

CERTIFICATE OF BOLLARD PULL

| | |
|--|--|
| Ship's name INDEE | Certificate number GZU 0320502/2 |
| Owner PSA Singapore | LR Office Guangzhou |
| | Date 30 Mar 2004 |
| Shipbuilder Hin Lee (Zhuhai) Shipyard Co., Ltd | Yard number 4821 |
| Location bollard pull trials held HUD, Hong Kong | Trial date 29 March 2004 |

This certificate is issued to **Hin Lee (Zhuhai) Shipyard Co., Ltd** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of: **Hin Lee (Zhuhai) Shipyard Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 12:28 | 12:29 | 1600 | 2500X2 | 58.1 | 60.4 |
| 2 | 12:29 | 12:30 | 1600 | 2500X2 | 59.2 | 60.7 |
| 3 | 12:30 | 12:31 | 1600 | 2500X2 | 58.2 | 59.1 |
| 4 | 12:31 | 12:32 | 1600 | 2500X2 | 59.0 | 61.5 |
| 5 | 12:32 | 12:33 | 1600 | 2500X2 | 59.3 | 60.2 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

CERTIFIED BOLLARD PULL

It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of: **58.7** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **61.5** tonnes force.

These results were recorded, during run number **1 to 5** without the main engine being overloaded.

Shaft driven auxiliaries were fully engaged / not engaged / not fitted (delete as applicable)

| | |
|--|---|
| Remarks This certificate is valid until 29 March 2004 . Issued at Guangzhou on 30 March 2009 . | Signature - Surveyor to Lloyd's Register of Shipping Asia Z.Q.Li |
|--|---|

SHIP PARTICULARS

| | |
|------------------------------------|----------------------------------|
| Length B.P. (m) LWL 25.0 | Moulded depth (m) 5.0 |
| Moulded breadth (m) 11.5 | Design draught (m) 5.0 |

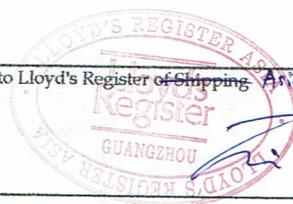
MACHINERY PARTICULARS

| | |
|---|--|
| Engine builders CATERPILLAR INC, USA | Propeller manufacturer undilusa, Zona Industrial, portugal |
| Engine type Internal combinstion Engine (3516B) | Propeller plan number 1139310 (approved by LR Hamburg) |
| Engine number 4BW00536, 4BW00537 | Number fitted 2 |
| Engine rating (MCR) 1600RPM | Fixed/ CPP FIXED |
| Gear ratio 5.718:1 | Propeller diameter (m) 2400 |
| Shaft driven auxiliaries (HP) 2500X2 | Number of blades 4 |
| | Propeller RPM 280 |
| | Propeller duct type NOZZLE (Type Schottel) |

TRIAL PARTICULARS

| | |
|--|---|
| Draught forward (m) 4.9 | Water depth (m) 23 |
| Draught aft (m) 5.2 | Temperature of water (°C) 15 |
| Mean draught (m) 5.05 | Density of water (t/m³) 1.02 |
| Trim (m) 0.22 | Wind speed (m/s) 1.0 |
| Displacement (t) 519 | Current speed (m/s) 1.0 |
| Immersion of propeller tips (% diameter) 100 | Observed wave height (m) 0.2 |
| Distance from stern of ship to pier (m) 200 | Height of towing hook above water level (m) 3.0 |
| Type of load cell R3000CSP-200K | Height of bollard above water level (m) 4.5 |
| Date of calibration 16 Apr 2003 | Angle of hawser from horizontal plane (deg) 0 |

Signature - Surveyor to Lloyd's Register of Shipping, Ltd.

