

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 10534

25 AUG 1934

Date of writing Report 20/8/34 When handed in at Local Office 21/8/34 Port of TRIESTE  
No. in Survey held at Trieste Monfalcone & Venice Date, First Survey July 26 Last Survey Aug 13 1934  
Reg. Book. 72722 on the Single Triple Quadruple Screw vessel "BONZO"  
Built at Monfalcone By whom built Cant. Rinniti dell'Adriatico Yard No. 241 When built 1931  
Engines made at Turin By whom made Fiat Stab. Grandi Motori Engine No. 6849 When made 1931  
Donkey Boilers made at Glasgow By whom made D. Rowan Boiler No. 377-378 When made 1931  
Brake Horse Power 2125 x 2 Owners Cantieri Rinniti dell'Adriatico Port belonging to Trieste  
Nom. Horse Power as per Rule 1000 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
Trade for which vessel is intended Oil Tanker 26 3/4 43 5/16

TYPE ENGINES, &c.—Type of Engines FIAT 2 and stroke cycle yes Single acting yes  
Maximum pressure in cylinders 35 atm. Diameter of cylinders 680 mm Length of stroke 1400 mm No. of cylinders 4 x 2 No. of cranks 4  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 950 mm. Is there a bearing between each crank yes  
Revolutions per minute 148 Flywheel dia. 3700 mm. Weight 12600 kg. Means of ignition fuel by blast air Kind of fuel used Diesel oil  
Crank Shaft, dia. of journals as per Rule 407 mm. as fitted 435 mm. Crank pin dia. 435 mm. Crank Webs Mid. length breadth 590 mm. Thickness parallel to axis  
Flywheel Shaft, diameter as per Rule 407 mm. as fitted 435 mm. Intermediate Shafts, diameter as per Rule 275 mm. as fitted 300 mm. Thrust Shaft, diameter at collars as per Rule 294 mm. as fitted 315 mm.  
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 309 mm. as fitted 330 mm. Is the tube screw shaft fitted with a continuous liner yes  
Bronze Liners, thickness in way of bushes as per Rule 17 mm. as fitted 20 mm. Thickness between bushes as per rule 13.75 mm. as fitted 16. 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 tube  
Shaft no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1650 mm.  
Propeller, dia. 4100 mm. Pitch 3820 mm. No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 5.5 sq. ft.  
Method of reversing Engines direct. Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes Means of lubrication  
forced Thickness of cylinder liners 52 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. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
That special arrangements are made for dealing with cooling water if discharged into bilges discharge overboard  
Bilge Pumps worked from the Main Engines, No. 2 Diameter 130 mm. Stroke 150 mm Can one be overhauled while the other is at work yes  
Pumps connected to the Main Bilge Line No. and Size One duplex 190 x 153 mm; 1 single 190 x 153 mm; Pump Room 1 - 153 x 153 x 153; Fwd pump room 1 duplex 230 x 230  
How driven electrically - steam - electrically.  
Ballast Pumps, No. and size 1 duplex 190 x 153 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 of 30 tons p.h.  
Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Machinery Spaces 2 @ 100 mm. 2 @ 90 mm. & 2 @ 76 mm. in E. cofferdams 3 @ 50 mm. In Pump Room 2 @ 100 mm.  
Holds, &c. fwd. pump room 1 @ 76; Chain locker 2 @ 76 mm; fore peak wells 2 @ 50 mm.  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 90 mm.  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces  
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  
That pipes pass through the bunkers How are they protected  
That pipes pass through the deep tanks fore peak tank suction pipe 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  
apartment 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

