

# REPORT ON OIL ENGINE MACHINERY

No. 7074

19 Apr 1926

Received at London Office

Date of writing Report Mar 29<sup>th</sup> 1926 When handed in at Local Office Apr 14 1926 Port of **TRIESTE**  
 No. in Survey held at **TRIESTE** Date, First Survey Feb 17<sup>th</sup>, 1925 Last Survey Mar 31<sup>st</sup> 1926  
 Reg. Book. Number of Visits 167

39004 on the Single Screw vessels **"FELLA"** Tons Gross 706.48  
Triple Net 446.42  
 Built at Trieste By whom built Stabilimento Socio Sperimento Yard No. 745 When built 1926  
 Engines made at Trieste By whom made " " Engine No. 5001 When made 1926  
 Donkey Boilers made at Auman By whom made Bochman & Son Boiler No. 9406 When made 1925  
 Brake Horse Power 489 Owners Hangayon Lipa Sperimento S.p.A. Port belonging to Venice  
 Is Refrigerating Machinery fitted for cargo purposes Yps. Is Electric Light fitted Yps.

**ENGINES, &c.**—Type of Engines Bureau & Wain Diesel 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 35 kg/cm<sup>2</sup> No. of cylinders 6 Diameter of cylinders 140 No. of cranks 6 Length of stroke 1500  
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 Is there a bearing between each crank Yps.  
 Revolutions per minute 95 Flywheel dia. 3360 Weight 18600 Means of ignition Compression Kind of fuel used Diesel oil  
 Crank Shaft, dia. of journals as per Rule 470 Crank pin dia. 472 Crank Webs as per Rule 450 Thickness parallel to axis 310  
as fitted 472 Mid. length thickness 310 shrunk Thickness around eye hole 195  
 Propeller Shafts, diameter as per Rule 470 Intermediate Shafts, diameter as per Rule 316 Thrust Shaft, diameter at collars as per Rule 332  
as fitted 472 as fitted 316 as fitted 332  
 Main Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 349 Is the shaft fitted with a continuous liner Yps.  
as fitted as fitted 362 as fitted

Cylinder Liners, thickness in way of bushes as per Rule 18 Thickness between bushes as per rule 13.5 Is the after end of the liner made watertight in the  
as fitted 19 as fitted 15.5 Yps.  
 Propeller boss Yps. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yps.  
 Is 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 Yps.  
 If two liners are fitted, is the shaft lapped or protected between the liners Yps. Is an approved Oil Gland or other appliance fitted at the after  
 end of the tube shaft Yps. Length of Bearing in Stern Bush next to and supporting propeller 1420  
 Propeller, dia. 4660 Pitch 3420 No. of blades 4 Material hane whether Moveable Yps. Total Developed Surface 6.34 sq. feet Yps.  
 Method of reversing Engines Comp. air (Brown) Is a governor or other arrangement fitted to prevent racing of the engine Yps. Means of lubrication  
Yps. Thickness of cylinder liners 585/41 Are the cylinders fitted with safety valves Yps. Are the exhaust pipes and silencers water cooled or lagged with  
 conducting material Yps. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine to funnel

Boiling Water Pumps, No. 2 centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yps.  
 Bilge Pumps fitted to the Main Engines, No. 2 Diameter 160 Stroke 225 Can one be overhauled while the other is at work Yps.  
 Pumps connected to the Main Bilge Line { No. and Size 1 duplex 140 x 150. 1 duplex 170 x 150. 1 duplex 300 x 300  
 How driven Yps.  
 Main Pumps, No. and size 1 duplex 300 x 300 Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 30 tons per hour  
 Are two independent means arranged for circulating water through the Oil Cooler Yps. not fitted Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 pumps, No. and size:—In Engine and Boiler Room 2 @ 90: 5 @ 80: 1 @ 80 in tunnel well, 2 @ 80 in cofferdam, 1 @ 80 in tunnel  
 Folds, &c. Forward 6 @ 80, deep Tank 2 @ 80, aft 6 @ 80

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 90 to bilge pump, 1 @ 180 to ballast pump  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yps. Are the Bilge Suctions in the Machinery Space  
 from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yps. except from isolated bilge  
 Are all Sea Connections fitted direct on the skin of the ship Yps. Are they fitted with Valves or Cocks Yps.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yps. 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 Yps. Are the Blow Off Valves fitted with a spigot and brass covering plate Yps.  
 Do all pipes pass through the bunkers Yps. How are they protected Yps.  
 Do all pipes pass through the deep tanks Yps. Have they been tested as per Rule Yps.  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yps.

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 Yps. Is the Shaft Tunnel watertight See hull report Is it fitted with a watertight door Yps. worked from top platform  
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yps.  
 Main Air Compressors, No. 1 No. of stages 3 Diameters 150, 175 & 150 Stroke 610 Driven by Main crank shaft  
 Auxiliary Air Compressors, No. 1 each 950 engine No. of stages 3 Diameters 322, 288 & 179 Stroke 220 Driven by 2 ex. Diesel engine  
 Other Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 80 & 32 Stroke 140 Driven by hand  
 Ventilating Air Pumps, No. Yps. Diameter Yps. Stroke Yps. Driven by Yps.  
 Auxiliary Engines crank shafts, diameter as per Rule 161.5  
as fitted 162

**RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve Yps. Starting air receiver & Aux. blast bottles  
 Are the internal surfaces of the receivers be examined Yps. What means are provided for clearing their inner surfaces Stamps life & bottom  
 Are there a drain arrangement fitted at the lowest part of each receiver Yps.  
 Main Pressure Air Receivers, No. 3 Main, 3 Aux. Cubic capacity of each 2 @ 500 litres, 1 @ 250 " Internal diameter 480 thickness 30  
1 @ 250 " 1 @ 184 105 84.5  
 Are they less, lap welded or riveted longitudinal joint Seamless Material S Range of tensile strength 44-50.5 Working pressure by Rules 70.6  
 Other Pressure Air Receivers, No. 2 Total cubic capacity 30m<sup>3</sup> Internal diameter 1953 thickness 26.5 Working pressure by Rules 79.5  
 Are they less, lap welded or riveted longitudinal joint Welded Material S Range of tensile strength 44-50.5 Working pressure by Rules 25

IS A DONKEY BOILER FITTED? *Yes.*  
 HYDRAULIC TESTS:—

If so, is a report now forwarded? *Yes.*

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	18/5/25 - 4/9/25	35 Kg/cm <sup>2</sup>	60 Kg/cm <sup>2</sup>	GoB WLS	plain from times & tested 3 Kg/cm <sup>2</sup> in water
" " COVERS	21/9/25 - 26/10/25	" " "	" " "	GoB WLS	
" " JACKETS	22/10/25 - 26/10/25	1.5 " "	3 " "	GoB WLS	
" " PISTON WATER PASSAGES	26/10/25 - 15/10/25	" " "	10 " "	GoB WLS	water circulating
MAIN COMPRESSORS—1st STAGE	23/9/25 - 17/11/25	4.5 " "	10 " "	GoB WLS	passage tested to 3 Kg/cm <sup>2</sup>
" 2nd "	14/11/25 - 21/11/25	20 " "	40 " "	GoB WLS	
" 3rd "	21/9/25 - 5/10/25	65 " "	130 " "	GoB WLS	
AIR RECEIVERS—STARTING	24/11/25 & 28/11/25	25 " "	39 " "	GoB WLS	
" INJECTION	25/9/24 - 25/5/25	65 " "	130 " "	GoB WLS	
AIR PIPES	16/11/25 - 21/3/26	25 & 65 " "	50 & 130 " "	GoB WLS	
FUEL PIPES	6/10/25 - 2/3/26	65 " "	130 " "	GoB WLS	
FUEL PUMPS	24/10/25	65 " "	130 " "	GoB WLS	Not water cooled.
SILENCER	30/12/25		3.5 " "	GoB WLS	
En-haut WATER JACKET	12/9/25	1.5 " "	50 W " "	GoB WLS	
SEPARATE FUEL TANKS	2/12/25 & 3/12/25	depth of tanks	15 W " "	GoB WLS	

PLANS. Are approved plans forwarded herewith for Shafting *Yes.* Receivers *Yes.* Separate Tanks *Yes.*  
 Donkey Boiler *Yes.* General Pumping Arrangements *Yes.* Oil Fuel Burning Arrangements *Yes.*

SPARE GEAR  
 See attached List *Yes.*

**Stabilimento Tecnico Triestino**  
 The foregoing is a correct description,  
 Fabbrica macchine S. Andrea - Trieste

Dates of Survey while building

During progress of work in shops -- }  
 During erection on board vessel -- }  
 Total No. of visits *One hundred and sixty seven.*

See attached List *Yes.*

Dates of Examination of principal parts—Cylinders	18/5/25 } 26/10/25 }	Covers	21/9/25 } 26/10/25 }	Pistons	26/9/25 } 15/10/25 }	Rods	19/10/25	Connecting rods	19/10/25
Crank shaft	16/6/25	Flywheel shaft	26/2/25	Thrust shaft	4/21	Intermediate shafts	8/5/24 } 6/4/25 }	Tube shaft	
Screw shaft	11/11/25	Propeller	11/2/26	Stern tube	21/8/25	Engine seatings	29/12/25	Engines holding down bolts	26/2/26
Completion of fitting sea connections	18/3/26	Completion of pumping arrangements	18/3/26	Engines tried under working conditions	11/3/26				
Crank shaft, Material	SM. first steel	Identification Mark	16/6/25-N65	Flywheel shaft, Material	SM. hypotet	Identification Mark	482-ASM-2		
Thrust shaft, Material	" " "	Identification Mark	5007-HK-4/21	Intermediate shafts, Material	" " "	Identification Marks	5889-HK-4/21 } 490/2-ASM } 4345-6/4/25 }		
Tube shaft, Material	" " "	Identification Mark	" " "	Screw shaft, Material	" " "	Identification Mark	3-CNS-11/11 } 1-CNS-27/11 }		

Is the flash point of the oil to be used over 150° F. *Yes.*  
 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.)  
 The machinery of this vessel has been built under special Survey and in accordance with the approved plans. The material and workmanship are good. On completion the machinery has been tried under working conditions with satisfactory results. With propeller immersed and main compression shut off 96 revolutions were obtained with blast air from two auxiliary the manoeuvring trials have been satisfactorily carried out in accordance with the Rules. Contra propeller fitted; the fixed parts welded on by electric process. The machinery of this vessel is eligible, in my opinion, to be classed in the Register Book with notation of + LMC 3.26.

The amount of Entry Fee ... £t : 605-  
 Special ... £t : 1297-  
 Donkey Boiler Fee ... £t :  
 Travelling Expenses (if any) ... £t : 110-  
 Committee's Minute  
 Assigned

When applied for, 12/4/1926  
 When received, 28.5.26

FRI. 23 APR 1926  
 + L.M.C. 3.26 CL  
 Oil Engines

*Geo. Munro & V. Lockrey*  
 Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to Trieste office

The Surveyors are requested not to write on or below the space for Committee's Minute.