

Brigantine Adds Another Yantian Depot



In January 2007, Brigantine's Shekou depot was established. In January 2008, Brigantine 1st Yantian depot was up and running. August 2009 marked another exciting moment for Brigantine as one more new depot was opened in Yantian.

Along with the gradual increasing export volume since the end of the second quarter 2009, the demand for sound containers has also increased. In order to better service our customers, Brigantine has expanded again, setting up a new 20,000 sqm depot with a storage capacity of around 3,500 TEU. The repair area of this depot is under a flyover bridge which acts as a "natural shelter" allowing repair to be done during rainy days. Its location, just off the highway, is also ideally suited for quick turns for truckers, carriers and their respective customers.



In this new depot, Brigantine provides dry box repair for Hapag Lloyd, Textainer and Maersk Line, and we sincerely welcome you to try out our quality services in this new site. Please contact us for enquiry; we will be very happy to serve you.

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Welcome!

This month is our seventh themed news letter focusing on Yard Equipment Management (YEM) and Container Services.

Each month offers a snap shot into different aspects of Brigantine's various business activities. Our Container Services team has opened 2 new sites, and recently started to rigorous new inspection criteria to better service our customer's needs.

We are also excited about several new product offerings, including our yard equipment lubrication oil purification service which saves our clients money, while at the same time helping to save the environment. There is often talk about "win-win" in business, but this one really hits all the marks.

We thank you, our valued customer and business partner, for your on going support.

Yours faithfully,

John Brennan
 Managing Director

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Hong Kong New Depot Opening

On the occasion of Brigantine first depot venture outside Yuen Long for a number of years, we held a simple depot opening ceremony on Aug 17, 2009 in San Tin, Hong Kong. Both current and prospective customers were on hand to witness and celebrate the opening of Brigantine's "Depot B".



The size of "Depot B" is around 150,000 square feet (14,000 square meters) with 2,400 TEU storage capacity. "Depot B" is equipped with 2 side-loaders and 15 repair slots with an estimated 40 units of daily repair capability.



"Depot B" is just one step of our expansion plan in 2009. We sincerely welcome more cooperation with different shipping lines. Please contact us; we will be very happy to serve you.

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Specific Inspection Service to Meet Foxconn & Sony Standards in YICT



Brigantine Inspectors have been assigned by YICT to conduct a specific inspection service to meet Foxconn & Sony standards since May 2009. The job scope is for our professional inspectors to inspect and select good-condition containers according to Foxconn & Sony standards inside the terminal. We are now providing these services to COSCO, Maersk Line, China Shipping and Hyundai inside YICT.

Through our inspector's great efforts, the discovery rate of Foxconn & Sony qualified containers has been boosted to 20%, up from 5% by a previous service provider. In a short two months since commencement, we have identified over 1,600 containers which comply with Foxconn & Sony standards. The enhancement not only assists YICT in saving extra yard shiftings but also satisfactorily meets the high demand of these VIP customers for good-quality containers.

Our aim is to continuously improve the discovery rate meeting the needs of our VIP customers' (YICT and Shipping Lines) so they can cost effectively provide excellent quality services to their customers.



A Yard Equipment Maintenance Job Story - Quay Crane Boom Hinge Bushing Replacement

The boom hinge of a quay crane joins the boom in the front and the girder at the back. It serves two important purposes:

- First, as the name implies, the hinge enables the smooth hoisting or lowering of the boom.
- Secondly, it acts as the load bearing support - together with the forestay, to take up the dynamic load of the boom and the container during loading or discharging operation

Therefore, the integrity and smooth operation of a boom hinge plays a critical role to the operation safety of a quay crane.

In 2008, Brigantine Yard Equipment Maintenance (YEM) was awarded with a tender from a terminal in HK that required the replacement of the worn boom hinge bushing on its seven quay cranes and the job was finished in 2009.

The work scope of the replacement work included:

1. Erecting temporary scaffolding hanging at both sides of the hinge as a working platform for removing the boom support and the subsequent repairing work.
2. Putting two 100-ton hydraulic jacks under the boom and two 250-ton hydraulic jacks between the girder and boom for boom leveling.
3. Aligning the level between the girders and boom until the hinge pin was free to remove.
4. Auxiliary supporting plates were welded across the girder and boom to maintain the correct alignment throughout the repair process. The plates were non-destructive tested after welding.
5. After removing the worn bushing, a tailor made boring machine was fixed to the boom to correct the roundness of the bushing housing.
6. After boring, the cooled down bushes were shrink fitted to the housing followed by the installation of the pins and covers.