Z.Q.Li

CERTIFICATE OF BOLLARD PULL

| | |
|--|--|
| Ship's name INDEE | Certificate number GZU 0320502/1 |
| Owner PSA Singapore | LR Office Guangzhou |
| | Date 30 Mar 2004 |
| Shipbuilder Hin Lee (Zhuhai) Shipyard Co., Ltd | Yard number 4821 |
| Location bollard pull trials held HUD, Hong Kong | Trial date 29 March 2004 |

This certificate is issued to **Hin Lee (Zhuhai) Shipyard Co., Ltd** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of **Hin Lee (Zhuhai) Shipyard Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 10:49 | 10:50 | 1600 | 2500X2 | 60.9 | 62.3 |
| 2 | 10:50 | 10:51 | 1600 | 2500X2 | 64.9 | 70.1 |
| 3 | 10:51 | 10:52 | 1600 | 2500X2 | 63.8 | 69.8 |
| 4 | 10:52 | 10:53 | 1600 | 2500X2 | 62.7 | 68.1 |
| 5 | 10:53 | 10:54 | 1600 | 2500X2 | 62.7 | 67.2 |
| | | | | | | |
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CERTIFIED BOLLARD PULL

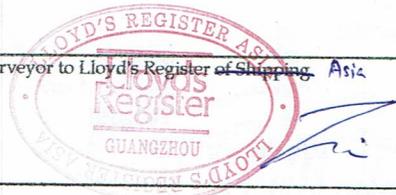
It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of: **63.0** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **70.1** tonnes force.

These results were recorded, during run number **1 to 5** without the main engine being overloaded.

Shaft driven auxiliaries were ~~fully engaged~~ / ~~not engaged~~ / not fitted (delete as applicable)

| | |
|--|---|
| Remarks This certificate is valid until 29 March 2004 . Issued at Guangzhou on 30 March 2009 . | Signature - Surveyor to Lloyd's Register of Shipping, Asia Z.Q.Li |
|--|---|



SHIP PARTICULARS

| | |
|------------------------------------|----------------------------------|
| Length B.P. (m) LWL 25.0 | Moulded depth (m) 5.0 |
| Moulded breadth (m) 11.5 | Design draught (m) 5.0 |

MACHINERY PARTICULARS

| | |
|---|--|
| Engine builders CATERPILLAR INC, USA | Propeller manufacturer undilusa, Zona Industrial, portugal |
| Engine type Internal combinstion Engine (3516B) | Propeller plan number 1139310 (approved by LR Hamburg) |
| Engine number 4BW00536, 4BW00537 | Number fitted 2 |
| Engine rating (MCR) 1600RPM | Fixed/CPP FIXED |
| Gear ratio 5.718:1 | Propeller diameter (m) 2400 |
| Shaft driven auxiliaries (HP) 2500X2 | Number of blades 4 |
| | Propeller RPM 280 |
| | Propeller duct type NOZZLE (Type Schottel) |

TRIAL PARTICULARS

| | |
|--|---|
| Draught forward (m) 4.9 | Water depth (m) 26 |
| Draught aft (m) 5.2 | Temperature of water (°C) 15 |
| Mean draught (m) 5.05 | Density of water (t/m³) 1.02 |
| Trim (m) 0.22 | Wind speed (m/s) 1.0 |
| Displacement (t) 519 | Current speed (m/s) 1.0 |
| Immersion of propeller tips (% diameter) 100 | Observed wave height (m) 0.2 |
| Distance from stern of ship to pier (m) 200 | Height of towing hook above water level (m) 2.5 |
| Type of load cell R3000CSP-200K | Height of bollard above water level (m) 4.5 |
| Date of calibration 16 Apr 2003 | Angle of hawser from horizontal plane (deg) 0 |

Signature - Surveyor to Lloyd's Register of Shipping, AN's
Z.Q.Li




Certificate of Class

This certificate is issued to the **INDEE**
LR Number **9289635**
Date of Build **30/03/2004**
Port of Registry **Port Hedland, WA**
Gross tons **325**

to confirm that having been surveyed by Lloyd's Register International and having been found in compliance with the Rules and Regulations for the Classification of Ships, the aforesaid ship has been assigned the class

- ✳ **100A1 Tug**
- ✳ **LMC UMS**

Date Special Survey Assigned **30 March 2014**
This Certificate is valid until* **29 March 2019**

* Unless extended after completion of a Special Survey (see page 3) or in accordance with Part 1, Chapter 2, Section 3.5.9 of the Rules and Regulations (see page 3) and is subject to surveys as prescribed (see page 2) being satisfactorily completed. (See notes 1 to 4, page 3)