Water Capacity Auxiliary Air Compressors, No. 1 No. of stages 3 Diameters 600/530/120 mm Stroke 750 mm Driven by main Eng.  
Main Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 310/270/70 mm Stroke 250 mm Driven by Fiat 3 C. 59  
Averaging Air Pumps, No. 1 each engine Diameter 1250 mm Stroke 900 mm Driven by main Eng.  
Auxiliary Engines crank shafts, diameter as per Rule 150 mm. as fitted 165 mm. No. 3. 2 SCSA 2 C. 260 x 450  
RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes Position Eng. Room. pl. - stbd & aft. 31-35 kg.  
Are 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. 2 Cubic capacity of each 123 lit. Internal diameter 291 mm. thickness 12.5 mm.  
Seamless, lap welded or riveted longitudinal joint seamless Material C.S. Range of tensile strength 45 kg/mm<sup>2</sup> Working pressure by Rules 82.5 kg/cm<sup>2</sup>  
Working Air Receivers, No. 4 for main Total cubic capacity 10800 lit. Internal diameter 1120-1100 mm thickness 55-36 mm.  
Seamless, lap welded or riveted longitudinal joint seamless Material S. Range of tensile strength 41 Working pressure by Rules 66 kg/cm<sup>2</sup>  
Actual 66

W1044-0193



## IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

PLANS. Are approved plans forwarded herewith for Shafting in London 22.6.34 Receivers in London 11.7.34 Separate Tanks

Donkey Boilers in London 26.6.34 General Pumping Arrangements 26.6.34 Oil Fuel Burning Arrangements

## SPARE GEAR.

Has the spare gear required by the Rules been supplied?

State the principal additional spare gear supplied

Two propellers; 1 propeller shaft; 1 piston complete; 2 cylinder liners; 1 cylinder cover; 1 set of spare parts for oil & circulating pumps; 1 set of main bearing brasses; 1 set of top & bottom end brasses for main engine; 1 compressor; 1 compressor piston; 1 set of scavenging valves; 1 air cooler coil; Various spare parts for cam shaft; Lubricating arrangements, coolers etc. Complete spare of valves, springs, brasses etc. for the pumps and auxiliary engine.

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

Dates of Examination of principal parts—Cylinders 4.8.34 Covers 4.8.34 Pistons 4.8.34 Rods 4.8.34 Connecting rods 4.8.34

Crank shaft 31.7.34 Flywheel shaft 6.8.34 Thrust shaft 8.8.34 Intermediate shafts 31.7.34 Tube shaft

Screw shaft Propeller 13.8.34 Stern tube after end Engine seatings 6.8.34 Engines holding down bolts 31.7.34

Completion of fitting sea connections Completion of pumping arrangements 7.9.34 Engines tried under working conditions 13.8.34

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

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, &amp;c. This vessel has been examined afloat and in dry dock

The main engines & the auxiliary engines, have been opened out, generally overhauled, examined in conformity to the requirements of the Rules with the exception of the pump shafts, and found in good condition and in accordance with the plans approved. The workmanship is

The main engines & auxiliaries, have been tested under full working condition for 6 hours with satisfactory results. All blast air to and starting air bottles tested hydraulically to 150 lb. satisfactorily. - R.P.

With reference to London letters E. 27.6.34 & 12.7.34, on examination, it has been found: 1) that the starting air receivers are of seamless construction & consequently their safety valves have been adjusted to blow off at 66 lb. sq. in. - 2) Each of the 30 tons per hour lubricating oil pumps, is

of supplying all the lubricating oil required for the main engines when working at full power - 3) In the pump room there are two

connections fitted viz. on port & starboard side. - 4) The cargo oil pipe lines are entirely apart from the oil fuel pipes. - 5) The oil fuel settling tank

are of substantial construction & in accordance with the requirements of Section 20 of the Rules, it is therefore submitted that the

of - LMC - 8.34, be assigned to the machinery of this vessel when the pump shafts have been examined.

One copy of the approved plans forwarded with our letter dated 19.6.34, have been retained in London.

R.S. - The pipes of the air pipes to the double bottom tanks in the machinery space and the means for closing the ports surrounding

are in accordance with the requirements of the Rules. (please see Secretary letter E. 27.6.34.)

The amount of Entry Fee .. £ : When applied for.

Special ... £ 1380 - 21/8 1934

Donkey Boiler Fee ... £ 440 - When received.

Travelling Expenses (if any) ... £ 410 - 18.10.34

Committee's Minute ... £ 200 - 19 OCT 1934

Assigned No action

TUE. 4 FEB 1936

15 APR 1936

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 28 JUN 1935

FRI. 2 AUG 1935

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