

REPORT ON OIL ENGINE MACHINERY.

No. 12491

Received at London Office

13 NOV 1939

of writing Report

19 When handed in at Local Office

10 11 39 Port of

Belfast

in Survey held at

Belfast

Date, First Survey

6 July 1938

Last Survey

5 Nov. 1939

Number of Visits

193

on the

Single
Twin
Triple
Quadruple

Screw vessel

"AUCKLAND STAR"

Tons

Gross 12382.11

Net 7507.77

at

Belfast

By whom built

Halaland, Wolff Ltd.

Yard No.

1017

When built

1939

ines made at

Belfast

By whom made

Halaland, Wolff Ltd.

Engine No.

1017

When made

1939

key Boilers made at

Belfast

By whom made

Halaland, Wolff Ltd.

Boiler No.

1017

When made

1939

ce Horse Power

12000

Owners

Blue Sta. Ltd.

Port belonging to

Belfast

. Horse Power as per Rule

2463

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

de for which vessel is intended

Ocean - Coning

ENGINES, &c.—Type of Engines

Halaland - B.H. Diesel Injection

2 or 4 stroke cycle

2

Single or double acting Double

um pressure in cylinders

700 lb/sq. in.

Diameter of cylinders

620 mm.

Length of stroke

1400 mm.

No. of cylinders

12

No. of cranks

12

Indicated Pressure

100 lb/sq. in.

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

1164 mm.

Is there a bearing between each crank

Yes

utions per minute

98

Flywheel dia.

2483 mm.

Weight

2500 Kgr.

Means of ignition

Compression

Kind of fuel used

Distill oil.

Solid forged
Semi built
All built

dia. of journals

as per Rule approved
as fitted 185 mm.

Crank pin dia.

486 mm.

Crank Webs

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

shrunk

Thickness parallel to axis 250 mm.
Thickness around eyehole 272.5 mm.

Wheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

460 mm.

e Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the

shaft fitted with a continuous liner

Yes

ize Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

Is the after end of the liner made watertight in the

Yes

ller 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.

e 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

o 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

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

78"

eller, dia.

17'-9"

Pitch

18'-9"

No. of blades

Three

Material

70% Bronze

whether Moveable

No.

Total Developed Surface

78.5 sq. feet

od of reversing Engines

As per Rule approved

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

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

ing Water Pumps, No.

3 P.W. 280 Gals/h. 2 F.W. 280 Gals/h.

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

Yes

e Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

ps connected to the Main Bilge Line

No. and Size

Three — Bilge 110 Gals/h. Ballast 200 Gals/h. General Service 80 Gals/h.

How driven

Electric Motors

e 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

gements

ast Pumps, No. and size

One 200 Gals/h.

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

Three, each 250 Gals/h.

wo independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

ps, No. and size:—In Machinery Spaces

Two 2 1/2", Two 2 3/4", Four 2" Main Rom; One 2 3/4" in 2 1/2" tunnel

olds, &c.

Six 2 3/4" from three fore holds, one 2 1/2" from scupper drain tanks for aft holds, one 2 3/4" duct keel

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

Three — Bilge 6" G.P. Pump 6" Ballast 7"

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

Yes

Are the Bilge Suctions in the Machinery Spaces

om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

ll Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Yes

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

Yes

Are the Overboard Discharges above or below the deep water line

Two above

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

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

pipes pass through the bunkers

None

How are they protected

pipes pass through the deep tanks

Have they been tested as per Rule

Yes

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

Yes

e 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

artment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Upper Deck

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

i Air Compressors, No.

Two

No. of stages

Two

Diameters

400, 350 mm.

Stroke

260 mm.

Driven by

Electric Motor

liary Air Compressors, No.

No. of stages

Two

Diameters

Stroke

Driven by

Steam Engine

il Auxiliary Air Compressors, No.

One

No. of stages

Two

Diameters

100, 88 mm.

Stroke

80 mm.

Driven by

Steam Engine

vision is made for first Charging the Air Receivers

Steam driven Compressor

ing Air Pumps, No.

Four

Capacity of each 291.5 M³

Diameter

2 98 hp.m. x 1.2 kg/cm² absol. pressure.

Driven by

Chain from Main Engine

ary Engines crank shafts, diameter

as per Rule

as fitted

280 mm.

journals, 220 mm.

Position

Wings of Main Motor Room

Is a report sent herewith

Yes

ne Auxiliary Engines been constructed under special survey

Yes

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AIR RECEIVERS:—Have they been made under survey *Yes at Belfast* State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes (on line)*

Can the internal surfaces of the receivers be examined and cleaned *Yes*

Is a drain fitted at the lowest part of each receiver *Yes*

MANUFRING. *Injection Air Receivers, No. Two.*

Cubic capacity of each *725 cu. ft.*

Internal diameter *6'-0 3/8"*

thickness *1"*

Seamless, lap welded or riveted longitudinal joint *TR DBS*

Material *Steel*

Range of tensile strength *28/32 Tens.*

Working pressure *360 lb.*

Actual *356 lb.*

EMERGENCY

Starting Air Receivers, No. *Two.*

Total cubic capacity *360 litres*

Internal diameter *2'-0 1/2"*

thickness *1/2"*

Seamless, lap welded or riveted longitudinal joint *Butt welded*

Material *Steel*

Range of tensile strength *28/32 Tens.*

Working pressure *360 lb.*

Actual *356 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 Shafting *17/5/39, 25/5/39*

Receivers *22/7/38, 12/12/38*

Separate Fuel Tanks *2/3/39, 16/3/39*

Donkey Boilers *2/7/38*

General Pumping Arrangements *22/12/38*

Pumping Arrangements in Machinery Space *8/3/39*

Oil Fuel Burning Arrangements *25/4/39*

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,

For HARLAND AND WOLFF, LIMITED

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits

Dates of Examination of principal parts—Cylinders
Crank shaft, Material
Thrust shaft, Material
Tube shaft, Material
Identification Marks on Air Receivers

Is the flash point of the oil to be used over 150° F.
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with
Is this machinery duplicate of a previous case

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under Special Survey.
The workmanship and materials are good.
The main engines & auxiliaries have been efficiently installed and tested under working conditions with satisfactory results.
In our opinion the machinery of this vessel is eligible for the notation of
F LMC 11,39 CL DB 80 lbs. OIL ENGINES

The amount of Entry Fee
Special
Donkey Boiler Fee
AIR RECEIVERS
Travelling Expenses (if any)
Committee's Minute
Assigned

R. Lee Anneson
Engineer Surveyor to Lloyd's Register of Shipping
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Foundation