Issued at **Fremantle**
on **27 May 2014**



Vijayan Keyarat
Surveyor to Lloyd's Register International

A subsidiary of Lloyd's Register Group Limited

- Note:
1. To establish the classification status of this ship, the ClassDirect Live web site and the Interim Certificates issued on completion of classification surveys should be consulted in addition to this certificate. Access to ClassDirect Live is available via <http://www.cd.live.lr.org>.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Ships Name INDEE

LR number 9289635

Annual/Intermediate survey endorsements

1st Annual Survey endorsement

Signed: PP Peter Hatton
Place of Survey Port Hedland
Date 15 Jan 2015



2nd Annual Survey / Intermediate Survey* endorsement

Signed: CASAN LINDA
Place of Survey PORT HEDLAND
Date 09 FEBRUARY 2016



3rd Annual Survey / Intermediate Survey* endorsement

Signed: C. J. Chew
Place of Survey Port Hedland, WA
Date 1 March 2017



4th Annual Survey endorsement

Signed:
Place of Survey
Date

* Delete as appropriate

Ships Name INDEE

LR number 9289635

Extension of special survey completion date

In accordance with the Rules and Regulations for the Classification of ships this certificate is extended until (see note 2)

Signed:

Place of Survey

Date

Special survey completion

This Special Survey having been completed, this certificate is extended until

Signed:

Place of Survey

Date

Notes

- 1 In accordance with the Rules and Regulations for the Classification of Ship's, class will be automatically suspended and this certificate becomes invalid if not endorsed annually within three months of the due date of the Annual or Intermediate Surveys.
- 2 This certificate expires on the due date of the Special Survey. Consideration can be given at the discretion of the Committee to any exceptional circumstances justifying an extension to the Special Survey completion date for a maximum period of three months beyond the validity of this certificate.
- 3 Prior to the endorsement of this certificate all overdue hull and machinery surveys should be dealt with or postponed by agreement.
- 4 In normal circumstances the Annual or Intermediate Survey is to be held in conjunction with the Periodical Load Line Inspection and the Safety Construction Annual Survey.

CERTIFICATE OF BOLLARD PULL

| | |
|--|--|
| Ship's name "PARDOO" | Certificate number GZU 0320503 / 1 |
| Owner PSA Singapore | LR Office Guangzhou |
| | Date 16 May 2004 |
| Shipbuilder Cheoy Lee Shipyards Co., Ltd | Yard number 4822 |
| Location bollard pull trials held H.U.D. Hong Kong | Trial date 16 May 2004 |

This certificate is issued to **Cheoy Lee Shipyards Co., Ltd** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of: **Cheoy Lee Shipyards Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 09:36 | 09:37 | 1600 | 2500 x 2 | 61.8 | 63.2 |
| 2 | 09:37 | 09:38 | 1600 | 2500 x 2 | 61.2 | 62.5 |
| 3 | 09:38 | 09:39 | 1600 | 2500 x 2 | 61.6 | 69.8 |
| 4 | 09:39 | 09:40 | 1600 | 2500 x 2 | 62.4 | 64.3 |
| | | | | | | |
| | | | | | | |
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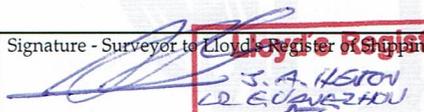
CERTIFIED BOLLARD PULL

It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of: **61.75** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **69.8** tonnes force.

These results were recorded, during run number **1 to 4** without the main engine being overloaded.

Shaft driven auxiliaries were ~~fully engaged / not engaged /~~ not fitted (delete as applicable)

| | |
|---|--|
| Remarks This certificate is valid until 15 May 2009 Issued at Hong Kong on 16 May 2004. | Signature - Surveyor to Lloyd's Register Asia  J.A.Henton Surveyor to LR Asia |
|---|--|

SHIP PARTICULARS

| | |
|------------------------------------|----------------------------------|
| Length B.P. (m) LWL 25.0 | Moulded depth (m) 5.0 |
| Moulded breadth (m) 11.5 | Design draught (m) 5.0 |

