

REPORT ON OIL ENGINE MACHINERY.

No. 49292

Date of writing Report

10

When handed in at Local Office

26 SEP 1938

Port of

HULL

Received at London Office

SEP 28 1938

No. in Survey held at
Reg. Book.83764 on the Single
Twin
Triple
Quadruple

Screw vessel

Motor Vessel

"SODALITY"

Date, First Surveyed

29th April 1938

Number of Visits

10th Sept 1938

1938

Tons { Gross 851
Net 476Built at Newbury

By whom built

R. Williamson & Son LtdYard No. 244When built 1938

Engines made at

Newbury

By whom made

Newbury Diesel Co LtdEngine No. 708When made 1938

Donkey Boilers made at

CYone

By whom made

Boiler No. -When made -

Brake Horse Power

700

Owners

F. J. E. & Sons Ltd

Port belonging to

Nom. Horse Power as per Rule

195

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended

Coasting

OIL ENGINES, &c.—Type of Engines

Heavy Oil2 or 4 stroke cycle 2 Single or double acting SA

Maximum pressure in cylinders

800

Diameter of cylinders

320 mm

Length of stroke

426 mm

No. of cylinders

7

No. of cranks

7

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

448 mm

Is there a bearing between each crank

Yes

Revolutions per minute

300

Flywheel dia.

900 mm

Weight

988 lbs

Means of ignition

Comp

Kind of fuel used

Heavy oilCrank Shaft, { Solid forged
as per Rule
dia. of journals
as fitted185.5 mm

Crank pin dia.

190 mm

Crank Webs

260 mm

Mid. length breadth

106 mm

Thickness parallel to axis

shrunk

Thickness around eyehole

Flywheel Shaft, diameter

as per Ruleas fitted

Intermediate Shafts, diameter

as per Ruleas fitted

Thrust Shaft, diameter at collars

as per Ruleas fitted

Tube Shaft, diameter

as per Ruleas fitted

Screw Shaft, diameter

as per Ruleas fittedIs the { tube
screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Ruleas fitted

Thickness between bushes

as per Ruleas fitted

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

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

Yes

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

shaft

Yes

If so, state type

CYone

Length of Bearing in Stern Bush next to and supporting propeller

3 1/2"

Propeller, dia.

7-2 1/2"

Pitch

4'-0"

No. of blades

4

Material

Semi-Steel

whether Moveable

Yes

Total Developed Surface

20 sq. feet

Method of reversing Engines

Direct

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

Yes

Means of lubrication

Forced

Thickness of cylinder liners

32 mm

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

Yes

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.

One - 150 mm x 120 mm

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.

2 D.A.

Diameter

110 mm

Stroke

120 mm

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

One Duplex D.A. 125 x 120 mmOne 4" Centrifugal (Pulsonic?)the above 2

How driven

Aux EngineElectric MotorMain Engine Pumps

Is the cooling water led to the bilges

Yes

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

arrangements

1/2" bore pipes onlyCYone

Ballast Pumps, No. and size

One - 4" CentrifugalPower Driven Lubricating Oil Pumps, including Spare Pump, No. and size2 2 1/2 gal/min

Are two independent means arranged for circulating water through the

Oil CoolerYesSuctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces3 2 1/2" dia2 2 3" diaIn Pump RoomYes2 2 1/2" dia2 2 3" dia2 2 1/2" dia2 2 3" dia2 2 1/2" dia2 2 3" dia

In Holds, &c.

Fore Peak 1 2 2" diaHold 2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia2 2 3" dia

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

2 2 3" diaincluded above

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

Yesthe Bilge Suctions in the Machinery Spacesare fitted with strum-boxesplaced above the level of the working floor, with straight tail pipes to the bilges where practicabledischarge into strum-boxYesAre they fitted with Valves or CocksYesAre the Overboard Discharges above or below the deep water lineAboveAre the Blow Off Cocks fitted with a spigot and brass covering plateYesWhat pipes pass through the bunkersCYone

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

YesAre they fixed sufficiently high on the ship's side to be seen without lifting the platform platesYesAre they each fitted with a Discharge Valve always accessible on the plating of the vesselYesHow are they protectedYesHave they been tested as per RuleYesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all timesYesIs 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 onecompartment to anotherYes

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

YesIs the Shaft Tunnel watertightCYoneIs it fitted with a watertight doorYesworked fromYesMain Air Compressors, No.OneNo. of stagesOneDiameters110 mmStroke

Auxiliary Air Compressors, No.

