



This is to certify that at the request of the Sheriff Office, Supreme Court of Singapore, we have attended on board the steel, twin screw, double hull, oil tanker,

BRIGHTOIL 326

IMO 9760861 of Singapore

Whilst the vessel lay afloat in ballast condition at Eastern Special Purpose Anchorage (AESP), Singapore on 9th August 2019 for the purpose of conducting a General Condition and Appraisal of the vessel and have to report as follows:

1. GENERAL PARTICULARS

Name of vessel : **BRIGHTOIL 326**

Call Sign : 9V3732

Flag/ Port of Registry : Singapore

Owners : Brightoil 326 Oil Tanker Pte Ltd

Managers : Brightoil Ship Management Pte Ltd

Type : Oil Tanker, Double hull

Built : 2015

Builder : Rizhao Kingda Shipbuilding Heavy Industry Co., Ltd.

Class : China Classification Society, CCS

Service Speed : 8 Knots (within port limits)

Dimensions:

Length Overall	: 90.0 m
Length BP	: 84.0 m
Breadth moulded	: 15.2 m
Depth moulded	: 7.2 m

Capacity:

Cargo	: 4,361.2 m ³
Fuel Oil	: 217.2 m ³
Marine Diesel Oil	: 96.3 m ³
Water Ballast	: 1,897.3 m ³
Fresh Water	: 121.0 m ³
GT	: 2,882
NT	: 1,215
DW	: 4,235 tonnes

Main Engine:

Two WARTSILA model 6L20 single-acting, 6 units, inline, four stroke, medium speed, exhaust gas turbocharged diesel engine directly geared to a HANGZHOU ADVANCE model LHS 1702 reversible reduction gearbox with a single screw shaft developing some 1,080 kW @ 1000 rpm.



2. SURVEYOR'S NOTE

In this report the following nomenclature is used to describe the condition of items and components:

Good: Condition superior in all respects or better than average, a condition unimpaired original strength and / or efficiency, no maintenance and or repair is required.

Satisfactory: Condition average, deficiencies of a minor nature not requiring correction: a condition of wear and tear of such an extent as not to affect original strength and/ or efficiency.

Serviceable: Condition below average, condition of wear and tear found to be of such an extent as to reduce strength and / or efficiency to a degree which does not require immediate corrective measures.

Unsatisfactory: Condition below average, condition of wear and tear found to be of such an extent as to reduce strength and/ or efficiency to a degree which requires immediate corrective measures, or those carrying a period of grace as granted by regulatory bodies.

Poor: Condition deteriorated in all respects, beyond economical repair, requiring renewal or replacement.

3. SURVEY

The vessel was surveyed on 9th August 2019 whilst she lay afloat and secured to her portside anchor at Eastern Special Purpose Anchorage (AESP), Singapore. At the time of our attendance, she was in a ballast condition.

The vessel is presently manned with a Master and 5 crew members.



4. HULL EXTERNAL PLATING

Port and starboard shell plating from shear strake to wind and light waterline level were noted in satisfactory condition. The bulbous bow and the transom plating were found in satisfactory condition. Both propellers (2) and rudders (2) were completely submerged and could not be viewed.

Hull plating paintwork on port and starboard sides was noted to be in satisfactory condition.

5. FORE DECK

The forecastle deck bulwark plating with connecting stays, air pipes, forward mooring bitts, roller / universal fairleads etc. were all noted to be intact, in good condition and well coated. Two electro-hydraulic anchor windlass and mooring winches with warping drums were intact and in satisfactory condition. The forward deck plating was in good condition and also well painted. A spare 2,100 kg spek anchor was found secured to the portside forecastle deck.

6. FORWARD BOSUN STORE

The forward Bosun store space was in satisfactory condition.

7. MAIN DECK PLATING

Port and starboard main deck plating was in good condition and well painted. Shipside handrails and fittings were found in good condition and well painted.

Deck stores and SOPEP locker spaces were in satisfactory condition.

Cargo and heating lines together with associated valves were well coated and in satisfactory condition.



8. AFT DECK

The aft deck fittings which consist of an electro-hydraulic mooring winch with double warping drums, mooring bitts, roller / universal fairleads, air and sounding pipes etc. were found intact and in good condition.

The aft handrails and deck plating were in good condition and well painted.

9. CARGO PUMP ROOM

The cargo pump space was well lit, marked and in good condition. The pump room bilges were noted in dry condition. Cargo pump room is protected by CO² fire extinguishing system and monitored by gas detectors. Two engine-driven COLFAX cargo pumps, one diesel oil pump and one stripping pump and two ballast pumps were found in satisfactory condition.

10. CARGO TANKS

The vessel has a total of 12 cargo tanks. Cargo tank no. 6P serves as Slop tank no. 6P. These tanks are fitted with thermal oil heating lines.

The cargo tanks are fitted with individual and common PV valves. The tanks were reportedly in empty condition and yet to be cleaned.

11. CARGO GEAR

Vessel is equipped with one JIANGSU HUAYING model 242 HCJ-2026-5A-005M cargo hose handling crane with SWL of 20 tonnes and jib length of 26.5 m. It is also equipped with a mass flow meter model CMFHC3MB04N3G2E22X.