MACHINERY PARTICULARS

| | |
|---|---|
| Engine builders Caterpillar Inc, USA | Propeller manufacturer Undilusa Zona Industrial, Portugal |
| Engine type Internal Combustion Engine Cat. 3516B | Propeller plan number 1139310 (Approved by LR Hamburg) |
| Engine number 4BW00546, 4BW00547 | Number fitted 2 |
| Engine rating (MCR) 1600rpm | Fixed/ CPP Fixed |
| Gear ratio 5.718:1 | Propeller diameter (m) 2400 |
| Shaft driven auxiliaries (HP) 2500 x 2 | Number of blades 4 |
| | Propeller RPM 280 |
| | Propeller duct type Nozzle (Schottel) |

TRIAL PARTICULARS

| | |
|---|---|
| Draught forward (m) 4.6 | Water depth (m) 24.5 |
| Draught aft (m) 5.5 | Temperature of water (°C) 16 |
| Mean draught (m) 5.15 | Density of water (t/m³) 1.02 |
| Trim (m) 0.7 | Wind speed (m/s) 1.0 |
| Displacement (t) 519 | Current speed (m/s) 1.0 |
| Immersion of propeller tips (% diameter) 100% | Observed wave height (m) 0.3m |
| Distance from stern of ship to pier (m) 150m | Height of towing hook above water level (m) 2.5 |
| Type of load cell R3000CSP-200K | Height of bollard above water level (m) 4.0 |
| Date of calibration 21 April 2004 | Angle of hawser from horizontal plane (deg) 0 |

Signature - Surveyor to Lloyd's Register of Shipping

J.A.Henton Surveyor to LR Asia

YARD NO. 4822 M/T "PARDOO"

BOLLARD PULL TEST RECORD

Date of Test: 16/5/2004

(ASTERN TOWING)

| Engine RPM | P S | 900 | 1100 | 1300 | 1600 |
|-------------------------------|--------|-----------------------|-------|-------|--------|
| Engine Loading (%) | | 36% | 46% | 54% | 96.5% |
| No. of Reading (every 15 sec) | | Bollard Pull (Tonnes) | | | |
| 1 | | 19.3 | 28.9 | 39.3 | 61.2 |
| 2 | | 19.3 | 28.6 | 42.3 | 62.1 |
| 3 | | 17.2 | 27.6 | 42.1 | 60.3 |
| 4 | | 23.3 | 28.9 | 40.8 | 60.3 |
| 5 | | 17.3 | 28.1 | 39.8 | 59.3 |
| 6 | | | | | 62.2 |
| 7 | | | | | 60.5 |
| 8 | | | | | 60.5 |
| 9 | | | | | 60.6 |
| 10 | | | | | 61.5 |
| 11 | | | | | 59.8 |
| 12 | | | | | 60.5 |
| 13 | | | | | 64.0 |
| 14 | | | | | 60.7 |
| 15 | | | | | 60.2 |
| 16 | | | | | 61.3 |
| 17 | | | | | 59.7 |
| 18 | | | | | 62.5 |
| 19 | | | | | 61.8 |
| 20 | | | | | 59.8 |
| Total (Tonnes) | | 96.3 | 142.1 | 204.3 | 1218.8 |
| Average (Tonnes) | | 19.26 | 28.42 | 40.86 | 60.94 |

CERTIFICATE OF BOLLARD PULL

| | |
|--|--|
| Ship's name "PARDOO" | Certificate number GZU 0320503 / 2 |
| Owner PSA Singapore | LR Office Guangzhou |
| | Date 16 May 2004 |
| Shipbuilder Cheoy Lee Shipyards Co., Ltd | Yard number 4822 |
| Location bollard pull trials held H.U.D. Hong Kong | Trial date 16 May 2004 |

This certificate is issued to **Cheoy Lee Shipyards Co., Ltd** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of: **Cheoy Lee Shipyards Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 10:24 | 10:25 | 1600 | 2500 x 2 | 60.6 | 62.1 |
| 2 | 10:25 | 10:26 | 1600 | 2500 x 2 | 61.1 | 62.2 |
| 3 | 10:26 | 10:27 | 1600 | 2500 x 2 | 61.0 | 64.0 |
| 4 | 10:27 | 10:28 | 1600 | 2500 x 2 | 61.0 | 62.5 |
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CERTIFIED BOLLARD PULL

It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of: **60.925** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **64.0** tonnes force.

