

REPORT ON OIL ENGINE MACHINERY.

No. 44025
21 JUL 1936

Date of writing Report 16-7-1936 When handed in at Local Office 20 JUL 1936 Port of Hull Received at London Office

No. in Survey held at 87708 on the *Goole* Date, First Survey 18th Dec. 1935 Last Survey 11th July 1936Reg. Book. *Goole* "CABENDA" Number of Visits 16 Tons Gross 534 Net 274Built at *Goole* By whom built *Goole Shipbuilding & Rep. Co. Ltd.* Yard No. 314 When built 1936Engines made at *Stockport* By whom made *Merrison, Jackson & Day, Ltd.* Engine No. 70389 When made 1936Donkey Boilers made at *Croft* By whom made *Croft* Boiler No. *✓* When made *✓*Brake Horse Power 450 Owners *T. E. Evans & Co. Ltd.* Port belonging to *London*Nom. Horse Power as per Rule 91 *✓* Is Refrigerating Machinery fitted for cargo purposes *✓* Is Electric Light fitted *✓*Trade for which vessel is intended *Ocean going*L ENGINES, &c.—Type of Engines *Heavy Oil* 2 or 4 stroke cycle 4 Single or double acting *Single*

Maximum pressure in cylinders 700 lbs/sq. in. Diameter of cylinders 12 1/2" Length of stroke 19" No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 17 1/8" Is there a bearing between each crank *Yes*Revolutions per minute 375 Flywheel dia. 49" Weight 1.1 ton Means of ignition *Comp.* Kind of fuel used *Heavy oil*Crank Shaft, dia. of journals as per Rule *App.* as fitted 7 1/2" Crank pin dia. 7 1/2" Crank Webs Mid. length breadth 10 1/4" Thickness parallel to axis *Shrunk*Flywheel Shaft, diameter as per Rule *✓* as fitted *✓* Intermediate Shafts, diameter as per Rule 4.4" as fitted 5" Thrust Shaft, diameter at collars as per Rule *App.* as fitted 5 1/2"Stern Shaft, diameter as per Rule *✓* as fitted *✓* Screw Shaft, diameter as per Rule 5.05" as fitted 5 3/8" Is the tube screw shaft fitted with a continuous liner *None*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 thepropeller 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 tubeshaft *Yes* If so, state type *Crewark* Length of Bearing in Stern Bush next to and supporting propeller 21" *✓*Propeller, dia. 65" Pitch 35-45" No. of blades 4 Material *C.I.* whether Moveable *✓* Total Developed Surface 10.8 sq. feetMethod 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 13/16" Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged withnon-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 *Up funnel*Cooling Water Pumps, No. *One & Goss Com. to bilge pump* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*What special arrangements are made for dealing with cooling water if discharged into bilges *All overboard*Bilge Pumps worked from the Main Engines, No. *One* Diameter 3 1/2" Stroke 4" Can one be overhauled while the other is at work *✓*

Pumps connected to the Main Bilge Line No. and Size 2 - 3" Rotary pumps 40 tons/hr each & above main engine pump

How driven *Aux. Heavy oil engine*Ballast Pumps, No. and size *All above pumps* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *One & one spare*Are two independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces 4 @ 3" dia. *✓* In Pump Room *✓*In Holds, &c. *Hold 2 @ 3" Horse peak 1 @ 3" No. 2 DB/ant. 3 @ 3" No. 2 DB/ant. 3 @ 3" 1st peak 1 @ 3"*Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 3" included above *✓*Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *Yes* Are the Bilge Suctions in the Machinery Spacesled from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *Strums* *Yes*Are all Sea Connections fitted direct on the skin of the ship *Yes* Are they fitted with Valves or Cocks *Yes*Are they fixed 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*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 *✓*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 *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 *✓* 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. *One* No. of stages 2 Diameters 2 3/8" & 7" Stroke 8 1/2" Driven by *Main Engine*Auxiliary Air Compressors, No. *One* No. of stages *One* Diameters *1* Stroke *✓* Driven by *Aux. Engine*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 *See Surr Reports* as fitted *D 1482 & 3* Copies herewith Position *Side of Engine* Port & Port side for'd.AIR RECEIVERS:—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*High Pressure Air Receivers, No. *None* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *✓*Starting Air Receivers, No. 2 Total cubic capacity 110 cu ft. Internal diameter 30" thickness 17/32" *✓*Seamless, lap welded or riveted longitudinal joint *✓* Material *Steel* Range of tensile strength 30-1/31.3 Working pressure *✓*

Foundation

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

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

Yes

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

11-11-35

Receivers Man Rpt.

Separate Tanks 22-1-36

Donkey Boilers

General Pumping Arrangements 20 & 24 - 12-35

Oil Fuel Burning Arrangements

PLAN OF ENGINE ROOM PUMPING ARRANGEMENTS AS FITTED FORWARDED WITH HUL Rpt No 46845
SPARE GEAR.

ASHANTI

Has the spare gear required by the Rules been supplied

Yes

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

1935:- Dec 18. 1936:- Apr 30. May 14. 25. 26. June 5. 8. 12. 16. 18. 25. 26. 30. July 4. 11.
15.

Dates of Examination of principal parts—Cylinders Man Rpt Covers Man:— Pistons Man:— Rods ✓ Connecting rods Man:—

Crank shaft Man:— Flywheel shaft ✓ Thrust shaft Man:— Intermediate shafts 12-6-36 Tube shaft ✓

Screw shaft 25-5-36 Propeller 8-6-36 Stern tube 5-6-36 Engine seatings 25-5-36 Engines holding down bolts 25-6-36

Completion of fitting sea connections 5-6-36 Completion of pumping arrangements 7-7-36 Engines tried under working conditions 7-7-36

Crank shaft, Material Steel. Identification Mark 1017 G.T.C Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material Steel. Identification Mark 2216 C.H.P. Intermediate shafts, Material Steel Identification Marks 287 C.S.P

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Steel Identification Mark 287 C.S.P

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 ✓

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 Part. If so, state name of vessel Auxiliary etc. as M.V. ASHANTI.

Hull Rpt. No 46845.

Main Engines are different.

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

The Machinery of the Vessel has been fitted on board under Special Survey, the workmanship & materials are good, and when tried under working conditions was found satisfactory in every respect.

The Machinery of the Vessel is eligible, in my opinion, to have the record of P.A.L.M.C. 7-36. 06. & the notation of Oil Eng. 4.S.C.S.A. 6 Cy. 12½"-19" 91 N.H.P.

The amount of Entry Fee .. £ - : -

1/5 Special ... £ 4 : 11

Donkey Boiler Fee ... £ - : -

Travelling Expenses (if any) £ : :

When applied for,

20 JUL 1936

When received,

1.10 1936

Committee's Minute

TUE. 11 AUG 1936

Assigned

+ L.M.C. 7-36
oil inf.

09

[Signature]

Engineer Surveyor to Lloyd's Register of Shipping.

B. Moffatt.



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