

REPORT ON OIL ENGINE MACHINERY.

Sld. No. 32174

New No. 95287

Received at London Office

AUG 5 1937

Date of writing Report

19

When handed in at Local Office

30/7/1937 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey

7/12/36

Last Survey

29/7/1937

Number of Visits

53

on the ~~Triple~~ ^{Single} Screw vessel~~RODLEY~~ TROMATons { Gross
Net

Built at

Sunderland

By whom built

Wm Darford & Son Ltd

Yard No. 638

When built 1937

Engines made at

Newcastle on Tyne

By whom made

Laker, Hunter & W. Richardson Ltd

Engine No. 1550

When made 1937

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

1800

Owners

Port belonging to

Bergen

Nom. Horse Power as per Rule

388

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

Ocean going

OIL ENGINES, &c.

Type of Engines

Opposed piston airless injection

2 or 4 stroke cycle

Single or double acting

Single

Maximum pressure in cylinders

568 lb/sq in

Diameter of cylinders

520 mm

Length of stroke

upper 880 mm
lower 1200 mm

No. of cylinders

3

No. of cranks

3-3 throw

Mean Indicated Pressure

88 lb

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

820 mm of Centre Crank

Is there a bearing between each crank

three throw

Revolutions per minute

115

Flywheel dia.

Ford 2240 mm
AFT 2240 mm

Weight

4.3 tons

Means of ignition

Compression

Kind of fuel used

Heavy oil fuel

Crank Shaft, dia. of journals

as per Rule 400 mm
as fitted 410 mm

Crank pin dia.

410 mm

Crank Webs

Mid. length breadth 580 mm
Mid. length thickness 230 mm

shrink

Thickness parallel to axis

230 mm

Thickness around eye-hole

190 mm

Flywheel Shaft, diameter

as per Rule 400 mm
as fitted 410 mm

Intermediate Shafts, diameter

as per Rule
as fitted

Thrust Shaft, diameter at collars

as per Rule 400 mm
as fitted 410 mm

Tube 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

{

Bronze 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

propeller boss

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

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

shaft

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

Method of reversing Engines

Hand lever & compressed air

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

Yes

Means of lubrication

Thickness of cylinder liners

20 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.

1-Sea Water & 1-Distilled water

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

Bilge Pumps worked from the Main Engines, No.

None

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

How driven

Is the cooling water led to the bilges

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

Ballast Pumps, No. and size

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

1. Main engine driven, dbl acting 80 mm dia x 520 mm stroke

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

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

In Pump Room

In Holds, &c.

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

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

Are the Bilge Suctions in the Machinery Spaces

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

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

Are the Overboard Discharges above or below the deep water line

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

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

What pipes pass through the bunkers

How are they protected

What pipes pass through the deep tanks

Have they been tested as per Rule

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

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.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Scavenging Air Pumps, No.

On double acting

Diameter

1510 mm

Stroke

520 mm

Driven by

Main engine

Auxiliary Engines crank shafts, diameter

as per Rule
as fitted

No.

Position

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?

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 Shifting

(If not, state date of approval)

19/11/36

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

Elec. Welded Constr. Bedplate, Columns, Entablature, 25/2/37.
SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

One Cylinder liner + jacket complete, 2 Piston heads complete.

1 Starting Air non-return valve complete, 1 upper + 1 lower piston rods.

1 Cyln relief valve complete, 2 fuel valve bodies + spindles.

1 Scavenge Pump suction + delivery valves.

1 each Top + bottom end bearings (centre + side) etc.

The foregoing is a correct description

SWAN, HUNTER & WILKINSON, LTD.

G. J. Duncanson

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

1936

1937

DIRECTOR

Dec. 7, 8, Jan. 20, 26, Feb. 16, 22, 24, 26, Mar. 1, 9, 12, 15, 17, 22, 25, Apr. 2, 7, 8, 12, 14, 19

20, 23, 26, 27, 28, May 3, 5, 6, 10, 11, 13, 19, 25, 28, 31, June 1, 3, 4, 8, 14, 16, 21, July 1, 2, 8, 13, 15, 22, 23, 27

53.

Dates of Examination of principal parts—Cylinders

2, 4, 14/37

Covers

✓

Pistons

8/11/37

Rods

4 1/16"

Connecting rods

8 1/16"

✓

Crank shaft

13/7/37

Flywheel shaft

as crank shaft

Thrust shaft

as crank shaft

Intermediate shafts

✓

Tube shaft

✓

Screw shaft

✓

Propeller

✓

Stern tube

✓

Engine seatings

✓

Engines holding down bolts

✓

Completion of fitting sea connections

✓

Completion of pumping arrangements

✓

Engines tried under working conditions

22/12/37

✓

Crank shaft, Material

S.M. Light Steel

Identification Mark

LL405 6838 HAI

Flywheel shaft, Material

as crank shaft

Identification Mark

as crank shaft

Thrust shaft, Material

as crank shaft

Identification Mark

as crank shaft

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.

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

✓

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 engine has been constructed under special survey in accordance with the Society's Rules and approved plans, and the materials & workmanship are good. The engine has been satisfactorily tested under full load on the test bed and the Electric Welded Construction Bedplate, columns & Entablature afterwards examined and found in good condition. It has been dispatched to Messrs Wm Doxford & Sons, Sunderland, for installation on board the vessel, after which it will be eligible in my opinion, for record + LMC (with date), Oil Eng., in the Register Book.

The amount of Entry Fee

£ 5 : 0

When applied for,

4/5 Special

£ 66 : 11

15 AUG 1937

Donkey Boiler Fee

£ 9 : 9

When received,

19 AUG 1937

Travelling Expenses (if any)

£

19 AUG 1937

Committee's Minute

Assigned

See Sld J.C.

72174

A. Clatt

Engineer Surveyor to Lloyd's Register of Shipping.



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