These results were recorded, during run number **1 to 4** without the main engine being overloaded.

Shaft driven auxiliaries were ~~fully engaged / not engaged /~~ not fitted (delete as applicable)

| | |
|---|---|
| Remarks This certificate is valid until 15 May 2009 Issued at Hong Kong on 16 May 2004. | Signature - Surveyor to Lloyd's Register of Shipping  J.A.Henton - Surveyor to LR Asia |
|---|---|



SHIP PARTICULARS

| | |
|------------------------------------|----------------------------------|
| Length B.P. (m) LWL 25.0 | Moulded depth (m) 5.0 |
| Moulded breadth (m) 11.5 | Design draught (m) 5.0 |

MACHINERY PARTICULARS

| | |
|---|---|
| Engine builders Caterpillar Inc, USA | Propeller manufacturer Undilusa Zona Industrial, Portugal |
| Engine type Internal Combustion Engine Cat. 3516B | Propeller plan number 1139310 (Approved by LR Hamburg) |
| Engine number 4BW00546, 4BW00547 | Number fitted 2 |
| Engine rating (MCR) 1600rpm | Fixed/CPP Fixed |
| Gear ratio 5.718:1 | Propeller diameter (m) 2400 |
| Shaft driven auxiliaries (HP) 2500 x 2 | Number of blades 4 |
| | Propeller RPM 280 |
| | Propeller duct type Nozzle (Schottel) |

TRIAL PARTICULARS

| | |
|---|---|
| Draught forward (m) 4.6 | Water depth (m) 24.5 |
| Draught aft (m) 5.5 | Temperature of water (°C) 16 |
| Mean draught (m) 5.15 | Density of water (t/m³) 1.02 |
| Trim (m) 0.7 | Wind speed (m/s) 1.0 |
| Displacement (t) 519 | Current speed (m/s) 1.0 |
| Immersion of propeller tips (% diameter) 100% | Observed wave height (m) 0.3 |
| Distance from stern of ship to pier (m) 150 | Height of towing hook above water level (m) 2.5 |
| Type of load cell R3000CSP-200K | Height of bollard above water level (m) 4.0 |
| Date of calibration 21 April 2004 | Angle of hawser from horizontal plane (deg) 0 |

Signature - Surveyor to Lloyd's Register of Shipping

J.A.Henton - Surveyor to LR Asia

COPY



TOWING AHEAD

CERTIFICATE OF BOLLARD PULL

| | |
|--|--|
| Ship's name "PARDOO" | Certificate number GZU 0320503 / 1 |
| Owner PSA Singapore | LR Office Guangzhou |
| | Date 16 May 2004 |
| Shipbuilder Cheoy Lee Shipyards Co., Ltd | Yard number 4822 |
| Location bollard pull trials held H.U.D. Hong Kong | Trial date 16 May 2004 |

This certificate is issued to **Cheoy Lee Shipyards Co., Ltd** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of: **Cheoy Lee Shipyards Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 09:36 | 09:37 | 1600 | 2500 x 2 | 61.8 | 63.2 |
| 2 | 09:37 | 09:38 | 1600 | 2500 x 2 | 61.2 | 62.5 |
| 3 | 09:38 | 09:39 | 1600 | 2500 x 2 | 61.6 | 69.8 |
| 4 | 09:39 | 09:40 | 1600 | 2500 x 2 | 62.4 | 64.3 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

CERTIFIED BOLLARD PULL

It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of: **61.75** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **69.8** tonnes force.

These results were recorded, during run number **1 to 4** without the main engine being overloaded.

