

REPORT ON OIL ENGINE MACHINERY.

No. 42668

Date of writing Report 10 When handed in at Local Office 23. 4. 1923 Port of *Elasgow* Received at London Office WED. APR. 25 1923
 No. in Survey held at *Elasgow* Date, First Survey 1st Sept 1919 Last Survey 18th April 1923
 Reg. Book. on the *Single* } Screw vessels *"EDIBA"* Number of Visits 116
 Triple }
 Master Built at *Elasgow* By whom built *Harland & Wolff* Yard No. *582* When built *1923*
 Engines made at *Elasgow* By whom made *Harland & Wolff. Ltd* Engine No. *582* When made *1923*
 Donkey Boilers made at *Annan* By whom made *Cochran & Co* Boiler No. When made *1924/1923*
 Brake Horse Power *2400* Owners *Elder Dempster & Co Ltd* Port belonging to *London*
 Nom. Horse Power as per Rule *665* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

L ENGINES, &c.—Type of Engines *Diesel* 2 or 4 stroke cycle *4* Single or double acting *Single*
 Maximum pressure in cylinders *500* No. of cylinders *12* No. of cranks *12* Diameter of cylinders *26 3/8" 670 mm*
 Length of stroke *39 3/8" 1000 mm* Revolutions per minute *115* Means of ignition *Compression* Kind of fuel used *above 150°F*
 Is there a bearing between each crank *Yes* Span of bearings (Page 92, Section 2, par. 7 of Rules) *794 mm*
 Distance between centres of main bearings *1320 mm* Is a flywheel fitted *Yes* Diameter of crank shaft journals as per Rule *390 mm*
 as fitted *422 mm*
 Diameter of crank pins *422 mm* Breadth of crank webs as per Rule *520 mm* as fitted *880 mm* Thickness of ditto as per Rule *218 mm*
 as fitted *215 mm*
 Diameter of flywheel shaft as per Rule *390 mm* as fitted *422 mm* Diameter of tunnel shaft as per Rule *12 1/16"* as fitted *12 1/4"* Diameter of thrust shaft as per Rule *322 mm*
 as fitted *350 mm*
 Diameter of screw shaft as per Rule *12 15/16"* as fitted *13 3/8"* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes*
 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 joints burned *Yes*
 Does 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 *Yes whole length*
 Are two liners are fitted, is the shaft lapped or protected between the liners *Yes* If without liners, is the shaft arranged to run in oil *Yes*
 Diameter of outer gland fitted to stern tube *Wood lined stern bush* Length of stern bush *60"* Diameter of propeller *13'-0"*
 Diameter of propeller *11'-0"* No. of blades *3* state whether moveable *Yes* Total surface *50 sq ft* square feet
 Method of reversing *Electric (compressed air)* Is a governor or other arrangement fitted to prevent racing of the engine when disconnected *Yes* Thickness of cylinder liners *60 mm*
 Are the cylinders fitted with safety valves *Yes* Means of lubrication *Forced sight feed* 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 *Yes*
 No. of cooling water pumps *Two* Is the sea suction provided with an efficient strainer which can be cleared
 Is the vessel *Yes* No. of bilge pumps fitted to the main bilges *Two* Diameter of ditto *8" DUPLEX* Stroke *8"*
 Can one be overhauled while the other is at work *Yes* No. of auxiliary pumps connected to the main bilge lines *Three* How driven *Electric motor*
 Sizes of pumps *2 1/8" x 8" x 1, 10" x 10"* No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room *3 1/2" 2 1/2" 3 1/2"*
 in holds, etc. *1 1/2" 5 1/2" 4 1/2" 10 1/2" 12 1/2" 2 1/2" 3 1/2" 4 1/2"* No. of ballast pumps *1* How driven *Electric motor* Sizes of pumps *10" duplex x 10" stroke*
 Is the ballast pump fitted with a direct suction from the engine room bilges *Yes* State size *5" dia* Is a separate auxiliary pump suction fitted in
 Engine Room and size *Yes 5"* Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine Room always accessible *Yes*
 Are the sluices on Engine Room bulkheads always accessible *Yes* Are all connections with the sea direct on the skin of the ship *Yes*
 Are they valves or cocks *Both* Are they fired sufficiently high on the ship's side to be seen without lifting the floor plates *Yes Above & below*
 Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times *Yes* Are the bilge suction pipes, cocks and valves arranged so as to prevent any
 communication between the sea and the bilges *Yes* Is the screw shaft tunnel watertight *Yes* Is it fitted with a watertight door *Yes*
 Is the vessel *Shelter deck* If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 No. of main air compressors *2* No. of stages *3* Diameters *170-540-148 mm* Stroke *350 mm* Driven by *Off main shaft*
 No. of auxiliary air compressors *2* No. of stages *2* Diameters *140-350 mm* Stroke *250 mm* Driven by *Electric*
 No. of small auxiliary air compressors *1* No. of stages *2* Diameters *106-34 mm* Stroke *80 mm* Driven by *Steam*
 No. of scavenging air pumps *1* Diameter *167 mm* Stroke *170 mm* Driven by *Yes*
 Diameter of auxiliary Diesel Engine crank shafts as per Rule *167 mm* as fitted *170 mm* Are the air compressors and their coolers made so as to be easy of access *Yes*