12. ACCOMMODATION SPACES

The aft steel accommodation casing, including all surrounding external decks, walkways and fittings, were intact and well painted condition.

The vessel has cabins sufficient for 14 crew members on 2 deck levels.

The internal accommodation passageways, officers and crew cabins and other common areas were in good condition. Individual bathrooms were found to be in satisfactory condition.



13. SAFETY EQUIPMENT

The vessel has one fibreglass rescue boat and one freefall type fibreglass lifeboats of 6 and 15 person capacity respectively they are located on the wheelhouse and compass decks. In addition, she is fitted with 2 inflatable liferafts of 15 person capacity on the wheelhouse deck. The foregoing liferafts were due for servicing since 5th December 2018. The CO² room and its fixed fire-fighting installation located at the poop deck were last inspected on 5th December 2018 at Singapore. CO² fire-fighting system is designed to protect the engine room and pump room with a total of 17 cylinders.

Fixed foam fire-fighting tank is located in the engine room, bottom platform and was last inspected on 5th December 2017 at Singapore. All portable fire extinguishers and Breathing Apparatus were found due for servicing since December 2018.

14. GALLEY

The galley equipment consist of electric type double stove top, double sink and stainless steel cabinets, 4 refrigerators and one freezer unit. Mess room is equipped with rice cookers (1), refrigerator (1).

Galley space cleanliness was found in good condition.

15. NAVIGATION EQUIPMENT

The navigation bridge/ wheelhouse space is fitted with the following equipment:

- | | |
|--|--------------------------------|
| 1) One (X-band) Radar | Furuno FAR-2107 |
| 2) One (S-band) Radar | Furuno FAR-2117S |
| 3) One Electronics Chart Display
Information System (ECDIS) | Furuno FMD-3200 |
| 4) One VDR recorder | Headway HMT-100A |
| 5) Two GPS Navigator | Furuno GP-150
Furuno GP-150 |



- | | |
|--------------------------------------|-----------------|
| 6) One speed log | Furuno DS-80 |
| 7) Navigation and deck lights system | |
| 8) One Navtex receiver | Furuno NX-700A |
| 9) AIS | Furuno FA-150 |
| 10) Gyro compass repeater | Tokyo keiki INC |

GMDSS Radio Equipment

- | | |
|---|------------------|
| 1) One Inmarsat 'C' system, | Furuno Felcom-15 |
| 2) One MF/ HF radio, | Furuno FS-2570C |
| 3) Two VHF radio | Furuno FM-8800S |
| 4) Two search and rescue transponders | McMurdo safelink |
| 5) One Emergency position indicating radio beacon | SMART406 |

Note:

Charts comprised of Southern Malaysia (Johor and Tanjung Pelepas waters) and Singapore waters.

All of the above mentioned navigation and radio equipment were found in good condition with the exception of SART which was found expired since December 2018 and battery expired in January 2019.

Main Engine:

Two WARTSILA model 6L20 single-acting, 6 units, inline, four stroke, medium speed, exhaust gas turbocharged diesel engine directly geared to a HANGZHOU ADVANCE model GWC 39/41-02 reversible reduction gearbox with twin screw shaft developing some 1,080 kW @ 1000 rpm each. The engines have total running hours of 3,711 (P) and 5,029 (STB) respectively and have yet to undergo any major overhaul as reported by the Chief Engineer.

**Diesel Generators:**

Two units of CUMMINS model K19-DM turbo-charged, inline, 4 stroke, 6 cylinder diesel engines each of 380 kW output and driving two KONTUNE model CCF380J-KC42 3 – phase, 600 A, 60 Hz synchronous generators were fitted. Both engines have running hours of 14,828 (no. 1) and 19,677 (no. 2) respectively.

At the time of survey, no. 1 diesel generator was operating at 80 kW load with diesel oil. The diesel generator was found with lubricating oil leakages in way of crankcase.

One DONG FENG CUMMINS model 6CT8.3-GM129 emergency diesel generator of output 129 kW at 1,800 rpm is located on the portside wheelhouse deck. The emergency generator engine was found without battery sets and therefore unable to battery start. Diesel oil supply was reported to be very low, approximately 20 L.

There were no records of past major maintenance available on board for our review.

Cargo Pumps:

Two COLFAX model 249.290 twin screw positive displacement cargo pumps were located in the pump room and found to be in satisfactory condition. They are connected to two WEI CHAI turbo-charged, inline, 4 stroke, 6 cylinder diesel engines each of 255 kW output to both main engines via gearbox.

Both cargo oil pumps were reportedly serviced / overhauled in September 2016 due to shaft end oil leakage carried out by local service technicians.

Auxiliary Boilers:

The plant consists of one auxiliary composite boiler of make ZHANG JIANG GREENS and type LYF 0.8/4.0-0.7 and capacity of 0.8 T/ hr and design pressure of 0.78 Mpa was noted to be in satisfactory condition.

One ALFA LAVAL model TFO 87345 thermal oil boiler designed for cargo and slop tank heating was fitted and found in satisfactory condition.

