

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office MAY 21 1937

Date of writing Report _____ When handed in at Local Office 10 May 1937 Port of Sunderland.
 No. in Survey held at Sunderland. Date, First Survey 13 July 36 Last Survey 7 May 1937
 Reg. Book _____ (Number of Visits 49)
 on the Steel Screw Steamer "LLANDAFF" Gross 4825 Tons Net 2902
 Built at Sunderland By whom built Bartson & Sons Ld. Yard No. 245 When built 1934.
 Engines made at Newcastle on Tyne By whom made White's Nav. Eng. Co. Ld. Engine No. 90. When made 1934.
 Boilers made at Sunderland By whom made G. Clark (1936) Ld. Boiler No. 1201. When made 1934.
 Registered Horse Power _____ Owners Wimborne S. S. Co Ld. Port belonging to London.
 Nom. Horse Power as per Rule 348. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Yes.
 Trade for which Vessel is intended _____

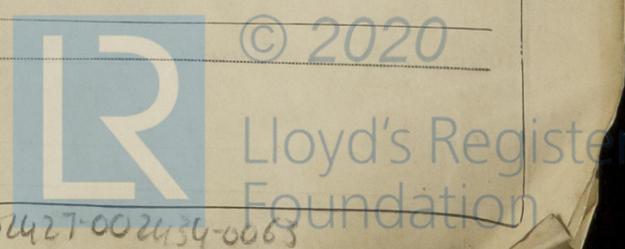
ENGINES, &c.—Description of Engines Please See Nwe. Rpt. No. 94862. Propeller Revs. per minute 61
 Dia. of Cylinders _____ Length of Stroke _____ No. of Cylinders _____ No. of Cranks _____
 Crank shaft, dia. of journals as per Rule _____ Crank pin dia. _____ Crank webs Mid. length breadth _____ Thickness parallel to axis _____
 as fitted _____ Mid. length thickness _____ shrunk _____ Thickness around eye-holes _____
 Intermediate Shafts, diameter as per Rule _____ as fitted _____ Thrust shaft, diameter at collars as per Rule _____ as fitted _____
 Tube Shafts, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule 13 1/2 Is the hub shaft fitted with a continuous liner Yes.
 as fitted _____ as fitted _____ Is the screw _____
 Bronze Liners, thickness in way of bushes as per Rule 23/32 Thickness between bushes as per Rule 3/4 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 one length.
 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 Yes.
 If two liners are fitted, is the shaft lapped or protected between the liners no. Is an approved Oil Gland or other appliance fitted at the after end of the tube no.
 If so, state type (Variable) Length of Bearing in Stern Bush next to and supporting propeller 4'-6 1/4"
 Propeller, dia. 18'-0" Pitch 19'-9" No. of blades 4. Material Bronze whether Moveable no. Total Developed Surface 106. sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter _____ Stroke _____ Can one be overhauled while the other is at work no.
 Bilge Pumps worked from the Main Engines, No. none Diameter _____ Stroke _____ Can one be overhauled while the other is at work no.
 Feed Pumps { No. and size 2 6" x 8 1/2" x 18" Pumps connected to the { No. and size 3 10" x 12" x 12" 10" x 6" x 6"
 How driven Steam Main Bilge Line { How driven Steam. 4 8" x 9" x 8"
 Ballast Pumps, No. and size 2 10" x 12" x 12" Lubricating Oil Pumps, including Spare Pump, No. and size 2 6" x 5 1/2" x 15"
 1 @ 8" x 9" x 8"
 Are two independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 @ 3" E.R. 1 @ 2 1/2" Sump well.
 In Pump Room _____ In Holds, &c. Forehold 3 1/2" φ r.s. Fore main hold 3 1/2" φ r.s.
 Cross bunker 2" φ r.s. Aft main hold 3" φ r.s. Aft hold 3" φ r.s.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 4 1/2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes.
 Are the Bilge Suctions in the Machinery Space led 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 Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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 Forward Bilge Suctions How are they protected Lead Casings.
 What pipes pass through the deep tanks none. 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 Yes. Is it fitted with a watertight door Yes. worked from E.R. top grating

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface (sq. ft.) Boilers 4834 (3540 for main + 1264 for aux.)
 Is Forced Draft fitted Yes (on main) No. and Description of Boilers 2 S.B. + 1 Aux. Working Pressure 230 lbs/sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.
 IS AN AUX. ~~DONKEY~~ BOILER FITTED? Yes. If so, is a report now forwarded? Yes.
 Is the donkey boiler intended to be used for domestic purposes only _____
 PLANS. Are approved plans forwarded herewith for Shafting (Nwe.) Main Boilers Yes. Auxiliary Boilers Yes. Donkey Boilers _____
 Superheaters Yes. General Pumping Arrangements Yes. Oil fuel Burning Piping Arrangements _____

SPARE GEAR.
 Has the spare gear required by the Rules been supplied Yes.
 State the principal additional spare gear supplied Please See Nwe. Rpt. No. 94862.
One Cast Iron Propeller, one Propeller Shaft, 4 main Check valve lids, 4 auxiliary Check valve lids, 12 Condenser tubes, 6 plain boiler tubes, 1 set valves for Suct. Val. Chest of ballast pump, 2 main boiler Safety valve Springs, one Superheater Safety valve Spring, one top & one bottom end bearings & bolts for Fan Engine.

The foregoing is a correct description,
 FOR GEORGE CLARK (1936) LTD.
H. Mackenzie.

Manufacturer.



001427-002434-0063

PILLAR
" "
" "
" "
Centre Stiffer
Platin
STRINGE Uppern String
" "
" "
Thick in v
Thick in v
If She
Second String
STR
FLAT PLAT
" I
BOTTOM PI of Strake
BILGE PLAT Strakes
SIDE PLAT Strakes
UPPER DE strake in
UPPER DE strake in
STRAKE BE strake in
STRAKE BE strake in
POOP SIDE
BRIDGE SID
FOREC'TLE
Total No.
MIDSHIP
" "
" "
" "
COLLISIO
AFTER P
STEEL.

Dates of Survey while building
During progress of work in shops - - 1936 July 13 Aug 18 Sep 3 18 24 Oct 16 Nov 4 18 20 23 25 Dec 3 7 9 16 23
1937 Jan 6 7 11 19 27 Feb 2 5 9 10 11 15 16 19 22 23 24 26 March 3 15 16 17 31 April 2 6 9
During erection on board vessel - - - 13 15 16 22 30 May 4 7
Total No. of visits 49

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓
Pistons ✓ Piston Rods ✓ Connecting rods ✓
Crank shaft ✓ Thrust shaft 4/1/34 (Gms.) Intermediate shafts 22/2/34 15/3/34
Tube shaft ✓ Screw shaft 19/1/34 24/1/34 Propeller 2/2/34
Stern tube 14/3/34 3/3/34 Engine and boiler seatings 16/2/34 Engines holding down bolts 13/4/34
Completion of fitting sea connections 3/3/34
Completion of pumping arrangements 4/5/34 Boilers fixed 13/4/34 Engines tried under steam 4/5/34 Aug. B.H.
Main boiler safety valves adjusted 4/5/34 Thickness of adjusting washers P.B.H. P. 9/32 S.P.H. S.B.H. P 3/8 S.P.H. P 1/2 S. 1/2
Crank shaft material Ingot Steel Identification Mark No 452 Thrust shaft material Ingot Steel Identification Mark CHLP 41/34
Intermediate shafts, material Ingot Steel Identification Marks WHF 22/2/34 Tube shaft, material Ingot Steel Identification Mark
Screw shaft, material Ingot Steel Identification Mark WHF 24/1/34 Steam Pipes, material P.D. Steel Test pressure 690 lb Date of Test 14/3/34
Is an installation fitted for burning oil fuel no. Is the flash point of the oil to be used over 150°F. ✓
Have the requirements of the Rules for the use of oil as fuel been complied with ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no. 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 not desired.
Is this machinery duplicate of a previous case No. If so, state name of vessel S/S "LLANASHE".

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been securely fitted on board the vessel & tried under working conditions alongside quay with satisfactory results.
The machinery is now eligible in my opinion to have notation L.M.C. S. 34 T.S. (CL) in the Register's Book.

Two-man Bhs
The amount of Entry Fee £ 30/18
Aux. boiler Special £ 19/0
Installing machinery £ 15/0
Donkey Boiler Fee (charged on N.W.C.)
Travelling Expenses (if any) £ /c.
When applied for, 19...
When received, 19...

J. H. K. [Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 25 MAY 1937
Assigned + Lumb 5.37
250 (20 Sp.) + 1 aux L.H.