concentrate for our client with very little capital”***



Adrian Howard  
Commercial Director

***“....Our Client was extremely pleased with the dust free solution”***

# CAPITAL COMPARISONS

## Existing Bulk Loading Infrastructure



**Capital Cost = USD150-250 million**



# CAPITAL COMPARISONS

## Containerized Bulk Handling Costing Capital

### MHC Model

- Cranes x 2 = USD\$8,000,000
  - Containers x 30 = USD\$ 300,000
  - CHE = USD\$ 500,000
  - Revolvers = USD\$1,500,000
- = 10 million**

### Ships Crane Model

- Revolvers x 2 = USD\$ 800,000
  - Misting System = USD\$ 200,000
  - Container = USD\$ Leased
  - Fork Truck = USD\$ Leased
- = 1 million**

# PROVEN IN OPERATION

## IMX crosses 2m-tonne export milestone

**BUSINESS EDITOR CHRISTOPHER RUSSELL - THE ADVERTISER - JULY 05, 2012 11:24AM**  
**COOPER Pedy iron miner IMX Resources has passed a milestone two million-tonne mark for exports.**

The company has gone on to load a record 85,140 tonnes at Port Adelaide aboard the Trans Hangzhou which departed on the weekend.

“Thanks to the efforts of our broker, Probulk in Singapore, and operator Cargill, we managed to locate a uniquely sized vessel that fitted the requirements of Port Adelaide,” IMX logistics manager Mark Hoepfl said.

“We have shipped over two million metric tonnes to date and we usually average approximately 75,000 metric tonnes per vessel.

“Our previous record was 80,471 metric tonnes, making this a landmark shipment,” Mr Hoepfl said.

The ore – a unique blend of iron and copper – is from IMX’s Cairn Hill mine southeast of Coober Pedy.



IMX Resources' logistics manager Mark Hoepfl with a cargo ship bound for China.  
Picture: Bianca De Marchi. Source: The Advertiser

# PATRICK PORT KEMBLA FACTS

**12,000** tonnes of ore per month

**10 year** contractor

**EPA** reviewed

**Growing jobs** in Wollongong



# CONTAINERIZED BULK PROCESS

Loading commodity



Land Transport



Quay Side



With Revolver®



Load Ship at Port



Lift from Storage



## **MINERS PERSPECTIVE**

***“Environmentally it is a very clean system due to containers being emptied directly into the ship’s hold thereby minimizing a number of dust generating points”***

***“...Loading rates of 15,000 wmt/day being achieved are such that it helps to minimize shipping costs”***



Jim Smith  
North Parkes Mine



# CONTAINERIZED BULK HANDLING BENEFITS

- ✓ **Flexible Berths – No fixed bulk berths**
- ✓ **Fast to start**
- ✓ **No dust**
- ✓ **Low cost**



# EQUIPMENT - INTERGRATED APPROACH

Revolver®



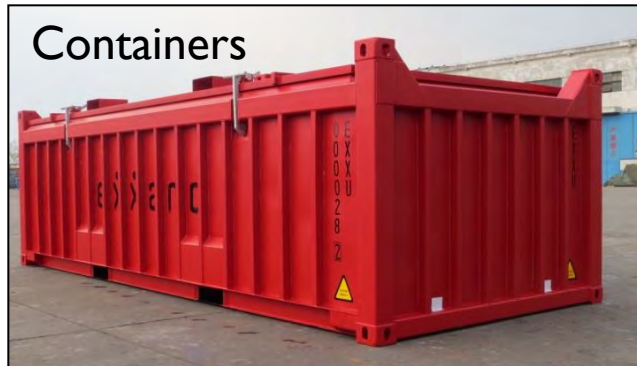
Cranes



Dust Suppression



Containers



Container Handlers



REVOLVER trailer system



# DUST FREE



**NO DUST**





# MATERIALS HANDLED LOAD & DISCHARGE

- Grains
- Wood Chip
- Coal
- Iron Ore
- Mineral Sands
- Copper Concentrates
- Scrap Metal
- Bagged Material
- Soya



# **SYSTEM BENEFITS**

## **Cost**

- **Lower set up costs (No conveyor, ship loaders, storage sheds)**

## **Environmental**

- **Zero dust, no clean up**
- **Best practice by EPA with fast approval**

## **Safe & Fast**

- **Virtually man less operation with loading rates of 1700 TPH per crane**

## **Proven & Reproducible**

- **Providing a simple proven turnkey solution to exporters**

# JOIN THE REVOLUTION



## Companies

- Exxaro
- Grinrod
- DP World
- Eletheni/ SNR
- BHP B
- Oz Minerals
- Hillgrove Copper
- Transnet
- FQML
- TPR Argentina
- Patrick
- Ironclad

“not often do you get a solution  
that is the lowest cost but also the  
best practice environmentally”

Thank You

Contact us

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