

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 9 MAR 1928

Date of writing Report 19 When handed in at Local Office - 8 MAR. 1928 Port of *Sunderland*
 No. in Survey held at *Sunderland* Date, First Survey 30th Sep 27 Last Survey 8th Mar 1928
 Reg. Book. on the "S.S. ST. THERESE" (Number of Visits 42)
 Built at *Sunderland* By whom built *Swan Hunter Wigham Richardson* Yard No. *1327* Tons {Gross 2280. Net 1354.
 Engines made at *do* By whom made *George Stark Ltd* Engine No. *1157* when made *1928*
 Boilers made at *do* By whom made *do* Boiler No. *1157* when made *1928*
 Registered Horse Power - Owners *Jens Lund & Co.* Port belonging to *London*
 Nom. Horse Power as per Rule *224* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*
 Trade for which Vessel is intended *General*

ENGINES, &c.—Description of Engines *Triple expansion* Revs. per minute *71*
 Dia. of Cylinders *20 1/2 - 34 - 56* Length of Stroke *39* No. of Cylinders *3* No. of Cranks *3*
 Crank shaft, dia. of journals as per Rule *10.78* Crank pin dia. *10 7/8* Crank webs Mid. length breadth *16 3/4* Thickness parallel to axis *6 3/4*
 as fitted *10 7/8* Mid. length thickness *6 3/4* shrunk Thickness around eye-hole *4 3/4*
 Intermediate Shafts, diameter as per Rule *10.266* Thrust shaft, diameter at collars as per Rule *10.78*
 as fitted *10 5/16* as fitted *10 7/8*
 Tube Shafts, diameter as per Rule - Screw Shaft, diameter as per Rule *11.48* Is the *tube* shaft fitted with a continuous liner *yes*
 as fitted - as fitted *11 5/8* Is the *screw* shaft fitted with a continuous liner *yes*
 Bronze Liners, thickness in way of bushes as per Rule *31* Thickness between bushes as per Rule - Is the after end of the liner made watertight in the
 as fitted *3 1/2* as fitted - 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* Length of Bearing in Stern Bush next to and supporting propeller *3' 10 1/2*
 Propeller, dia. *14' 9"* Pitch *14' 6"* No. of Blades *4* Material whether Moveable *no* Total Developed Surface *68.3* sq. feet
 Feed Pumps worked from the Main Engines, No. *2* Diameter *2 3/4* Stroke *24* Can one be overhauled while the other is at work *yes*
 Bilge Pumps worked from the Main Engines, No. *2* Diameter *2 3/4* Stroke *24* Can one be overhauled while the other is at work *yes*
 Feed Pumps { No. and size *1 @ 6" x 4" x 6"* Pumps connected to the { No. and size *1 @ 9" x 11" x 10"*
 How driven *Steam* Main Bilge Line How driven *Steam*
 Ballast Pumps, No. and size *1 @ 9" x 11" x 10"* Lubricating Oil Pumps, including Spare Pump, No. and size -
 Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room *3 @ 2 1/2"*
 In Holds, &c. *No 1, 2 @ 3 1/4" No 2, 3 @ 3"*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1 @ 4"* Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size *1 @ 4"* 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
 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 *below*
 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 How are they protected
 What pipes pass through the deep tanks 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
 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record *5*) Total Heating Surface of Boilers *3614* sq. ft.
 Is Forced Draft fitted *no* No. and Description of Boilers *Two of fl. Smith.* Working Pressure *180 lbs.*
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *yes*
 IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*
 PLANS. Are approved plans forwarded herewith for Shafting Main Boilers *yes* Auxiliary Boilers - Donkey Boilers
 Superheaters. General Pumping Arrangements *yes* Oil fuel Burning Piping Arrangements -

SPARE GEAR. State the articles supplied:— *2 top end 2 bottom end 2 main bearing bolts & nuts*
1 set coupling bolts. 2 valves for feed & 2 for bilge pumps & condenser tubes
& 50 female 3 plain bilge tubes & 3 other tubes & safety valve springs 1 main
& 1 aux feed check valve lid. 1 set of valves for ballast & feed tanks
A quantity of assorted bolts & nuts & riv. of various sizes. 1 C.V. Propeller
1 tail end shaft. 1 set of air & circulating pump valves.

The foregoing is a correct description,
 FOR GEORGE CLARK LIMITED.

W.B. Spence Manufacturer.



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Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - - -

1927. Sep. 30. Oct. 10, 14, 18, 19, 21, 24, 28, 31. Nov. 2, 7, 8, 14, 15, 17, 22, 23, 24, 30. Dec. 2, 6, 7, 9, 12
1928. Jan. 10, 12, 13, 16, 17, 19, 23, 31. Feb. 16, 17. Mar. 1, 8

Total No. of visits 42

Dates of Examination of principal parts—Cylinders 24/10/27 Slides 14/10/27 Covers 30/9/27
 Pistons 17/11/27 Piston Rods 18/10/27 Connecting rods 19/10/27
 Crank shaft 21/10/27 & 2/11/27 Thrust shaft 2/11/27 Intermediate shafts 24/11/27
 Tube shaft ✓ Screw shaft 7/12/27 Propeller 2/12/27
 Stern tube 28/10/27 Engine and boiler seatings 10/1/28 Engines holding down bolts 13/1/28
 Completion of fitting sea connections 10/1/28 & 30/12/27
 Completion of pumping arrangements 31/1/28 Boilers fixed 12/1/28 Engines tried under steam 17/1/28
 Main boiler safety valves adjusted 17/1/28 Thickness of adjusting washers $0\frac{5}{8}$ " $5\frac{1}{2}$ " $1\frac{1}{2}$ " $5\frac{1}{2}$ "
 Crank shaft material J. STEEL Identification Mark 8656A Thrust shaft material J. STEEL Identification Mark 7730MD
 Intermediate shafts, material J. STEEL Identification Marks 111, 112, 113, Tube shaft, material ✓ Identification Mark -
 Screw shaft, material J. STEEL Identification Mark 77194 Steam Pipes, material L. W. STEEL Test pressure 540 ^{135F} Date of Test 16/1/28
 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 carrying and burning oil fuel been complied with ✓
 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 engines & boilers of this vessel have been built under special survey & the materials & workmanship are good. On completion the machinery was tried under full working conditions with satisfactory results. The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the notation **L.M.C. 3-28** marked in the Society's Register Book. also T.S. C-L.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3-28 C-L.

J.S.A. 13/3/28

SUNDERLAND.

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

The amount of Entry Fee ... £ 4-0-0
 Special ... £ 56-0-0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 1 MAR. 1928
 When received, 5.6.28

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 13 MAR 1928

Assigned + L.M.C. 3, 28

