

Messrs Pollock State that Newcastle
Eng is intended for G.T. Gillies Ltd.

REPORT ON OIL ENGINE MACHINERY.

No. 1985

WED. OCT 27 1920

pt. 4b

REMARKS.

Received at London Office

of writing Report 23 Oct 1920 When handed in at Local Office

19

Port of

Stockholm

in Survey held at
Book.

Stockholm

Date, First Survey 11 Jan 1918 Last Survey 10 Oct 1920

Number of Visits 6

Single }
Twin } Screw vessels
Triple }

Tons } Gross
Net

Master Built at By whom built Yard No. When built

Engines made at Stockholm By whom made J.C.G. Bolander Co Ltd. Engine No. 14129/21 When made 1920

Boilers made at By whom made Boiler No. When made

Indicated Horse Power 320 Owners Messrs James Pollock Sons & Co Port belonging to London

Net Horse Power as per Rule 91 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c. Type of Engines Bolander Oil Engine 2 or 4 stroke cycle Single or double acting reversible

Maximum pressure in cylinders 264.5 lbs No. of cylinders 4 No. of cranks 4 Diameter of cylinders 420 mm 16 7/8"

Length of stroke 480 mm Revolutions per minute 225 Means of ignition Hot bulb Kind of fuel used Cude Oil

Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 210 mm

Distance between centres of main bearings 840 mm Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 176 mm as fitted 180 "

Diameter of crank pins 180 mm Breadth of crank webs as per Rule 234 mm as fitted 270 " Thickness of ditto as per Rule 98.5 mm as fitted 105.0 "

Diameter of flywheel shaft as per Rule 178 mm Diameter of tunnel shaft as per Rule - as fitted - Diameter of thrust shaft as per Rule 169 mm as fitted 175 "

Diameter of screw shaft as per Rule - Is the screw shaft fitted with a continuous liner the whole length of the stern tube No

Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the joints burned

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

Are two liners are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil

Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller

Number of blades state whether moveable Total surface square feet

Method of reversing Timing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners none fitted

Are the cylinders fitted with safety valves No Means of lubrication pumps Are the exhaust pipes and silencers water cooled or lagged with

Non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

No. of cooling water pumps 000 Is the sea suction provided with an efficient strainer which can be cleared

Are the bilge pumps fitted to the main engines Diameter of ditto Stroke

Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines How driven

No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room

No. of ballast pumps How driven Sizes of pumps

Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in

Engine Room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible

Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship

Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any

Communication between the sea and the bilges Is the screw shaft tunnel watertight Is it fitted with a watertight door

Is the vessel 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

No. of main air compressors 1 No. of stages 2 Diameters 275/100 mm Stroke 240 mm Driven by main engine

No. of auxiliary air compressors No. of stages Diameters Stroke Driven by

No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by

No. of scavenging air pumps more fitted Diameter Stroke Driven by

Diameter of auxiliary Diesel Engine crank shafts as per Rule - as fitted - Are the air compressors and their coolers made so as to be easy of access Yes

AIR RECEIVERS:—No of high pressure air receivers 1 Internal diameter 143 mm Cubic capacity of each 20 litres

Material S.M. Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength min. 23 tons per inch

Thickness 4.5 mm Working pressure by Rules 517 lbs No. of starting air receivers 3 Internal diameter 434 mm

Total cubic capacity 296 litres each Material S.M. Steel Seamless, lap welded or riveted longitudinal joint lap welded

Range of tensile strength min. 23 tons per inch thickness 8 mm Working pressure by rules 260 lbs 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 Yes What means are provided for cleaning their

Inner surfaces manhole Is there a drain arrangement fitted at the lowest part of each receiver Yes