RECEIVERS:—No. of high pressure air receivers *Eight* Internal diameter *295 mm* Cubic capacity of each *5 off 150 litres 3 off 88 litres*
 Material *Solid drawn tube* Seamless, lap welded or riveted longitudinal joint *Seamless* Range of tensile strength *28/32 TONS*
 Thickness *59"* Working pressure by Rules *1400 lbs/sq in* No. of starting air receivers *Two* Internal diameter *6'-0"*
 Cubic capacity *940 cubic ft.* Material *Steel* Seamless, lap welded or riveted longitudinal joint *D. Butt. Weld.*
 Range of tensile strength *28-32 Tons/sq in* thickness *1 3/32"* Working pressure by rules *356 lbs/sq in* Is each receiver, which can be isolated,
 with a safety valve as per Rule *Yes* Can the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their
 inner surfaces *BLAST Detachable heads, STARTING Manholes* Is there a drain arrangement fitted at the lowest part of each receiver *Yes*

IS A DONKEY BOILER FITTED? *Yes Certificate N° 16306* If so, is a report now forwarded? *Yes Glasgow N° 41077.*

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	22/2/21 TO 2/5/21	15 LBS/SQ	50 LBS/SQ	J.E.	
COVERS	8/4/21 TO 15/4/21	"	50 LBS/SQ	J.E.	
JACKETS.....	12/5/21 TO 3/6/21	"	50 LBS/SQ	J.E.	
PISTON WATER PASSAGES.....	30/3/21		2000 LBS/SQ	J.E.	
MAIN COMPRESSORS—1st STAGE.....					
2nd					
3rd					
AIR RECEIVERS—STARTING	1/2/21	356 LBS/SQ	712 LBS/SQ	R.J.B.	Belfast Rpt. N° 849
INJECTION	2/11/22 7/11/22		2000 LBS/SQ	H.M.C.	AV. N° 297 6304.
	20/11/22, 14/12/22, 20/12/22	356 LBS/SQ	712 LBS/SQ	H.M.C.	
AIR PIPES	✓	✓	✓		
FUEL PIPES	✓	✓	✓		
FUEL PUMPS	✓	✓	✓		
SILENCER	✓	✓	✓		
WATER JACKET			7½ LBS/SQ	A.C.	
SEPARATE FUEL TANKS	6/12/22 & 7/12/22				

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

SPARE GEAR *Copy of spare gear list attached.*

Receivers ✓

Separate Tanks *Standard.*

The foregoing is a correct description,
For HARLAND & WOLFE, LTD.

J. C. Green

Manufacturer.

MANAGER FINNIESTON WORKS

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 24-11-21 Covers 30-1-22 Pistons 21-10-21 Rods 21-10-21 Connecting rods 30-8-21

Crank shaft 31/34 2/4/21 Thrust shaft 12-6-21 Tunnel shafts 10-8-21 Screw shaft 10-8-21 Propeller 10-8-21 Stern tube 10-8-21 Engine seatings 9-11-21

Engines holding down bolts 23/1/23, 29/1/23 Completion of pumping arrangements 6-4-23 Engines tried under working conditions 18-4-23

Completion of fitting sea connections 1-12-22 Stern tube 9-11-22 Screw shaft and propeller 9-11-22

Material of crank shaft *S* Identification Mark on Do. *51780 51242 1241 4444 N°2 4444 N°2 216A 342A R.F.M. J.P. 5418 J.P.* Identification Mark on Do. *5*

Material of tunnel shafts *S* Identification Marks on Do. *5* Material of screw shafts *S* Identification Marks on Do. *Δ*

Is the flash point of the oil to be used over 150° F. *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M/S "LOSADA"*

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

This machinery has been built under special survey and in accordance with the rules and approved plans, the materials and workmanship are sound and good. After being fitted on in an efficient manner a full power trial was carried out and everything found satisfactory, and in our opinion is eligible to be classed with record of L.M.C. 4.

The amount of Entry Fee ... £ 6 : 0 :
Special ... £ 107 : 15 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 23/4/23.
When received, 24 APR 1923

Committee's Minute

GLASGOW

Assigned

+ L M C 4, 23.

MACHINERY DEPT
WRITTEN 14/1/23
(dated 25/4/23)



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Foundation