Shaft driven auxiliaries were ~~fully engaged~~ / ~~not engaged~~ / not fitted (delete as applicable)

| | |
|---|---|
| Remarks This certificate is valid until 15 May 2009 Issued at Hong Kong on 16 May 2004. | Signature - Surveyor to Lloyd's Register Asia J.A.Henton Surveyor to Lloyd's Register Asia |
|---|---|

SHIP PARTICULARS

| | |
|------------------------------------|----------------------------------|
| Length B.P. (m) LWL 25.0 | Moulded depth (m) 5.0 |
| Moulded breadth (m) 11.5 | Design draught (m) 5.0 |

MACHINERY PARTICULARS

| | |
|---|---|
| Engine builders Caterpillar Inc, USA | Propeller manufacturer Undilusa Zona Industrial, Portugal |
| Engine type Internal Combustion Engine Cat. 3516B | Propeller plan number 1139310 (Approved by LR Hamburg) |
| Engine number 4BW00546, 4BW00547 | Number fitted 2 |
| Engine rating (MCR) 1600rpm | Fixed/CPP Fixed |
| Gear ratio 5.718:1 | Propeller diameter (m) 2400 |
| Shaft driven auxiliaries (HP) 2500 x 2 | Number of blades 4 |
| | Propeller RPM 280 |
| | Propeller duct type Nozzle (Schottel) |

TRIAL PARTICULARS

| | |
|---|---|
| Draught forward (m) 4.6 | Water depth (m) 24.5 |
| Draught aft (m) 5.5 | Temperature of water (°C) 16 |
| Mean draught (m) 5.15 | Density of water (t/m ³) 1.02 |
| Trim (m) 0.7 | Wind speed (m/s) 1.0 |
| Displacement (t) 519 | Current speed (m/s) 1.0 |
| Immersion of propeller tips (% diameter) 100% | Observed wave height (m) 0.3 |
| Distance from stern of ship to pier (m) 150 | Height of towing hook above water level (m) 2.5 |
| Type of load cell R3000CSP-200K | Height of bollard above water level (m) 4.0 |
| Date of calibration 21 April 2004 | Angle of hawser from horizontal plane (deg) 0 |

Signature - Surveyor to Lloyd's Register of Shipping

J.A.Henton - Surveyor to LR Asia

YARD NO. 4822 M/T "PARDOO"

BOLLARD PULL TEST RECORD

Date of Test: 16/5/2004

(ASTERN TOWING)

| Engine RPM | P | 900 | 1100 | 1300 | 1600 |
|-------------------------------|---|-----------------------|-------|-------|--------|
| | S | | | | |
| Engine Loading (%) | | 36% | 46% | 54% | 96.5% |
| No. of Reading (every 15 sec) | | Bollard Pull (Tonnes) | | | |
| 1 | | 19.3 | 28.9 | 39.3 | 61.2 |
| 2 | | 19.3 | 28.6 | 42.3 | 62.1 |
| 3 | | 17.2 | 27.6 | 42.1 | 60.3 |
| 4 | | 23.3 | 28.9 | 40.8 | 60.3 |
| 5 | | 17.3 | 28.1 | 39.8 | 59.3 |
| 6 | | | | | 62.2 |
| 7 | | | | | 60.5 |
| 8 | | | | | 60.5 |
| 9 | | | | | 60.6 |
| 10 | | | | | 61.5 |
| 11 | | | | | 59.8 |
| 12 | | | | | 60.5 |
| 13 | | | | | 64.0 |
| 14 | | | | | 60.7 |
| 15 | | | | | 60.2 |
| 16 | | | | | 61.3 |
| 17 | | | | | 59.7 |
| 18 | | | | | 62.5 |
| 19 | | | | | 61.8 |
| 20 | | | | | 59.8 |
| Total (Tonnes) | | 96.3 | 142.1 | 204.3 | 1218.8 |
| Average (Tonnes) | | 19.26 | 28.42 | 40.86 | 60.94 |



Certificate of Class

This certificate is issued to the **PARDOO**
LR Number **9289647**
Date of Build **11/05/2004**
Port of Registry **Port Hedland,WA**
Gross tons **325**

to confirm that having been surveyed by Lloyd's Register International and having been found in compliance with the Rules and Regulations for the Classification of Ships, the aforesaid ship has been assigned the class

⊗ **100A1 Tug**

⊗ **LMC**

Date Special Survey Assigned **11 May 2014**
This Certificate is valid until* **10 May 2019**

* Unless extended after completion of a Special Survey (see page 3) or in accordance with Part 1, Chapter 2, Section 3.5.9 of the Rules and Regulations (see page 3) and is subject to surveys as prescribed (see page 2) being satisfactorily completed. (See notes 1 to 4, page 3)

Issued at **Perth,WA**
on **11 June 2016**



CASALI Luigi
Surveyor to Lloyd's Register International

A subsidiary of Lloyd's Register Group Limited

Note: 1. To establish the classification status of this ship, the Class Direct web site and the Interim Certificates issued on completion of classification surveys should be consulted in addition to this certificate. Access to Class Direct is available via <http://www.cd.live.lr.org>.