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	8.9.20	264.5 lbs	529 lbs	LLOYD'S TEST 529 LBS SKM 8.9.20 A	
" " COVERS	8.9.20	ditto	ditto		
" " JACKETS	8.9.20		50 lbs		
" " PISTON WATER PASSAGES	(open pistons.)				
MAIN COMPRESSORS—1st STAGE	8.9.20	117.5 lbs	235 lbs		
" " 2nd "	8.9.20	441	882		
" " 3rd "					
3 AIR RECEIVERS—STARTING	9.9.20	15 Atm	30 Atm	LLOYD'S TEST 30 ATM WORKING PR 15 - No 2198 SKM 9.9.20 A	LLOYD'S TEST 30 ATM WORKING PR 15 ATM No 2199-2200 SKM 1.10.20 A
" " INJECTION	8.9.20	30 Atm	60 Atm	LLOYD'S TEST 60 ATM WORKING PR 30 - No 2197 SKM 8.9.20 A	
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER	8.9.20		50 lbs		
" " WATER JACKET	8.9.20		50 lbs	HYDR. TEST 50 LBS SKM 3.6.20 A	
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *Secretary's letters* E. 6.1.10.11.17.14.10.1.1/6 Receivers *Starting* E 8.3.16
(If not, state date of approval) *Injection* E 5.2.15 Separate Tanks -
SPARE GEAR to be supplied and inspected on delivery.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops - 11/1, 1/3, 11.21/5, 1.7/6, 2/7, 23/8, 22/12 1918; 29/12 1919, 13/1, 2.8.9/9, 1.10/10 1920
During erection on board vessel -
Total No. of visits 16
Dates of Examination of principal parts—Cylinders 2.8/9 20 Covers 2.8/9 20 Pistons 2.8/9 20 Rods - Connecting rods 11/1, 1/3, 28/12 18
Crank shaft 7/6, 29/8 18 Thrust shaft 11.21/5 18 Comp. crank 1/6, 2/7 18 Screw shaft - Propeller - Stern tube - Engine seatings -
Engines holding down bolts - Completion of pumping arrangements - Engines tried *in shop* under working conditions 2.9.20

Completion of fitting sea connections. Stern tube. Screw shaft and propeller.
Material of crank shaft *St. Steel* Identification Mark on Do. *LLOYD'S No 2990 SKM 8.9.20 A* Material of thrust shaft *St. Steel* Identification Mark on Do. *LLOYD'S No 2939 SKM 8.9.20 A*
Material of *comp. crank* *St. Steel* Identification Marks on Do. *LLOYD'S No 2978 SKM 8.9.20 A* Material of screw shafts - Identification Marks on Do. -

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 *See Rem report no 1944*

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

I am of opinion that this motor is of superior material and workmanship, and as it has been designed and constructed under my special survey, I have respectfully to submit that it will be eligible to be classed **LMG** as soon as it has been fitted in a vessel to the satisfaction of the Society's Surveyors.

The amount of Entry Fee ... £ : : When applied for,
Special *Survey* ... £ 22 : 12 : 4 : 25.10. 1920
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : *Secr.* 19.20.

Committee's Minute

FRI. 16 DEC. 1921

FRI. 20 JAN. 1922

Assigned

A. Jackson

Engineer Surveyor to Lloyd's Register of Shipping.
assisted by Mr. K. J. Anderson.



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Lloyd's Register
Foundation

Rpt. 13.

Port of

No. in on
Reg. Book *Sup*
36153. Bu
Owners *Ferr*
Yard No. 65

DESCRIPTION

Main dyna
Anc dyna

Capacity of Dyn
" "Anc.
Where is Dyna

Position of Mai

Positions of au

1-4 way

If fuses are fi

circuits

If vessel is i

Are the fuses o

Are all fuses fi

are perman

Are all switches

Total number of

A

B Capstan

C Steering h

D Off winch

E Forward lin

F. Windlass

1 Mast h

2 S

If arc lights, wh

Where are the s

DESCRIPTION

Main cable carryi

B Branch "

C Branch cables ca

D " "

E Branch cables ca

F " "

Leads to lamps ca

Cargo light cables

DESCRIPTION

Main ca

junction

gls + h

Joints in cables, h

Are all the joints

positions, no

Are there any joi

How are the cable

to alone