



## Message

By **Philip Lee**,  
Chief Executive Officer

Welcome to the second edition of our newsletter. This newsletter is of great significance to us as it allows RAM to share with you news and innovations amongst our customers and friends.

Since the launch of our first newsletter in April, we've kept busy, preparing for a very special event which represents a pivotal milestone in the history of RAM Spreaders – the official retirement of our founder Mr Robert A. Mills. After over 40 years of dedicated hard work, will retire from RAM this year.

The event was held at the prestigious Hotel Atlantic Kempinski in Hamburg, where a famous chase scene for a James Bond film took place. The evening got on to a start with Robert making his grand entrance into a room filled with family, friends and work colleagues who were gathered to pay homage to the RAM Founder. Guests toasted Robert and he, in turn, delivered a heartfelt speech to thank everyone for their help and support over the years. In his address, he also touched on the merger with SMAG, his elation with all that has happened and his quiet confidence in the company's ability to grow from strength to strength.

In commemoration of this occasion and to pay tribute to our founder, we have prepared a special instalment where we take a trip down memory lane to reminisce Robert's early years, and how he transformed a humble family run business to becoming a true spreader pioneer of our time. We hope you will join us all at the RAM family in wishing Robert good health and a happy retirement.

Concurrently, at RAM, we saw our innovative products receiving some good media coverage over the past few months – from Port Elizabeth celebrating their first anniversary of implementing the Containerised Bulk Handling process using the RAM Revolver to a Chilean TV news report on the ceremonial arrival of the CBH system at a Port in Chile. These examples not only exemplified the success of our products' implementation, but also their effectiveness in helping our customers achieved their goals. In addition, there was also a news feature on the trends in multiple lifting which outlined the concept of lifting multiple containers using a single hoist crane. Specific mentions and references were made to the success of our RAM SingFlex Tandem40 Headblock that is now in operations on five continents.

I hope you enjoy reading about our latest achievements in this edition of our newsletter.



**Special instalment.** Click button to download the full article in PDF format

Robert on his day of happy retirement, handed over RAM business to management for continuity



# Asia Pacific Entrepreneurship Awards - 2016

Congratulations to Mr Philip Lee, Chief Executive Officer of RAM SMAG Lifting Technologies on being awarded the Entrepreneur of Singapore under Industrial & Commercial Products Industry by Asia Pacific Entrepreneurship Awards (APEA) 2016.

APEA is one of the most prestigious awards in the region where only a select few are honoured each year in recognition of their outstanding and exemplary achievements in entrepreneurship. The Award honours the relentless drive of these entrepreneurs, their courage to

take risks and embark on dreams, and their commitment to stand tall as the trailblazer in their industry.

"This award is an acknowledgement for the team of hard-working and passionate people who contributed their knowledge and are dedicated to the success of RAM business. I would like to take this opportunity to thank my predecessors and everyone who enabled our dream to come true," said Mr Lee.



Personal profile of Mr Lee in "Signature 2016" by Enterprise Asia. [Click button to download the full article in PDF format](#)



**PHILIP LEE TZE YONG**  
RAM SMAG LIFTING TECHNOLOGIES PTE LTD



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# Customer News

By **Johnny Medranda**, Regional Sales Manager - Americas

## DP World Caucedo, Dominican Republic

RAM delivered and commissioned a repeat order of three units of RAM 3540 all-electric spreaders to DP World Caucedo for their existing RTG cranes. This brings the total number of units in operation to 17. The order is part of their handling equipment renovation on RTG cranes, which were already fitted with RAM Spreaders.

A world-class gateway terminal at the heart of global commercial lanes, DP World Caucedo requires outstanding performance and high reliability on their RTG Spreaders to support and sustain high throughputs.

## Port of Tauranga, New Zealand

One of RAM's longest standing customers, the Port of Tauranga in New Zealand has ordered three new spreaders.

Tauranga is one of the busiest ports in New Zealand and has been a customer of RAM for more than 20 years. In the latest order they are purchasing the heavy duty RAM 2940 STS spreader with shock absorb system. Notably, they will be receiving their first spreader with an auto greasing system which is positioned to give the port a greater MMBF.