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Ships Name PARDOO

LR number 9289647

Annual/Intermediate survey endorsements

1st Annual Survey endorsement

Signed:
Place of Survey Port Hedland
Date 18 May 2015



CHEW C.J.

2nd Annual Survey endorsement

Signed:
Place of Survey Port Hedland
Date 11 June 2016



CASALI Luigi

Intermediate Survey endorsement

Signed: C. J. Chew
Place of Survey Port Hedland, WA
Date 28 Feb. 2017



4th Annual Survey endorsement

Signed:
Place of Survey
Date

* Delete as appropriate

Ships Name **PARDOO**

LR number **9289647**

Extension of special survey completion date

In accordance with the Rules and Regulations for the Classification of ships this certificate is extended until (see note 2)

Signed: _____

Place of Survey

Date

Special survey completion

This Special Survey having been completed, this certificate is extended until

Signed: _____

Place of Survey

Date

- Notes
- 1 In accordance with the Rules and Regulations for the Classification of Ship's, class will be automatically suspended and this certificate becomes invalid if not endorsed annually within three months of the due date of the Annual or Intermediate Surveys.
 - 2 This certificate expires on the due date of the Special Survey. Consideration can be given at the discretion of the Committee to any exceptional circumstances justifying an extension to the Special Survey completion date for a maximum period of three months beyond the validity of this certificate.
 - 3 Prior to the endorsement of this certificate all overdue hull and machinery surveys should be dealt with or postponed by agreement.
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Certificate of Bollard Pull

Ship's name
YANDEYARRA

Owner
BHP BILLITON MINERALS PTY LTD

LR Office
Guangzhou

Date
23 June 2008

Yard number
4914

Trial date
20 June 2008

Location bollard pull trials held
Hong Kong HUD

Shipbuilder
HinLee (Zhuhai) Shipyard Co., Ltd

This certificate is issued to **BHP BILLITON MINERALS PTY LTD** to certify that the undersigned Surveyor to Lloyd's Register attended the bollard pull trials stated above for the purpose of ascertaining the bollard pull capacity of the subject ship, at the request of: **Hin Lee (Zhuhai) Shipyard Co., Ltd**

The relevant particulars of the ship and its machinery and propellers together with the significant trials data are listed on page 2 of this certificate. The trials were completed and the following results were obtained:

TRIAL RESULTS

| RUN NUMBER | START TIME | END TIME | SHAFT RPM | SHAFT HP | SBP | MBP |
|------------|------------|----------|-----------|----------|------|------|
| 1 | 10:25 | 10:26 | 1600 | 2500x2 | 63.5 | 64.8 |
| 2 | 10:26 | 10:27 | 1600 | 2500x2 | 62.5 | 63.8 |
| 3 | 10:27 | 10:28 | 1600 | 2500x2 | 62.2 | 64.7 |
| 4 | 10:28 | 10:29 | 1600 | 2500x2 | 61.7 | 63.2 |
| 5 | 10:29 | 10:30 | 1600 | 2500x2 | 62.2 | 64.1 |

CERTIFIED BOLLARD PULL

It is hereby certified that the vessel under the conditions described on page 2, exerted a Steady Bollard Pull (SBP) over a minimum of 5 minutes duration of **62.4** tonnes force.

It is also certified that the Maximum Bollard Pull (MBP) during the same five minute interval was **64.8** tonnes force.

These results were recorded, during run number **1-5** without the main engine being overloaded.

