

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

Sld. No. 30504
Shm No. 3297

Received at London Office 13 AUG 1930

Date of writing Report 8 Aug 1930 When handed in at Local Office 19 Port of Som.

Sld 17 Nov. 1930

No. in Survey held at Sickla Shm. Dist. Date, First Survey 24 March Last Survey 31 July 1930. Number of Visits 6

on the ^{Single} ~~Two~~ ~~Triple~~ ~~Quadruple~~ MOTOR "THORSHAVN"
Screw vessel

Tons { Gross 6749
Net 4045

Built at Sunderland. By whom built Sir James Laing & Co Ltd Yard No. 710 When built 1930

Engines made at Stockholm By whom made Aktief. Atlas Diesel Engine No. 80336 When made 1930

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 100 Owners Messrs. William Delford & Sons Ltd. Port belonging to Sunderland

Nom. Horse Power as per Rule 46 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Oil Tanker

OIL ENGINES, &c. Type of Engines Stationary Diesel Oil Engine (Type 2429) 2 stroke cycle Single or double acting

Maximum pressure in cylinders 35 cm² Diameter of cylinders 290 mm Length of stroke 410 mm No. of cylinders 2 No. of cranks 2

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 984 mm Is there a bearing between each crank No

Revolutions per minute 275 Flywheel dia. 1400 mm Weight 1185 kg Means of ignition compression Kind of fuel used crude oil

Crank Shaft, dia. of journals as per Rule 178 mm as fitted 200 Crank pin dia. 195 mm Crank Webs Mid. length breadth 260 mm Thickness parallel to axis - Mid. length thickness 110-120 " shrunk Thickness around eyehole -

Flywheel 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

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

pumps Thickness of cylinder liners none fitted Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

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

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size
How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

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 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, None fitted 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. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule - as fitted

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 What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, None fitted, solid injection Cubic capacity of each Internal diameter thickness Working pressure by Rules

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Starting Air Receivers, None ordered Total cubic capacity Internal diameter thickness Working pressure by Rules

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules



002138-002150-0015

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *E 28.5.25*
(If not, state date of approval)

Receivers *25.10.26*

Separate Tanks

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Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR *as per list, approved on the 4th Febr. 1926, will be inspected when machinery is being fitted in ship.*

Date of fitting Report

No. in Survey held Reg. Book.

on the

Master

Engines made at

Boilers made at

Nominal Horse Power

MULTITUBULAR

Manufacturers of Steam

Total Heating Surface

No. and Description

Tested by hydraulic

Area of Firegrate in

Area of each set of

In case of donkey boiler

Smallest distance between

Smallest distance between

Largest internal diameter

Thickness

long. seams

Percentage of strength

Percentage of strength

Thickness of butt str

Material

Length of plain part

Dimensions of stiffen

End plates in steam

How are stays secur

Tube plates: Mater

Mean pitch of stay

Girders to combusti

Wings 7 1/2

at centre Cent. 7

in each 3

Tensile strength

Pitch of stays to ditto

Working pressure by

Thickness

Pitch of stays at

Working Pressure

Diameter

Working pressure by

Diameter

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops--	<i>24 14 2, 17, 29 & 31 / 7 - 30</i>							
	During erection on board vessel---	<i>3, 4,</i>							
	Total No. of visits	<i>in shop 6</i>							
Dates of Examination of principal parts—Cylinders <i>with</i> Covers <i>29 30</i> Pistons <i>29 30</i> Rods <i>24 2 & 29 7</i> Connecting rods <i>29 30</i>									
Crank shaft <i>14 17 & 29 7-30</i> Flywheel shaft Thrust 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 <i>in shop 29 30</i>									
Crank shaft, Material <i>S.M. Steel</i> Identification Mark LLOYD'S N: 0 5888 A.I. 29.7.30. A 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.									

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *See Som. report no. 3972*

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

I am of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be approved as auxiliary to a classed main engine.

This engine has been satisfactorily fitted in the vessel & tried under full working conditions with good results.

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee ... £	:	:	When applied for,
<i>Special survey in shop No. 218: 40</i>	:	:	<i>8.8. 19 30</i>
Donkey Boiler Fee ... £	:	:	When received,
<i>Travelling Expenses (if any) £ 28:00</i>	:	:	<i>30.9. 19 30</i>
<i>Total No. 246:40</i>	:	:	

Committee's Minute

TUE. 25 NOV 1930

Assigned

See Old No 30504

Shawbottle
R. J. Andersson
 Acting Engineer Surveyor to Lloyd's Register of Shipping.



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