

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 10838

29 MAY 1935

Date of writing Report 25/5/35

When handed in at Local Office 25/5/35

Port of TRIESTE

Received at London Office

No. in Survey held at 88366

Reg. Book. on the *Manfalcone*

Date, First Survey Jan 29

Last Survey May 20 1935

Number of Visits 28

Single  
Twin  
Triple  
Quadruple

Screw vessel

*Auris*Tons { Gross 8030  
Net 4783Built at *Manfalcone*By whom built *Lanterini Rion. dell'Avio*

Yard No. 1129 When built 1935

Engines made at *Amsterdam*By whom made *N. V. Werkspoor*

Engine No. 632 When made 1935

Donkey Boilers made at *Manchester*By whom made *R. W. Hawthorn Leslie & Co*

Boiler No. 9705 When made 1935

Brake Horse Power 2800

Owners *Anglo-Saxon Petroleum Co. Ltd*Port belonging to *London*

Nom. Horse Power as per Rule 502

Is Refrigerating Machinery fitted for cargo purposes *no*Is Electric Light fitted *yes*

Trade for which vessel is intended

25/5/35

55/8

IL ENGINES, &c.—Type of Engines *Diesel solid injection (superch.)* 2 or 4 stroke cycle 4 Single or double acting *single*

Maximum pressure in cylinders 700 lbs Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm Is there a bearing between each crank *yes*Revolutions per minute 110 Flywheel dia. 2260 mm Weight 6500 kg Means of ignition *solid* Kind of fuel used *crude oil*Crank Shaft, dia. of journals as per Rule 444 mm as fitted 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 870 mm Mid. length thickness 290 mm Thickness parallel to axis *shrunk* Thickness around eye hole *—*

Flywheel Shaft, diameter as per Rule 444 mm as fitted 460 mm Intermediate Shafts, diameter as per Rule 313 mm as fitted 470 mm Thrust Shaft, diameter at collars as per Rule 330 mm as fitted 460 mm

Tube Shaft, diameter as per Rule *—* as fitted *—* Screw Shaft, diameter as per Rule 345 mm as fitted 400 mm Is the tube screw shaft fitted with a continuous liner *yes*

Bronze Liners, thickness in way of bushes as per Rule 19.84 mm as fitted 20.50 mm Thickness between bushes as per rule 14.78 mm as fitted 16.5 mm 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 *—* Is an approved Oil Gland or other appliance fitted at the after end of the tubeshaft *no* If so, state type *—* Length of Bearing in Stern Bush next to and supporting propeller 1390 mmPropeller, dia. 15'-0" Pitch 12'-0" No. of blades 4 Material *bronze* whether Moveable *no* Total Developed Surface 72 sq. feetMethod of reversing Engines *comp. air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication*forced* Thickness of cylinder liners 55 mm Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged withnon-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 *from*Cooling Water Pumps, No. 3 sea water 2 fresh w. 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 *lgl. discharge overboard. Pumps in closed circuit in to FW tank*Bilge Pumps worked from the Main Engines, No. 2 Diameter *rotary* Stroke 35 T. Can one be overhauled while the other is at work *yes*Pumps connected to the Main Bilge Line No. and Size *Two 35 T. on M.E. — One independent 100 T (8x8x10)* How driven *Two by main engine. One by steam*Ballast Pumps, No. and size *One 40 T. in form. P. Space* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *One rotary 40 T/H One steam 8x8x10 (50T)*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 3a 3 1/2" — 1a 3 1/2" in each E.P. Cofferdam, at frames 40-41 In Pump Room *Not one a 3 1/2" No. 2 one a 3 1/2" Forw. one a 2"*

In Holds, &amp;c. 2a 2" — Forward Peak top 1a 2" — Deep Tank top 1a 2" — Forward Cofferdam 3a 2 3/4"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *One 5" on bilge pump. One 6 1/2" on lin. P. Two 2" on Trans for Pumps from gutter way*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 *yes*Are all Sea Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *valves & cocks*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 *yes*What pipes pass through the bunkers *tank Section from Cofferd. at fr. 40-41* How are they protected *—*What pipes pass through the deep tanks *the above* 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 *—*