Shaft driven auxiliaries were fully **not fitted** (delete as appropriate)

Lloyd's Register Asia
Initials ZQL
Guangzhou Office
Z.Q.Li

Surveyor to **Lloyd's Register Asia**

A member of the Lloyd's Register Group

SHIP PARTICULARS

Length B.P. (m)
LWL 25.0
Moulded breadth (m)
11.5

Moulded depth (m)
5.0
Design draught (m)
5.0

MACHINERY PARTICULARS

Engine builders
CATERPILLAR INC, USA
Engine type
Internal combustion Engine (3516B)
Engine number
S2X00824, S2X00825
Engine rating (MCR)
1600RPM
Gear ratio
5.718:1
Shaft driven auxiliaries (HP)
-

Propeller manufacturer
Wartsila CME Zhenjiang Propeller Co., Ltd
Propeller plan number
HPC0310110/1863406/OS/BHS
Number fitted
2
Fixed/ CPP
FIXED
Propeller diameter (m)
2400
Number of blades
4
Propeller RPM
280
Propeller duct type
NOZZLE (Type SCHOTTEL)

TRIAL PARTICULARS

Draught forward (m)
4.85
Draught aft (m)
5.45
Mean draught (m)
5.15
Trim (m)
0.6
Displacement (t)
450
Immersion of propeller tips (% diameter)
100
Distance from stem of ship to pier (m)
200
Type of load cell
R3000CSP-200K
Date of calibration
28 March 2008

Water depth (m)
26.2
Temperature of water (°C)
20
Density of water (t/m³)
1.002
Wind speed (m/s)
1
Current speed (m/s)
1
Observed wave height (m)
0.3
Height of towing hook above water level (m)
3.0
Height of bollard above water level (m)
3.0
Angle of hawser from horizontal plane (deg)
0

Lloyd's Register Asia
Initials **ZC**
Zhenzhou Office
Surveyor to **Lloyd's Register Asia**

A member of the Lloyd's Register Group

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

Lloyd's **register** Certificate of Class

This certificate is issued to the **YANDEYARRA**

LR Number **9487134**

Date of Build **23/06/2008**

Port of Registry **Port Hed land, WA**

Gross tons **327**

to confirm that having been surveyed by Lloyd's Register Asia and having been found in compliance with the Rules and Regulations for the Classification of Ships, the aforesaid ship has been assigned the class

E4100A1 Tug

LMC , UMS

Date Special Survey Assigned **23 June 2013**

This Certificate is valid until* **22 June 2018**

* Unless extended after completion of a Special Survey (see page 3) or in accordance with Part 1, Chapter 2, Section 3.5.9 of the Rules and Regulations (see page 3) and is subject to surveys as prescribed (see page 2) being satisfactorily completed. (See notes 1 to 4, page 3)

Issued at **Fremantle**

on **25 June 2013**

o s egister
itil:
Fremantle Office

Ster

MAO, Thomas
Surveyor to Lloyd's Register Asia

A subsidiary of Lloyd's Register Group Limited

Note: 1. To establish the classification status of this ship, the ClassDirect Live web site and the Interim Certificates issued on completion of classification surveys should be consulted in addition to this certificate. Access to ClassDirect Live is available via <http://www.cdive.lr.org>.

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Ships Name **YANDEYARRA**

LR number **9487134**

Annual/Intermediate survey endorsements

1st Annual Survey endorsement

Signed: C- 1_4 wt
Place of Survey Y-L-rkekCawf'c
Date 27 June 2014

Lloyd's Register International
Initial: OHL
Fremantle Marine Office
Lloyd's Register

2nd Annual Survey / Intermediate Survey endorsement

Signed: C C VveA, J'
Place of Survey fr 1-1-ecA CAytel
Date 0.00.

Lloyd's Register International
Fremantle Marine Office
Lloyd's Register

...I.Ed-Aziamel4befvey / Intermediate Survey* endorsement

Signed: C. t4 Lrm
Place of Survey Yam' \e-c2(A.t-44
Date 1 ?1-t`A.at3 te.

Lloyd's Register International
Fremantle Marine Office
Lloyd's Register

4th Annual Survey endorsement

Signed:
Place of Survey
Date

"Delete as appropriate"

Ships Name **YANDEYARRA**

LR number **9487134**

Extension of special survey completion date

In accordance with the Rules and Regulations for the Classification of ships this certificate is extended until (see note 2)

Signed:

Place of Survey

Date

Special survey completion

This Special Survey having been completed, this certificate is extended until

Signed:

Place of Survey

Date

- Notes
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