Bulletin

CCS Australian Office, No. 051, 2016 Issue 001

Port Hedland Safety Information

--- Mooring Line and Winch Break Rendering Load Test

With reference recent incidents occurred in Port Hedland, it was noted by BHP Billiton Berth that in 2013 there were 5 parted line incidents reported, and there were 16 parted line incidents in 2014. Parted lines make up 18% of all significant events for BHP Berth in Port Hedland.

Analysis by BHP to latest 12 line incidents (till February 2015) indicated following root causes:

- Mooring lines in poor condition (4 incidents)
- Unequal or incorrect tension applied to mooring lines (incidents)

In addition to above 12 incidents there has been three instances over the last few months (till February 2015) where mooring liens have been rejected upon berthing due to substandard condition. Duly we remaindered as follows:

1. Mooring line kept in good working condition.

As indicated in Newsletter Issue 1 from BHP Billiton in February 2015, Vessel Master was reminded as follows:

- Remind the vessel Masters that it is their responsibility to ensure their lines are monitored effectively.
- Remind vessel Masters that the minimum port requirements for tending to mooring lines are as follows:

  --- Ship mooring lines are to be properly tended 24 hours per day whilst a vessel is moored alongside. Mooring lines are to be kept tight and the ship kept firmly alongside and parallel to the fender line

--- Masters of Vessels are requested to ensure that ships mooring lines are checked and if necessary tightened at least 30 minutes prior to scheduled passing movements of large ships.

- Remind vessel Masters to ensure that all winch equipment is in good working order and any deficiencies are reported through their respective agent prior to berthing.(Don't Forget to reported deficiency to AMSA simultaneously)
- Remind vessel Masters to ensure that pre-berthing inspections of mooring lines is carried out and change out of any lines that are in poor condition or are not suitable is completed prior to berthing.
- Ensure that all crews onboard vessels calling Port Hedland are thoroughly trained in monitoring of mooring lines and operation of winches.

2. Winch Break Rendering Load Test

Winch brake is the heart of the mooring system as it secures the drum and thereby the mooring line at the shipboard end. It also act as a safety device in case the load in the line becomes excessive, by rendering and allowing the line to shed its load before it breaks （at Maximum Breaking Load).

As a result of the recent incidents and to ensure all people are safe and port operations are not impacted, BHP Billiton will be introducing a new requirement for winch brake render test to have been completed with following details:

- Winch Brake Rendering Load Test will become mandatory for all vessels loading at BHP Billiton berths as of July 1st 2017.
- The test MUST be conducted at intervals of no more than 2.5 years
- Any deficiencies identified during the test MUST be rectified and retested to ensure compliance.

As indicated in the Newsletter, between now and the July 1st, 2017 BHP Billiton marine personnel will be checking whether the testing has been completed however vessels will

continue to be accepted if the test is scheduled to take place prior to the cut off.

It was confirmed to BHP Billiton the Winch Break Rendering Test can be conducted by crew staff on board, subject to suitable Winch Break Test Kit was provided on board.

Winch Brake Test should be carried out after completion of any modification or repair involving the winch brakes, or upon any evidence of premature brake slippage or related malfunctions. DULY, it was recommended Winch Break Test Kit was to be provided on board as indicated in appendix 2.

As per marine industry normal policy, the Winch Brake was normally set to hold 60% of the mooring line Minimum Breaking Load, excessive setting will cause Winch Brake failed to render and allow the line to shed its load before it break (at Maximum Breaking Load).

Appendix No.1： Marine Notice 18/2015

Appendix No.2: Picture of Brake Test Kit

CCS Australia Office

January 11, 2016

Announcement:

1. Intention is to assist and ensure owners to understand and well prepared, ensuring all updated requirements from AMSA can be met
2. For more information, please visit AMSA website at www.amsa.gov.au and CCS website at www.ccs.org.cn
3. The information contained does not and cannot supersede any AMSA or related governing parties requirements as well as CCS class rules and regulations.

Attachment 1: Newsletter from Port Hedland BHP

Port Hedland Shipping Community Newsletter – Issue 1 - February 2015

bhpbilliton
resourcing the future

Welcome

This is the first of our newsletters which have been designed to broadcast to Customers, Shipping Owners and Operators incidents and risks that occur at our Port Hedland operations. The purpose of this newsletter is to work with our Customers and their Shipping Companies to reduce the risk of a serious incident occurring.

This first newsletter is focussed on ships lines and the recent increase in the number of parted line incidents that we have seen in Port Hedland.



Significant increase seen in the number of parted line incidents

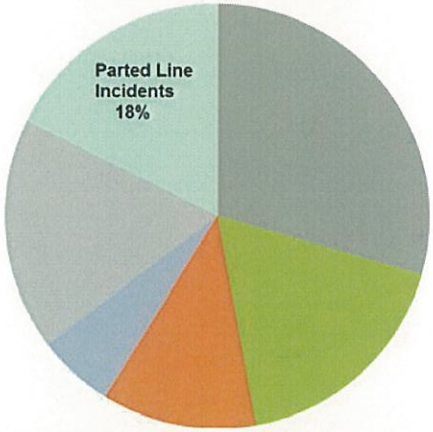
Over the past six months we have seen a significant increase in the number of parted line incidents at BHP Billiton berths in Port Hedland.