There were a couple of difficulties in the repairing process that we had to overcome:

1. The boom hinge was around 100 meters above ground, one could only imagine the difficulty that could be encountered while working at this height; definitely work safety was our primary concern throughout the whole process. The working platform was specially made and examined by registered professional engineer.
2. Even with the mammoth size and weight, the boom with the hinge pin removed sways, even under mild wind conditions.
3. Our biggest challenge was the threat of typhoons hitting during the work process, which could be disastrous.

Our solution to the above problems was a swift operation to minimize our exposure to those effects. Our working period was cut from the original planned 14 days to mere eight days by the precise work planning and our team of committed and experienced workers. Should you be interested for additional details, please contact Mr. Cheung Chi Kin at [+852 9100 0135](tel:+85291000135).

Advantages of a Maintenance Program for Engines

All operational people know that fire-fighting and on-the-spot problem solving go hand in hand with a normal days work in the field. It is a common trait for most operational teams to be keenly focused on the daily performance of their business, simply because daily operations in container depots are busy with high turnover of trucks delivering/picking up empty containers, traffic flow management, intra-yard shifting of boxes and efficient use of resources. Nearly every day, a depot's machines are rarely at rest. Sometimes a depot's management team may forget it is important to maintain the empty handlers they use in good/safe condition. With the current economic times it might seem to some that also postponing needed maintenance might save a penny now, but we know it often costs a dollar later. A cost-effective maintenance program will surely help!

A diesel engine is the heart of many machines and empty handlers or top loaders are no different. If the engine breaks down, it severely hampers daily operations, and in some cases, might even bring it to a standstill. Most everyone with regular interaction with the depot/terminal industry knows of numerous cases of such nightmares and how they seriously impact both their customers and their own business. It is not uncommon that a machine breakdown could take at least a week to be put back into service. For more serious problems, such a missing that crucial part, the downtime could be even longer.

Some of our customers have recognized this need, looking for a proper maintenance program for their empty handlers and top loaders. A recent customer contacted our professional YEM team to provide a full maintenance solution for their fleet of empty handlers.

Our advice to all depot operators is that they should ensure they have a comprehensive maintenance program drawn up for each piece of capital equipment.

Such a maintenance program can be tailor made to meet a customer's needs, but a common process would be:

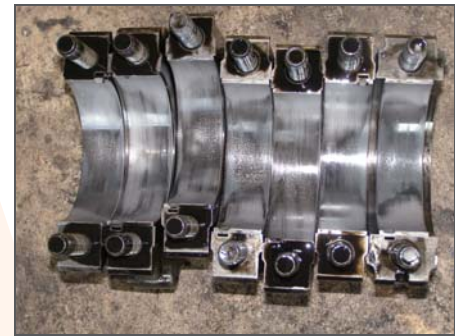
First, check the diesel engine's running history and ascertain if the engine has been running for 20,000 hours from its last engine overhaul. If that is the case, an overhaul is critically required.

The second thing to do would be to draw a scheduled maintenance program for each empty handler. Such a maintenance program consists of the following:

- A. A daily routine check prior to each operation. This is to be carried out by individual drivers who will be educated to handle such daily routine checks. A form for mandatory filling-in will be used for this purpose and filed into the log book.
- B. Weekly check the maintenance mechanic for electrical and mechanical systems.
- C. A regular maintenance for every 250 running hours. To ensure that scheduled maintenance is carried out, the estimated time for 250 running hours will be determined and the equipment will be made available for its regular maintenance. Such regular maintenance normally takes approx. 4 hours, and therefore one morning which has light operations would be an ideal choice for this scheduled maintenance.
- D. The equipment will be scheduled for engine overhaul prior to the completion of each 20,000 running hours. Such overhaul would require about 4 days, and therefore the schedule for overhaul has to be planned taking into consideration the impact on the operations for the depot.

From such a maintenance program, the availability of the empty handler can be improved. Unexpected downtimes will certainly become the past, leaving you with reliable operations now and in the future.

Should you be interested, please contact Mr. James Yeh of Brigantine Services (Taiwan) Co., Ltd. at [+886 7823 7761](tel:+88678237761).



