

REPORT ON OIL ENGINE MACHINERY

No. 19429

DEC -5 1938

Received at London Office

Writing Report 2nd Dec 1938 When handed in at Local Office 3rd Dec 1938 Port of Leith
 Survey held at Leith Date, First Survey 16th Sept. Last Survey 28th Nov 1938
 Number of Visits 18.

49 on the Single Motor "PURIRI" Screw vessel
 at Leith By whom built Henry Robb Ltd Yard No. 273 When built 1938
 nes made at Glasgow By whom made British Auxiliaries Ltd Engine No. 3078 When made 1938
 y Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 e Horse Power 740 Owners The Anchor Shipping & Foundry Co Ltd Port belonging to Nelson N.Z.
 Horse Power as per Rule 134 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 for which vessel is intended New Zealand Coast

ENGINES, &c.—Type of Engines

2 or 4 stroke cycle Single or double acting

m pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

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

Is there a bearing between each crank

ions per minute

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Shaft, dia. of journals

as per Rule

as fitted

Crank Webs

Mid. length breadth

Thickness parallel to axis

eel 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

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the {tube screw} shaft fitted with a continuous liner

In way of stern tube yes

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

r boss

yes

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

✓

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

✓

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

No

If so, state type

✓

Length of Bearing in Stern Bush next to and supporting propeller

1'-10 7/8"

ler, dia. 5'-2"

Pitch 3'-6"

No. of blades 4

Material Bronze

whether Moveable Solid

Total Developed Surface

9.68

sq. feet

d of reversing Engines

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

Means of lubrication

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

ducting material

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

exhaust up funnel

g Water Pumps, No.

for particulars

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

yes

Pumps worked from the Main Engines, No. 1-Each Eng.

Diameter 8 5/8"

Stroke 60 1/4"

Can one be overhauled while the other is at work

yes

connected to the Main Bilge Line

No. and Size

{Gen. Service Drysdale Centrex}

{Bilge & Ballast Drysdale Centrex}

{Elec. Motor. Capacity 40 tons/hr}

{Elec. Motor. Capacity 40 tons/hr}

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

t Pumps, No. and size 1- Drysdale Centrex

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

each 3 1/2 galls/min.

{two on each main engine capacity of 40 tons/hr}

independent means arranged for circulating water through the Oil Cooler

yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces

Port for 1-2 1/2"

Port aft 1-2"

Star 1-2"

Cofferdam 1-2"

In Pump Room Hold Cofferdam 1-2"

is, &c.

Ford Hold 1-3" Port 1-3" Star 1-3" After Hold 1-2 1/2" Port 1-2 1/2" Star 1-2 1/2" In tunnel Well 1-2"

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3" on Star side from G.S. Pump 1-3" on Port side from Bilge Pump

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

yes

Are the Bilge Suctions in the Machinery Spaces

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

yes

Sea Connections fitted direct on the skin of the ship

yes, except main inlets which are fitted to plating of wells

Are they fitted with Valves or Cocks

Valves

y fired 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

above

y 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

✓

pipes pass through the bunkers

None

How are they protected

✓

pipes pass through the deep tanks

None

Have they been tested as per Rule

✓

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

yes

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

tment to another

yes

Is the Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from top platform

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

Air Compressors, No.

See

No. of stages

gls.

Diameters

Rpt

Stroke

60064

Driven by

liary Air Compressors, No.

one

No. of stages

25

cub ft/min capacity

@ 350 lbs

Driven by

Elec. Motor

I Auxiliary Air Compressors, No.

one

No. of stages

See Grimsby Rpt N° 20403

attached to Grimsby Rpt N° 20403

Driven by

Elec. Motor

enging Air Pumps, No.

See

gls.

Diameter

Rpt N°

Stroke

60064

Driven by

uxiliary Engines crank shafts, diameter

as per Rule

as fitted

See Grimsby Rpt N° 20403

No. 3 off in Eng. Room

Position

No 1 Port for 1, No 2 Port aft, No 3 Star for 1

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AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules
Actual

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules
Actual

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting + Stemgear - Yes

(If not, state date of approval)

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Dates
of Survey
while
building

During progress of
work in shops - -

During erection on
board vessel - -

Total No. of visits

1938 Sept. 16 29 Oct 3 6 12 21 24 25 28 Nov 1 4 8 10 14 17 22 25 28
18

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shafts in place 12/10/38

Propellers in place 12/10/38

Stern tubes in place 6/10/38

Engine seatings 24-10-38

Engines holding down bolts 8-11-38

Completion of fitting sea connections 24-10-38

Completion of pumping arrangements 22-11-38

Engines tried under working conditions at sea 25-11-38

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

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 so, have the requirements of the Rules been complied with

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Machinery—(Gls Rpt No 60064 on Main Engines; Gms Rpt No 20403 on the Aux² Eng²) has been efficiently fitted on board, the materials & workmanships being sound & good. The Main & Aux² Machinery was finally tried out at sea under full & working conditions, & it was found satisfactory in all respects. Manoeuvring trials were carried out, & the capacity of the air receivers was found to be considerably in excess of the Rule requirements. The Aux² Engine which is the initial starting air compressor can be started by hand.

In my opinion the Machinery of this vessel is eligible to be classed in the Register Book with the notation of +L.M.C. 11-38 & the records of Oil Eng. C.L.

The amount of Entry Fee

£

When applied for,

Special

1/3rd L.M.C. 11-38

Charged by

Donkey Boiler Fee

£

When received,

Travelling Expenses (if any)

£

Leith.

Committee's Minute

Assigned

+L.M.C. 11-38

Oil Eng. C.L.

John Houston
Engineer Surveyor to Lloyd's Register of Shipping



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