It was reported by the Chief Engineer that the thermal oil boiler was never in operation due to cargo received in heated condition and all engines operating in diesel oil.

**Oily Water Separator:**

Oily water separator of make JOWA AB with capacity of 1 m³/hr including 15 ppm monitor was found in satisfactory condition.

Oil Purifiers:

Two fuel oil purifiers of make MITSUBISHI model SJ20gh with capacity of 1150L/ hr and two MITSUBISHI model SJ08 with capacity of 550L/ hr lubricating oil purifiers were fitted and found to be in satisfactory condition.

There were no records of past maintenance available on board for our review.

Air Compressors:

Two units SHUNFENG model WP-18L electric main air compressors were fitted and found in satisfactory condition.

There were no records of past maintenance available on board for our review.

Sewage Plant

The sewage treatment plant of make JOWA AB capacity for 15 persons was found in satisfactory condition.

Main & Auxiliary Cooling Pumps

Main and auxiliary engines cooling pumps were all noted in satisfactory condition and manufactured by TIANJIN PUMPS. One air con seawater cooling pump was noted to be in disassembled condition due to unavailable spare.

Steering Gear

Electro hydraulic two-ram type steering gear with twin rudder configuration of make NANJING HUAYING MARINE model V234NB39A2-00SM with a working pressure of 13.5 Mpa was found in satisfactory condition and tested at every ten days.



Engine Control Room

Main engine control room has the following fittings:

- Central console incorporating main engine control and alarm monitoring system
- Main engine and auxiliary machinery equipment monitoring system
- Main switchboard and distribution boards.

All of the above equipment was found in satisfactory condition with the exception of engine control room air conditioning unit operating without Freon gas supply and seawater inlet pipe leakage.

Machinery Space

Machinery space was generally in satisfactory condition.

16. SPEED AND CONSUMPTION

Vessel's speed and diesel oil consumption data are as follows:-

Main engine: Average speed 8.0 knots (port limit):

At sea (ballast) : 100 L x 24 hours = 2.4 MT per engine / day

At sea (laden) : 125 L x 24 hours = 3.0 MT per engine / day

Generator: Diesel oil (MGO) Consumption per engine/ day:

At sea : 0.685 MT

Idle in port/ anchorage : 0.685 MT

Boiler: Not in use.



17. SURVEY STATUS AND NOTATIONS

The vessel is classed with China Classification Society CCS rules with the following notation:

***CSA Oil Tanker, Double hull;F.P.≤ 60°CPSPC(B);In-water survey;BWMP9MEPC.127(53))**

***CSM**

Certificate of Class valid until: 20th September 2020

Class renewal Hull & Machinery valid until: 20th September 2020

18. TRADING CERTIFICATES

All trading certificates were sighted with expiry dates as follows:

MPA Harbour craft license	NIL
Certificate of Registry	NIL
ISM Safety Management Certificate	21 st August 2021
Minimum Safe Manning Certificate	NIL
Document of Compliance	18 th January 2020
Maritime Labour Certificate	21 st August 2021
International Load Line Certificate	20 th September 2020
Safety Construction Certificate	20 th September 2020
Safety Equipment Certificate	20 th September 2020
Safety Radio Certificate	20 th September 2020
Statement of Acceptance - Type approved	25 th August 2019



Equipment for Singapore Registered Ships

IOPP Certificate	20 th September 2020
IAPP Certificate	20 th September 2020
ISPP Certificate	20 th September 2020
ISS Certificate	3 rd December 2018
IIEEC Certificate	NIL
IAPP Certificate	20 th September 2020
IAF Certificate	NIL
International Tonnage Certificate	NIL
International Ballast Water Management Certificate	25 th August 2019
Ship Radio Station License	31 st January 2021

19. GENERAL COMMENTS

The vessel was found in satisfactory condition except the following:

1. Portside anchor chain studs noted several detached and shifted pieces.
2. Liferafts and associated hydrostatic release units servicing were found expired.
3. Lifejacket lights were expired since July 2019.
4. Emergency escape breathing device was found expired since 4th December 2018.
5. Fire-fighting extinguishers and CO2 fixed fire-fighting system were found last serviced since December 2017.
6. Auxiliary engine no. 1 was operating with lubricating oil leakage found in way of crankcase.



7. Air con cooling seawater pump no. 2 was found in dismantled condition due to unavailable spare parts. Presently bypassed and utilised seawater cooling condenser pump for boiler.
8. Emergency generator unable to start via battery due to none on board and diesel oil supply was found very low, approximately 20 L.

20. PHOTOGRAPHS

Photographs taken in the form of digital images, recorded during our attendance, are attached to and form part of this report. The undersigned confirms that the images reproduced here are a fair and reasonable representation of our findings at the time of our attendance.

MALIM ARAFFIZ
Attending Surveyor

ENCLOSURES

Ship's particulars	X
Classification Status	X
Classification and statutory certificates	X
Continuous synopsis record	X
General arrangement plan	X
Capacity plan	X
Photographs	X
Terms and Conditions	X