Brigantine YEM Launches a New Service – Lubrication Oil Recycling Service to the Terminal Yard Equipment

Most breakdowns in machinery with lubrication oil system result from contaminated lubricant that contains water, gas, and other common impurities. By removing water and impurities from lubrication oil and improving the properties of the oil, we can greatly extend the lifetime of machinery as well as conserve a valuable resource. This will help terminal operators save the cost for the purchase of new lubricant as well as preventing contamination to the environment.

Putting our mind on both our client and the environment, Brigantine is proud to launch a new product; lubrication oil recycling service.

Research has revealed that approx 85% of the terminals in China have not started recycling their lubrication oils. A typical terminal that handles one million TEUs, the yearly budget for the lubricants is around HKD 1 million representing a sizeable market for this type service in China.

The process of the recycling is to use a high speed rotating centrifuge to separate oil from all kinds of contaminants. There are two ways of doing this recycling:

- On-site filtering in a running machine
- Off-site filtering in special equipment

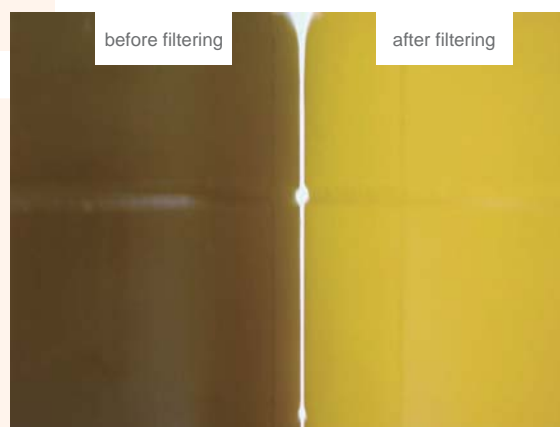
The “On site” process doesn’t require replacing the lubricants; we just install our tailor made instrument near the hydraulic oil system. This instrument is compact and easy to operate, but only applicable for smaller quantities of lubricant.

The “Off-site” method requires replacing all the lubricant from a piece of capital equipment and treating it in a specialized machine. The “off-site” process takes more time but is ideal for larger quantities of lubricants, and has the additional benefit of treating the lubricants more effectively.

No matter which method is adopted, it can prolong the life cycle of lubrication oil, saving money, all while minimizing pollution to the environment. Lubricant oil can be treated/filtered three times. Our research shows that by adopting this service, a terminal will achieve three 50% cut-backs:

- Reducing waste lubricant oil by 50%, helping the environment.
- Reducing lubricant oil purchase requirements by 50%, helping your bottom line.
- Reducing related lubricant oil change workloads by 50%, letting you better redeploy a terminal’s limited resources to other value generating tasks.

If you are interested in saving money, at the same time as saving the environment, please contact Mr. Patrick Gao Bao Qiang at **+86 150 1289 6583**.



Brigantine YEM Heading West...

In August 2009, Brigantine YEM successfully entered a Maintenance & Repair agreement with Dachan Bay Terminal Phase One located at the West Shenzhen, China. This agreement is a significant milestone in our YEM development plan in serving our current and future customers in Mainland China.

Brigantine's YEM team is a professional service provider specializing in container terminal handling equipment management including maintenance & repair services that originally started in Taiwan 20 years ago. Today, our YEM operations are present in Malaysia, Nigeria, Hong Kong and Mainland China.

Over the past several years, Brigantine has started to aggressively build up our local organizational capability in Mainland China through significant investment in human resources and equipment. As part of our quality commitment to our customers, our experienced professional engineers come from existing terminals, institutions, and crane manufacturers.

Some of our mainland Chinese customers may be concerned with our rates due to our commitment to quality – are Brigantine's rates competitive? Do we offer the best value for money? The extensive bidding and subsequent rigorous vendor selection process employed by Dachan Bay Terminal in fact shows that Brigantine is not only an expert for equipment maintenance and repair but also price competitive!

We thank Dachan Bay for recognizing Brigantine's true value, and we look forward to further enhancing our relationship with them. With peace of mind through our quality service, they can rest easy while focusing on their core business.

Should you be interested, please contact Mr. Patrick Gao Bao Qiang at [+86 150 1289 6583](tel:+8615012896583).