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. *none* No. of stages *—* Diameters *—* Stroke *—* Driven by *—*Independent Auxiliary Air Compressors, No. 2 No. of stages *Two 2 crank* Diameters *10 1/2" x 4 1/2"* Stroke *7 1/2"* Driven by *50 HP steam Eng.*Small Auxiliary Air Compressors, No. *none* No. of stages *—* Diameters *—* Stroke *—* Driven by *—*Scavenging Air Pumps, No. *supercharge at bottom* Diameter 650 mm Stroke 1400 mm Driven by *Main Engine*Auxiliary Engines crank shafts, diameter as per Rule *approved* No. *1 throughout engine & steam E.* Position *E.P. platform start.*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*

Starting High Pressure Air Receivers, No. 2 Cubic capacity of each 800 cf Internal diameter 1495 mm thickness 21 mm

Seamless, lap welded or riveted longitudinal joint *welded* Material *PM S* Range of tensile strength 29-34 T Working pressure by Rules 375 lbs

Starting Air Receivers, No. 1 (this is also used as a heat exchanger) Total cubic capacity 75 lbs Internal diameter 250 mm thickness 7 mm

Seamless, lap welded or riveted longitudinal joint *Seamless* Material *PM S* Range of tensile strength 44-50 T Working pressure by Rules 46.6 lbs/cm<sup>2</sup>

Actual 25 " 31/5/35

W1123-0293



If so, is a report now forwarded? yes

PLANS. Are approved plans forwarded herewith for Shafter Lee Anniston Rep. 13378 13378 13378  
(If not, state date of approval)

### Separate Tanks

Donkey Boilers See Newcastle Rep 91672 General Pumping Arrangements in London

# Oil Fuel Burning Arrangements in London

*SPARE GEAR.*

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

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--}	Please see Amsterdam Report No 13378	
	During erection on board vessel---	1935 Jan 27 Feb 13/15/18 Mar 4/12/18/25/28 Apr 1/3/8/16/17/18/19/26/27/29/29 May 1/2/6/9/13/14/16/18/20	
	Total No. of visits	twenty-nine	

Dates of Examination of principal parts—Cylinders 5, 11, 28, 7/34 20.9.34 10, 20/9/34 28/6 & 31/7/34 28/6 & 31/7/34  
 17231/7/34 18/3/35 Covers 18.3.35 Pistons 18/3/35 Rods 18.3.35 Connecting rods 18.3.35  
 Crank shaft 25.3.35 Flywheel shaft 17231/7/34 Thrust shaft 168/5/34 Intermediate shafts 10.22/9/34 Tube shaft —  
 25/9 & 12/11/34 25/3/35 25/3/35 25/3/35 8.4.35  
 Screw shaft 18.2.35 Propeller 4/3/35 Stern tube 13/4/34 & 15/2/35 Engine seatings 12.2.35 Engines holding down bolts 8/4/35

Completion of fitting sea connections. 15/2/35 Completion of pumping arrangements. 9/5/35 Engines tried under working conditions. 16/5/35

Crank shaft, Material SPML Identification Mark OH 2-6-34 Flywheel shaft, Material SPML Identification Mark N-2133 OH 26-6

Thrust shaft, Material SMS Identification Mark No 1447 HPB21834 Intermediate shafts, Material SMS Identification Marks No 1199 HPB 2503

Tube shaft, Material — Identification Mark — Screw shaft, Material *SPM P* Identification Mark *461201 H.P.B. 25.8*

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. *Oil Tanker* 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.)

The machinery of this vessel has been constructed under special survey at Amsterdam and satisfactorily fitted on board at Monfalcone. The pumping arrangement, Dowlley Boiler and the oil fuel arrangement have been fitted in accordance with the Rules and approved plans. The machinery has been tested under full working condition and found in order and in my opinion is eligible to have the notation of + LMC 5.35

The amount of Entry Fee	..	£	:	:	When applied for,	
1/5 Special	...	£	1.850	-	25/67	1935
Donkey Boiler Fee	...	£	:	:	When received,	
Travelling Expenses (if any)		£	1/80	-	June '18	1935

Committee's Minute

Assigned + Lumb 5.95 L.B.-1000  
L. oil sup.

*P. P. Pearson*  
Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Reg  
Foundation