2No. of stages2Diameters110 x 45 mmStroke82 mmDriven byAux EngineSmall Auxiliary Air Compressors, No.OneNo. of stagesOneDiameters

What provision is made for first Charging the Air Receivers

The above Aux. Air CompressorScavenging Air Pumps, No.OneDiameter600 mmDAStroke426 mmDriven byMain EngineAuxiliary Engines crank shafts, diameteras per Ruleas fittedSee L.A. Apts.

Have the Auxiliary Engines been constructed under special survey

YesIs a report sent herewithYesSee Hull Entry of 6-9-38 Regarding Port Aux. Engine & Daily Service Tank.1/10/38Lloyd's RegisterFoundation003412-003719-0022

AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *Yes*
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*
WHISTLE
Injection Air Receivers, No. *One* Cubic capacity of each *0.72 cu. ft.* Internal diameter *8"* thickness *3/16"*
Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *29-33* Working pressure by Rules *320 lb*
Actual *500 lbs/sq*
Starting Air Receivers, No. *3* Total cubic capacity *2.16 cu. ft.* Internal diameter *8"* thickness *3/16"*
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *29-33* Working pressure by Rules *400 lbs/sq*
Actual *400 lbs/sq*

IS A DONKEY BOILER FITTED? *No* 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 *Yes* Receivers *Yes* Separate Fuel Tanks *Yes*
Donkey Boilers *Yes* General Pumping Arrangements *Yes* Pumping Arrangements in Machinery Space *Yes*
Oil Fuel Burning Arrangements *Yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* except Main Engine Gears per bush.
State the principal additional spare gear supplied
- See attached list -

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: - April 29. July 21. 25. 28. Aug 10. 24. 26. Sept 1. 6. 7. 9. 10.*
Dates of Examination of principal parts—Cylinders *Yes* Covers *Yes* Pistons *Yes* Rods *Yes* Connecting rods *Yes*
Crank shaft *Yes* Flywheel shaft *Yes* Thrust shaft *Yes* Intermediate shafts *Yes* Tube shaft *Yes*
Screw shaft *Yes* Propeller *28.7.38* Stern tube *28.7.38* Engine seatings *28.7.38* Engines holding down bolts *1-9-38*
Completion of fitting sea connections *28.7.38* Completion of pumping arrangements *10.9.38* Engines tried under working conditions *10.9.38*
Crank shaft, Material *Steel* Identification Mark *8618 - 8454* Flywheel shaft, Material *On crank shaft* Identification Mark *3871*
Thrust shaft, Material *Steel* Identification Mark *3869* Intermediate shafts, Material *Steel* Identification Mark *J.F.C. 76-38 J.L.*
Tube shaft, Material *Steel* Identification Mark *3870* Screw shaft, Material *Steel* Identification Mark *J.F.C. 3-6-38*

Identification Marks on Air Receivers
WHISTLE— *C.T.C.O. 700502* *LLOYDS TEST. 1000 lbs/sq* *W.P. 500 lbs/sq* *23-6-38* *AN.L.D.* *17.6.38*
RIVETED STARTING:— *LLOYDS Nos 393, 394 + 395* *T.P. 800 lbs/sq* *W.P. 400 lbs/sq* *H.M.C. 12.5.38*

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 *No* If so, have the requirements of the Rules been complied with *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 *Yes*

General Remarks (State quality of workmanship, opinions as to class, etc.)
The Machinery of this vessel has been built under Special Survey in accordance with the approved plans & the Rules. The workmanship & materials are good & when tried under full working conditions at sea it was found satisfactory in every respect with the exception of the Centrifugal Battery Pump which would not draw from the bilges (See trial list dated 21-9-38 copy attached). The spare gear also required to be completed.
The Machinery of this vessel is eligible, in my opinion, to have the following records on completion. *L.M.C. 9.38* *O.G.* *Oil Engine* *2 S.C. S.A.* *7 Cy.* *12 5/8" - 16 3/4"* *195 N.H.*

The amount of Entry Fee .. £ : :
1/5 Special £ 9 : 15 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *27 SEP 1938*
When received, *31/10/1938*

John J. Johnson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned
+ L.M.C. 9.38
O.G.
Oil engines