Of the 12 incidents that have occurred in the last six months the following have been identified as the root causes:

- *Mooring lines in poor condition (4 incidents)*
- *Unequal or incorrect tension applied to mooring lines (8 incidents)*

In addition to these incidents there has been three instances over the last few months where mooring lines have been rejected upon berthing due to substandard condition.

- **In 2013 there were 5 parted line incidents reported**
- **In 2014 there were 16 parted line incidents reported**
- **Parted lines make up 18% of all significant events for BHPB in Port Hedland**



Parting mooring lines can kill or injure both shore personnel and vessel crew

A vessel that drifts off a berth due to parted lines could result in a collision or worse still a blockage of the channel

What is BHP Billiton doing?

New Communication Process

BHP Billiton shiploader operators have now been instructed to inform the crew when a vessel movement is about to take place at Finucane Island.

Improvements to BHP Billiton Mooring Line Monitoring Systems

BHP Billiton has identified a number of improvements to enhance the existing mooring line monitoring systems. The improvement includes the ability to monitor under-tensioned lines and a visual aid for vessels to identify when a line is under too much tension.These will be introduced in due course.

Mooring awareness sessions with Port Hedland Pilots

All BHP Billiton Production personnel have recently completed mooring awareness sessions with Port Hedland Pilots to get a better understanding of the risks associated with mooring lines. This should assist communication and understanding on the berthing and sailing of vessels.

Vessel interaction and mooring analysis project

BHP Billiton is about to commence a detailed study on the incidents that have occurred over the last six months to determine the root causes and contributing factors. The study will be looking at the following factors:

- *Vessel interaction*
- *Mooring line type, age and condition*
- *Mooring arrangements*
- *Tidal flow within the harbor*

Upon completion of the study a number of recommendations will be provided on strategies and processes that can be put in place to minimize the risk.



We all need to work together to minimize the risk

What can you do to help?

- *Remind the vessel Masters that it is their responsibility to ensure their lines are monitored effectively*
- *Remind vessel Masters that the minimum port requirements for tending to mooring lines are as follows:*
  - *Ships mooring lines are to be properly tended 24 hours per day whilst a vessel is moored alongside. Mooring lines are to be kept tight and the ship kept firmly alongside and parallel to the fender line*
  - *Masters of Vessels are requested to ensure that ships mooring lines are checked and if necessary tightened at least 30 minutes prior to scheduled passing movements of large ships*
- *Remind vessel Masters to ensure that all winch equipment is in good working order and any deficiencies are reported through their respective agent prior to berthing*
- *Remind vessel Masters to ensure that pre-berthing inspections of mooring lines is carried out and change out of any lines that are in poor condition or are not suitable is completed prior to berthing*
- *Ensure that all crews onboard vessels calling Port Hedland are thoroughly trained in monitoring of mooring lines and operation of winches*

Winch Brake Testing

Background

There have recently been a number of incidents where vessels have drifted off the berth due to mooring winch brakes being ineffective in holding the vessel alongside.

Port Hedland has large tidal movements and high traffic volumes which means effective winch brakes are essential to hold vessels alongside and mitigate the effects of vessel interaction and surging.

New Requirement

As a result of the recent incidents and to ensure all people are safe and port operations are not impacted, BHP Billiton will be introducing a new requirement for winch brake rendering test to have been completed.

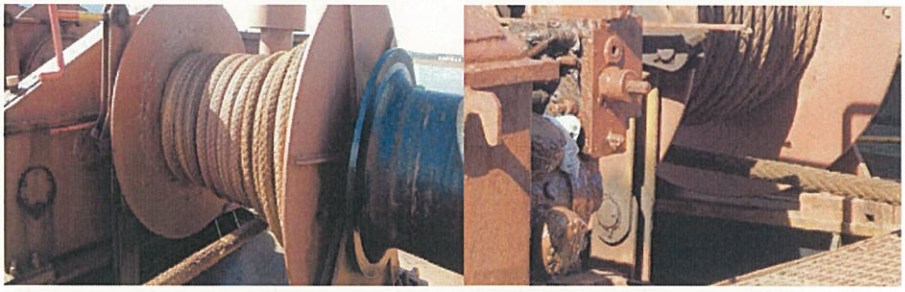
Details are as follows:

- *Winch brake rendering load test will become mandatory for all vessels loading at BHP Billiton berths as of 1st July 2017*
- *The test must be conducted at intervals of no more than 2.5 years*
- *Any deficiencies identified during the test must be rectified and retested to ensure compliance*

The Terminal Vetting Questionnaire (TVQ) will be updated to reflect this requirement.