# "How To" Video News

By **Craig Gladwinfield**, Service Manager

## Setting the Electrical Spreader Twistlock Position Sensors

In our April newsletter, the very first "How To" video was produced showing how actuator seals can be replaced on a hydraulic flipper actuator. We have now produced a video that shows a step-by-step process of how to set the

twistlock sensor position on the RAM all-electric spreader. The videos we are producing are designed to help customers service and maintain their purchased spreaders from RAM.

Please click on the video link in this article to see the latest video release.



# Case Study

By **Frank van Laarhoven**, Senior Sales Manager Europe

## Trends of Multiple Lifting

With vessels getting larger, ports are innovating to be able to transfer the containers from these massive behemoths faster. When the 18,000 TEU CMA Benjamin Franklin, with decks nine rows high and 23 wide calls at a port, an efficient loading and unloading solution is needed. The answer: many ports are turning to the RAM SingFlex tandem headblock for multiple container lifting.

Carrying two 40-foot containers is not a new concept, it has been happening in Dubai for a decade, and terminals are fine-tuning how to do this after years of experience. Experienced tandem crane operators, like DP World (DPW) and APM Terminals (APMT), have learnt that all cranes on a vessel do not need to work at the hectic pace of 60 containers per hour, instead focus needs to be on the larger points of work which control the vessel sailing. Flexibility is the key to turn around these vessels. You only need to work two or three cranes at 60 moves per hour.

With this in mind, APMT and DPW have both opted for RAM SingFlex as their solution to speed up operations. SingFlex has a fully automated rapid mode change system from single to twin headblock mode and presents huge capital savings over a dedicated dual hoist setup. Due to these reasons, we are seeing terminals turn away from the traditional dual hoist design with high maintenance cost.



### What is SingFlex?

SingFlex is single hoist tandem lifting (SHTL) and uses conventional crane design. It employs a "smart" headblock that allows two spreaders to attach to a single hoist crane and provides the terminal with tandem lift capability.

Each headblock system can transform from single to tandem mode automatically. Transferring from single to twin mode provides the crane driver with the flexibility of being able to handle 2x40ft containers, or 4x20ft containers in tandem mode.

**Flexibility** is the key to the design. The smart headblock can transfer from single to tandem to quad quickly and without the need for ground staff. This transformation is achieved in a docking station with an auto-electrical connector.

The automated changeover from single to tandem mode for SingFlex is performed by the crane operator and is achieved in less than **two minutes**.

*"Flexibility is the key to turning around these vessels. You only need to work two or three cranes at 60 moves per hour"*







Single Spreader



Docking Station Change-over

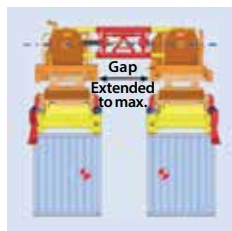


Tandem Lift Spreader

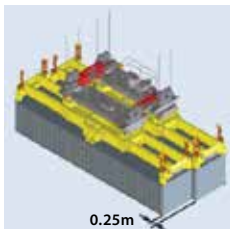
## Features and Flexibility

Due to the large range of different conditions on a ship and the quay the system needs to be able to adjust to different heights and gaps. The crane operator has the ability to adjust the gap, skew angle, offset capability and height between the spreaders and containers.

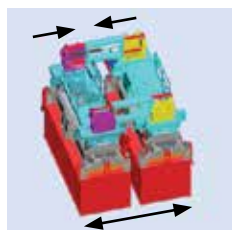
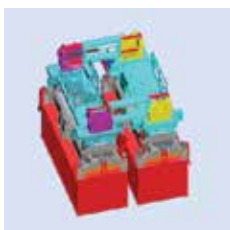
### Gap Adjustment: 0 - 1600mm



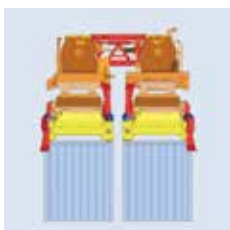
### Longitudinal Offset: $\pm 200\text{mm}$



### Skewing Angle: $\pm 5$ degrees



### Vertical Float: $\pm 1000\text{mm}$



## Where is it?

After more than 10 years of development with units operating in China, Southeast Asia and North Africa, SingFlex saw its first commercial operation on eight cranes at London Gateway, and subsequently 19 semi-automated cranes at DP World's flagship Jebel Ali Terminal 3.

After fine-tuning the first batch of cranes with DPW London Gateway, RAM secured a breakthrough repeat order from London. This demonstrates the customers' faith in the system. Both Jebel Ali and London Gateway are using the system extensively, and are regularly achieving 60 containers per hour.

