

REPORT ON OIL ENGINE MACHINERY.

No. 12500

Received at London Office

DEC 2 1939

Date of writing Report

When handed in at Local Office

30.11.39 Port of

Belfast

No. in Survey held at
Reg. Book.

36311 on the

Single

Twin

Triple

Quadruple

Screw vessel

"WAHOTIRA"

Date, First Survey

16 Aug 1938

Last Survey

26 Nov 1939

Number of Visits

197

Tons

Gross

Net

Built at

Belfast

By whom built

Halaland, Wolff Ltd

Yard No. 1019

When built

1939

Engines made at

Belfast

By whom made

Halaland, Wolff Ltd

Engine No. 1019

When made

1939

Donkey Boilers made at

Belfast

By whom made

Halaland, Wolff Ltd

Boiler No. 1019

When made

1939

Brake Horse Power

14000

Owners

Shaw Savill, Albion Co Ltd

Port belonging to

Southampton

Nom Horse Power as per Rule

2463

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean-Going

OIL ENGINES, &c.

Type of Engines

Halaland, Wolff - B & W Ailers Injector or 4 stroke cycle 2 Single or double acting Double

Maximum pressure in cylinders

700 lbs/sq in

Diameter of cylinders

24 3/4 620 mm

Length of stroke

1400 mm

No. of cylinders

12

No. of cranks

12

Mean Indicated Pressure

100 lbs/sq in

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

1164 mm

Is there a bearing between each crank

Yes

Revolutions per minute

110

Flywheel dia.

2483 mm

Weight

2500 Kgs

Means of ignition

Compressor

Kind of fuel used

Diesel Oil

Crank Shaft, {

{ Solid forged
Semi built
All built

dia. of journals

as per Rule approved
as fitted 485 mm

Crank pin dia.

485 mm

Crank Webs

Mid. length breadth 1040 mm
Mid. length thickness 250 mm

Thickness parallel to axis

250 mm

Thickness around eye-hole

272.5 mm

Flywheel Shaft, diameter

as per Rule
as fitted

On Thrust Shaft

Intermediate Shafts, diameter

as per Rule approved
as fitted 17 1/2"

Thrust Shaft, diameter at collars

as per Rule approved
as fitted 460 mm

Tube Shaft, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule approved
as fitted 19 1/4"

Is the

{ tube
screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule
as fitted28 1/2
32
1"

Thickness between bushes

as per Rule
as fitted

27 1/2"

Is the after end of the liner made watertight in the

propeller boss

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

One length

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Propeller, dia.

18'-0"

Pitch

19'-0"

No. of blades

3

Material

Boss - Cast Iron

Length of Bearing in Stern Bush next to and supporting propeller

6'-9"

Method of reversing Engines

Air, Oil Brake

Is a governor or other arrangement fitted to prevent racing of the engine when decoupled

Yes

Means of lubrication

Forced

Thickness of cylinder liners

42 mm

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

Lagged

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No.

Three

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Yes

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Three - Bilge Pump 120 Ins/h

Bilge Pump 120 Ins/h

Ballast Pump 200 Ins/h

Pumps connected to the Main Bilge Line

No. and Size

How driven

Electric Motors

Is the cooling water led to the bilges

No

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Ballast Pumps, No. and size

One & 200 Ins/h

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

Three & 280 Ins/h

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

4 & 3 1/2"

One & 2 1/2" Tunnel recess, 2 & 2" Crankpit

One & 3 1/2" Tunnel well

In Pump Room

2 & 3 1/2" from each of Nos 1, 2, 3 & 4

2 & 3 1/2" from Scupper drain tanks

2 & 3 1/2" from No 4.5 Locks

2 & 3" in 6 Hold, No 2" Duct Keel, No 2" 9/12

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Yes

Three - Ballast P 6", Bilge P 5", Bilge P 5"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Spaces

Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Yes

Are they fitted with Valves or Cocks

Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

Are the Overboard Discharges above or below the deep water line

Above & Below

What pipes pass through the bunkers

Scupper Pipes (Nos 4, 5 & 6) of Bunkers P & S

How are they protected

Yes

What pipes pass through the deep tanks

Have they been tested as per Rule

Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

compartment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Stella OK

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No.

Two

No. of stages

2

Diameters

400 mm, 350 mm

Stroke

260 mm

Driven by

Electric Motors

Auxiliary Air Compressors, No.

One

No. of stages

2

Diameters

100, 88 mm

Stroke

80 mm

Driven by

Steam Engine

Small Auxiliary Air Compressors, No.

One

No. of stages

2

Diameters

100, 88 mm

Stroke

80 mm

Driven by

Steam Engine

What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No.

Four

Capacity of each

328 M³/min at 126 Kg/cm² absolute

Diameter

Stroke

2 1/2" 110 RPM of Engine

Driven by

Chain from Main Engine

Auxiliary Engines crank shafts, diameter

as per Rule

158 mm

as fitted

160 mm

No.