New requirement for winch break testing



Implementation of new requirement

As of the 1st July 2017 all ships that call BHP Billiton berths at Port Hedland must have completed the winch brake rendering test within the previous 2.5 years.

Between now and the 1st of July 2017 BHP Billiton marine personnel will be checking whether the testing has been completed however vessels will continue to be accepted if the test is scheduled to take place prior to the cut off.

Together we can make Port Hedland incident free!

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Brake Test Kit

With reference to chapter 7.4.5 in OCIMF Mooring Equipment Guidelines they recommend testing of mooring winch band brakes every year. To test and adjust the Brake Setting Indicator (BSI), or other brakes, Aker Pusnes AS has made a testing tool that will fit every type of drum sizes. The flange of the drum can easy be drilled with two ø82mm holes to fit the equipment.

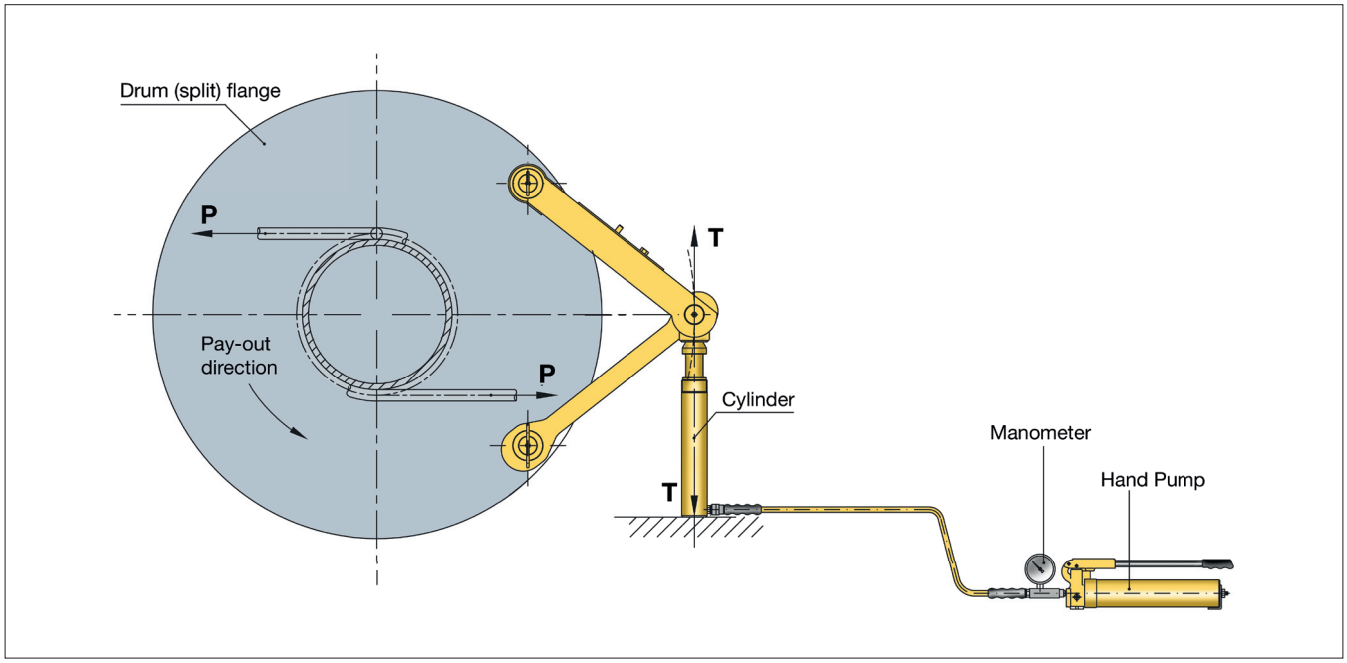
Technical specifications of box:
Total weight with equipment: 75 kg
Dimensions:
LxHxW: 1115x375x335mm
Box made of hard plastic and designed to withstand 180kg of equipment.

For testing instructions, see Aker Pusnes AS documents: TI0004, TI0005, 217205, 215775 and 324199.

Compact and professional storing.

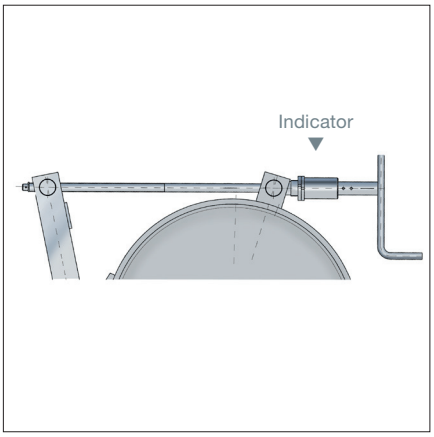
Can be stored vertical and is easy to handle with wheels in one end.

Aker Pusnes AS deliver adjustable Brake Setting Indicator (BSI). This equipment is made to ensure that band brake will render at 60% of Main Braking Load (MBL) of wire/ rope.









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