

REPORT ON OIL ENGINE MACHINERY.

No. 19346.

Received at London Office 30 MAR 1951

Date of writing Report 15th Mar. 51. When handed in at Local Office 19. Port of MIDDIESBROUGH.

No. in Survey held at Date, First Survey 19th Sept. 1950. Last Survey 8th March. 19. 51.

Reg. Book. Number of Visits 63.

Single on the Twin Triple Quadruple Screw vessel m.v. "ATHELSULTAN".

Gross 9148.88 Tons Net 5222.98

Built at South Bank. By whom built Smith's Dock Co. Ltd., Yard No. 1210 When built 1951

Engines made at Newcastle-on-Tyne. By whom made R & W Hawthorn Leslie & Co. Ltd. Engine No. 4063 When made 1950

Donkey Boilers made at Wallsend on Tyne By whom made North Eastern Marine Eng. Co. (1938) Ltd. Boiler No. 3200 When made 1950

Brake Horse Power 4450 Owners Athel Line Ltd. Port belonging to Liverpool.

I.N. Power as per Rule 902 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

Trade for which vessel is intended NHP = 86 Open Sea Service. (Tanker).

ENGINES, &c. —Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Mean Indicated Pressure Ahead Firing Order in Cylinders Span of bearings, adjacent to the crank, measured from inner edge to inner edge Is there a bearing between each crank Revolutions per minute

Propeller dia. Weight Moment of inertia of flywheel (X lbs. in² or Kg. cm.²) Means of ignition Kind of fuel used

Propeller shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank webs Mid. length breadth shrunk Thickness parallel to axis

Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as fitted

Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner

Propeller Liners, thickness in way of bushes Thickness between bushes 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 packed between the liners Is an approved Oil Gland or other appliance fitted at the after end of 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

Moment of inertia of propeller (X lbs. in² or Kg. cm.²) Kind of damper, if fitted

Method 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

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

Ge 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 1 - 10 1/2" x 14 1/2" x 24" Vert. Simplex, 1 - 10 1/2" x 12 1/2" x 21" Vert. Simplex

How driven Vertical Pumps Steam Driven & 1 - Elect. Driven Rotary Pump 50 tons/hr. Cap.

the 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 arrangements

Ballast Pumps, No. and size 1 - 10 1/2" x 14 1/2" x 24" Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 - M.E. Driven, 1 - Rotary 45 tons/hr. Cap.

Are two independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both main bilge pumps and auxiliary

ge pumps, No. and size:—In machinery spaces 3 - 3 1/2", 2 - 2" Oily Bilge, 1 - 3" Cofferdam. In pump room Mid. 1 - 4"

holds, &c. 1 - 4" Fore Peak, 1 - 4" Aft Peak, 2 - 2" Cargo Hold 1 - 2" F.P. Flat 2 - 4" Cofferdam, 2 - 4" Deep Tank.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 - 4" x 1 - 6" Emergency.

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes. Yes. Are the bilge suction 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 Yes

Are all Sea Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks Both. Are they fixed efficiently 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 below.

Are they 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.

What pipes pass through the bunkers None. How are they protected

What pipes pass through the deep tanks suction pipe to fore peak. Have they been tested as per Rule Yes

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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 Yes Is the shaft tunnel watertight None Is it fitted with a watertight door worked from

Is 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. None No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. Two No. of stages See London Report No. 23749. stroke driven by steam.

Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

What provision is made for first charging the air receivers Steam Driven Compressors.

Scavenging Air Pumps, No. Two diameter 1700 mm stroke 548 mm driven by Levers from Nos. 1 & 2 Engines.

Auxiliary Engines crank shafts, diameter as per Rule as fitted See London Report No. 121377 Position

Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes.

AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....

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.....

NO. 107957. Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No.....

Cubic capacity of each.....

Internal diameter.....

thickness.....

Seamless, 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, welded or riveted longitudinal joint.....

SEE

Material.....

Range of tensile strength.....

Working pressure.....

by Rules.....

Actual.....

IS A DONKEY BOILER FITTED Yes - 2 ✓ 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.....

No.....

Receivers No.....

Separate fuel tanks No.....

Donkey boilers.....

No.....

General pumping arrangements.....

Yes

Pumping arrangements in machinery space.....

Yes

Oil fuel burning arrangements.....

Yes.

Have Torsional Vibration characteristics been approved.....

Date of approval.....

SPARE GEAR.

Yes ✓

Has the spare gear required by the Rules been supplied.....

State the principal additional spare gear supplied.....

Tail End Shaft & Propeller.

The foregoing is a correct description.....

Manufacturer.....

Dates of Survey while building

During progress of work in shops -

1950: Sept. 11, 15, 18, Oct. 2, 16, 23, 30, 31, Nov. 2, 7, 9, 13, 16, 20, 23, 29, 30, Dec. 1, 6, 8, 11, 12, 13, 14, 18, 19, 20, 27, 29, (1951) Jan. 4, 5, 9, 10, 12, 16, 18, 19, 22, 23, 24, 25, 26, 29, 30, 31, Feb.

During erection on board vessel -

5, 7, 8, 9, 12, 13, 15, 20, 22, 27, 28, Mar. 1, 2, 6, 7, 8.

Total No. of visits.....

63.

Dates of examination of principal parts—Cylinders.....

Covers.....

Pistons.....

Rods.....

Connecting rods.....

Crank shaft.....

Flywheel shaft.....

Thrust shaft.....

Intermediate shafts.....

12/1/51 Tube shaft.....

Screw shaft 23. 10. 50. Propeller.....

23. 10. 50. Stern tube.....

16. 10. 50. Engine seatings.....

12. 1. 51. Engine holding down bolts.....

12. 1. 51.

Completion of fitting sea connections.....

7. 11. 50. Completion of pumping arrangements.....

2. 3. 51. Engines tried under working conditions.....

20. 2. 51

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.....

Identification marks on air receivers.....

SEE

NEWCASTLE

REPORT

Welded receivers, state Makers' Name.....

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. ✓

Description of fire extinguishing apparatus fitted.....

steam smothering.

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.....

Not desired.

Is this machinery duplicate of a previous case.....

No.

If so, state name of vessel.....

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boiler have been fitted aboard this vessel in accordance with the approved plans and Rule Requirements and on completion the machine was tried under working conditions and found satisfactory. In our opinion this vessel is now eligible for a record of LMC 3,51 and notation of TS (CL) 3,51

A notice board has been fitted near the control station stating maximum engine revolutions 128 per minute and it was stated by the Builders that the engine governor had been adjusted accordingly.

Installation

The amount of Entry Fee ...

£85

: 2 6

Special ...

£

:

When applied for

29. 3. 19 51.

Donkey Boiler Fee...

£

:

When received

19.

Travelling Expenses (if any) £

:

(Committee's Minute.....

FRI. 13 APR 1951

Assigned

+ LMC 3,51 Oil Eng.

C.L.

2013 18016

(with endorsement)

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation