

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 12 JUN 1930

11 JUNE 1930

Date of writing Report 19 When handed in at Local Office 11 JUNE 1930 Port of Sunderland.

No. in Survey held at Sunderland. Date, First Survey 10 Dec. '29 Last Survey June 3 1930
Reg. Book. (Number of Visits 55

on the S.S. "IRON CHIEF".

Gross 4560
Tons Net 2677

Built at Sunderland By whom built Wm Dufford & Sons Ltd. Yard No. 607 When built 1930.

Engines made at Do By whom made George Halket Ltd. Engine No. 1186 when made 1930.

Boilers made at Do By whom made Do Boiler No. 1186 when made 1930.

Registered Horse Power Owners Interstate Steamships Ltd. Port belonging to Sunderland.

Nom. Horse Power as per Rule 479. 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** *72*
Dia. of Cylinders *26"-43"-71"* **Length of Stroke** *148"* **No. of Cylinders** *3* **No. of Cranks** *3*
Crank shaft, dia. of journals as per Rule *13.534* **Crank pin dia.** *13 5/8"* **Crank webs** Mid. length breadth *20 1/2"* Thickness parallel to axis *8 1/2"*
as fitted *13 5/8"* Mid. length thickness *8 1/2"* Thickness around eye-hole *8"*
Intermediate Shafts, diameter as per Rule *12.89"* **Thrust shaft, diameter at collars** as per Rule *13.534"*
as fitted *13"* as fitted *14"*
Tube Shafts, diameter as per Rule *✓* **Screw Shaft, diameter** as per Rule *14.369"* Is the { tube } shaft fitted with a continuous liner { *Yes* }
as fitted *✓* as fitted *14 1/2"* as the { screw }
Bronze Liners, thickness in way of bushes as per Rule *23/64"* 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 *✓*
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 *4-10 5/8"*
Propeller, dia. *17-9"* Pitch *16-0"* **No. of Blades** *4* **Material** *Brass* whether Moveable *No* **Total Developed Surface** *106* sq. feet
Feed Pumps worked from the Main Engines, No. *2* **Diameter** *3 3/4"* **Stroke** *27"* Can one be overhauled while the other is at work *Yes*
Bilge Pumps worked from the Main Engines, No. *2* **Diameter** *3 3/4"* **Stroke** *27"* Can one be overhauled while the other is at work *Yes*
Feed Pumps { No. and size *129x6x15* **DUPLEX** / *129 1/2x7x21* **SIMPLEX** } **Pumps connected to the** { No. and size *12 10"x12"x12"* }
{ How driven *STEAM* / *STEAM* } **Main Bilge Line** { How driven *STEAM* }
Ballast Pumps, No. and size *12 10"x12"x12"* **Lubricating Oil Pumps, including Spare Pump, No. and size** *None*
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 *4 23 1/8" / 23" Funnel Well.*
In Holds, &c. *No 1, 2 23 1/8" No 2, 2 23 1/2" No 3, 2 23" No 4, 1 23 1/2" Holdwell.*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1 @ 6 1/2"* **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
No. and size *1 @ 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
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 *None /* 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 *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 *Top of Rm. Stair*

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *7002*
Is Forced Draft fitted *YES* No. and Description of Boilers *3 CYL MWT S. E.* Working Pressure *180 LB*
IS A REPORT ON MAIN BOILERS NOW FORWARDED? *YES.*
IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *-*
PLANS. Are approved plans forwarded herewith for Shafting *yes* Main Boilers *yes* Auxiliary Boilers *-* Donkey Boilers *-*
(If not state date of approval)
Superheaters *-* General Pumping Arrangements *YES.* Oil fuel Burning Piping Arrangements *-*

SPARE GEAR. State the articles supplied:—2 Connecting Rod top end 2 connecting rod bottom end both joints, 2 main bearing bolts, 1 set coupling bolts 1 set of feed & bilge pump valves, a quantity of assorted bolts & nuts & iron of various sizes. 3 Condenser tubes, 12 boiler tubes, 2 safety valve springs, 1 main & 1 Run feed check valve with 6 junk ring bolts & nuts, cast iron propeller, 1 Propeller shaft, 1 set springs for each piston, 1 set air & circulating pump valves, 1 ballast pump & 1 general service pump valves.

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.

1698 miles

Manufacturer.

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Lloyd's Register
Foundation

010640-010651-0300

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

NOTE.—The words which do not apply should be deleted.

1m 9,26. T.

29/ Dec. 10 30/ Jan. 8, 14, 17, 21, 28, 28, 30, 31. Feb. 3, 5, 7, 10, 18, 20, 24, 27, 28. Mar. 3, 5, 6, 7, 11, 12.
 13, 14, 18, 19, 20, 24, 26, 28. Apr. 1, 4, 9, 10, 11, 15, 16, 28, 24, 24, 25. May. 1, 5, 7, 12, 13, 14, 16, 17, 19, 27, 29
 June 3
 Total No. of visits 55

Dates of Examination of principal parts—Cylinders 24/2/30 Slides 3/2/30 Covers 5/2/30
 Pistons 23/1/30 Piston Rods 10/2/30 Connecting rods 27/2/30
 Crank shaft 3/3/30 Thrust shaft 18/3/30 Intermediate shafts 24/3/30
 Tube shaft - Screw shaft 24/3/30 Propeller 7/3/30
 Stern tube 5/3/30 Engine and boiler seatings 5/5/30 Engines holding down bolts 14/5/30
 Completion of fitting sea connections 15/4/30
 Completion of pumping arrangements 16/5/30 Boilers fixed 12/5/30 Engines tried under steam 17/5/30
 Main boiler safety valves adjusted 17/5/30 Thickness of adjusting washers PORT 5 3/8" CENTRE 5 3/8" STB 5 3/8" S 3/8"
 Crank shaft material I. STEEL Identification Mark 2785. Thrust shaft material I. STEEL Identification Mark 133.
 Intermediate shafts, material I. STEEL Identification Marks 1464, 123, 1465. Tube shaft, material Identification Mark -
 Screw shaft, material I. STEEL Identification Mark 132 WORKING 1463 SPARE. Steam Pipes, material L.W. STEEL Test pressure 540 Date of Test 24/4/30
 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 a full head of steam with satisfactory results.

The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the notation L.M.C. - 6.30 & T.B. P.L. marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 6.30
 C-L F.D.

J. 14/6/30.

The amount of Entry Fee ... £ 5-0-0 When applied for, 1 JUNE 1930
 Special ... £ 96-17-0
 Donkey Boiler Fee ... £ : : When received, 18.6.30
 Travelling Expenses (if any) £ : :

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

Committee's Minute

Assigned

+ L.M.C. 6.30