Four

Position

Wings of Main Engine room

Is a report sent herewith

Yes

Have the Auxiliary Engines been constructed under special survey

Yes

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Lloyd's Register

Foundation

W1139

-0147

AIR RECEIVERS:—Have they been made under survey *Yes at Belfast* State No. of Report or Certificate *Yes (on line)*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*
Can the internal surfaces of the receivers be examined and cleaned *Yes* Is a drain fitted at the lowest part of each receiver *Yes*
Manufacturing Injection Air Receivers, No. *Two* Cubic capacity of each *800 cu ft* Internal diameter *6' 4 1/2"* thickness *1 1/8"*
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *28/32 TAP* Working pressure *364 lb*
Auxiliary Starting Air Receivers, No. *2* Total cubic capacity *400 litres* Internal diameter *15 3/4"* thickness *1 1/2"*
Emergency Seamless, lap welded or riveted longitudinal joint *Laps welded* Material *Steel* Range of tensile strength *24/28 TAP* Working pressure *360 lb*
Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *26/30 IMP* Working pressure *300 lb*

IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*
Is the donkey boiler intended to be used for domestic purposes only *No*
PLANS. Are approved plans forwarded herewith for Shifting (If not, state date of approval) *19.38 14.9.38* Receivers *19.38* Separate Fuel Tanks *24.3.39 9.6.39 7.7.39*
Donkey Boilers *19.38* General Pumping Arrangements *11.9.37* Pumping Arrangements in Machinery Space *14.6.39*
Oil Fuel Burning Arrangements *24.6.39*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes - see appended list.*
State the principal additional spare gear supplied

The foregoing is a correct description.

66P
For HARTLAND WOLF LIMITED
SECRET
Manufacturer.
1938 Aug. 16. 18. 19. 22. 23. 31 Sep. 1. 21 Oct. 4 Nov. 18. 28 Dec. 2. 7. 13. 15. 16. 19. 21. 23 1939 Jan. 2. 4. 5. 6. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Feb. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Mar. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Apr. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 May 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 June 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 July 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Aug. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Sept. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Oct. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Nov. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Dec. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31
Dates of Examination of principal parts—Cylinders *28.39 9.9.39* Covers *9.6.39 12.10.39* Pistons *27.6.39 4.10.39* Rods *30.6.39 29.8.39* Connecting rods *27.6.39 16.10.39*
Crank shaft *21.7.39 1.8.39* Flywheel shaft *28.7.39 1.8.39* Thrust shaft *28.7.39 1.8.39* Intermediate shafts *31.3.39 19.6.39* Tube shaft *17.10.39 2.11.39*
Screw shaft *3.7.39* Propeller *30.10.39* Stern tube *6.1.39 26.4.39* Engine seatings *18.7.39* Engines holding down bolts *24.11.39*
Completion of fitting sea connections *18.7.39* Completion of pumping arrangements *24.11.39* Engines tried under working conditions *24.11.39*
Crank shaft, Material *Steel* Identification Mark *LLOYD 285 CH* Flywheel shaft, Material *Steel* Identification Mark *LLOYD 331 CH*
Thrust shaft, Material *Steel* Identification Mark *LLOYD 331 CH* Intermediate shafts, Material *Steel* Identification Mark *LLOYD 331 CH*
Tube shaft, Material *Steel* Identification Mark *LLOYD 331 CH* Screw shaft, Material *Steel* Identification Mark *LLOYD 331 CH*
Identification Marks on Air Receivers. *Main Starting (2) No 190. Aux Starting B 2638 B 2637 Emergency E 1539*
Qu Recs LLOYD TEST Qu Boils LLOYD TEST LLOYD TEST
585 lbs (2) 900 lbs AS 900 lbs AS
CH 7.6.39 2.3.39 2.3.39
Boils 400 300 400
1.6.39 AP

Is the flash point of the oil to be used over 150° F. *Yes*
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Yes*
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *No*
Is this machinery duplicate of a previous case *No* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c)
The machinery of this vessel has been constructed under Special Survey.
The materials and workmanship are good.
The main engine and auxiliary have been efficiently installed
in accordance with the Rules and tested under full working
conditions at sea with satisfactory results
In our opinion the vessel is eligible for the notation of
F LMC 11.39 CL 2DB 100 lb. OIL ENGINES.

The amount of Entry Fee .. £ 6 : - : - When applied for, *30.11.1939*
Special ... £ 161 - 11 - 6
Donkey Boiler Fee ... £ 8 - 8 - 0 When received, *27.12.1939*
AIR RECEIVERS ... £ 8 - 8 - 0
Travelling Expenses (if any) £ 3 - 4 - 0
TUE 12 DEC 1939

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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