APMT with its fleet of mega ships understands the need to work fast, and after working with early iterations of the system in Morocco, APMT has installed "tandem 40" cranes with SingFlex in Lazaro Mexico. They are also looking at more systems on the drawing board for other terminals.

**mega-ships "can only be profitable if they are handled very quickly at ports"**

*OECD ports and shipping analyst, Olaf Merk*

## China Factor

RAM SingFlex is taking off in Asia as well, with orders for 15 units destined for three automated terminals in Shanghai, Yangshan and Qingdao.

Yangshan and Qingdao Port terminals are amongst the busiest in China, with over 10 dual hoist cranes each. After having used RAM's twinlift spreaders for their fully automated single hoist terminal, they embarked on a long study of RAM's SingFlex Twin40 Headblock, comparing it with alternatives.

The study recommended RAM SingFlex to be the solution for the two new automated terminals because of its flexibility, low capital cost and proven stable design. Importantly, its potential to couple with all spreaders also ensures no obsolete equipment.

Yangshan and Qingdao Port terminals each placed an order of seven units for phase 1. Similarly, Shanghai Zhen Dong Terminal had ordered one unit of the SingFlex Headblock last year. The feedback from both terminals has been positive. They are extremely pleased with the system's efficiency and stability.

### Fast Cranes Attract Big Ships

For terminals to attract bigger ships, they must be able to provide a fast turnaround to get the vessel back to sea quickly. In the case of London Gateway, using single hoist tandem makes them the only container terminal in the UK with a capability to lift two 40ft containers or four 20ft containers at once. This results in faster operations, attracting bigger ships and more business to the port.

**“We are pleased that the single hoist tandem has allowed DP World to work more productively and as such, attract more business.”**

*Andrew Bowen, Head of Engineering, London Gateway*

Single hoist tandem allows terminals to work tandem operations for less than 3% of the capital cost of a ship to shore crane. That, coupled with the fast changeover from single to tandem, means that terminals can get all the benefits

of tandem 40 handling for a much lower cost. The trend in tandem lifting is heading in the same direction as twin lifting 15 years ago. It is a natural progression for larger terminals to adopt tandem and quad over the next few years.

**“tandem lifting is heading in the same direction as twin lifting 15 years ago.**

**It is a natural progression for larger terminals to adopt tandem and quad over the next few years”**

### Build it. They will Come

Many ports are looking for a decisive competitive edge in their region. Having tandem cranes is a unique offering, showing that they are tuned to the needs of shipping lines. Being able to turn vessels around faster is a big factor in choosing which port to call and who to spend with.

Take the Middle East region for example, despite Oman, Iran, Bahrain and Saudi having large ports, it is Jebel Ali with its high-tech tandem cranes that continues to enjoy stellar growth.

Terminals such as the likes of London Gateway, APMT Mexico and Evergreen have all opted for single hoist tandem systems. These bold moves are showing success in these ports. One example is the UASC's super vessel 'AL MURAYYKH' redirecting to London Gateway and taking advantage of its connectivity and super fast tandem cranes.



### Energy Savings

With the cost of energy soaring we all need to conserve energy to help reduce emissions. We can achieve this by lifting two containers at once. With the crane trolley weighing more than 100 tons and with the spreader and normal headblock close to 20t, the ability to add one more spreader and headblock and shorten the journey by half is significant.

A case study comparing the lifting of 100 25-ton loaded containers by a single lifting or tandem lifting shows an energy saving of 15-20% over 100 containers.

**\$** A case study shows that energy savings are around 15%



### Advantages over Dual Hoist

For many years, dual hoist cranes have been the only way to tandem lift containers. With the advent of single hoist tandem, many ports are choosing to switch to the more flexible single hoist systems.

Ports are choosing single hoist because:

**Weight** – The extra trolley and motors add more than 200 tons to the weight of the crane, which some civil works cannot cope.

**Maintenance** – Extra costs have to be incurred to maintain the extra trolley and hoisting system, and there is minimal benefit to run cranes that don't control the sailing of the ship at 60cph. Instead, the ability to flexibly deploy tandem, is more important.

**“there is minimal benefit to run cranes that don't control the sailing of the ship at 60 cph.**

**It is the ability to flexibly deploy tandem that is more important”**

