

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 30637

15 MAY 1931

Date of writing Report

When handed in at Local Office

14 MAY 1931

Received at London Office

Port of *Funderland.*No. in Survey held at *Funderland.*
Reg. Book.Date, First Survey *12 Dec '30* Last Survey *4 May 1931*
(Number of Visits *63*)

on the

*S.S. BENEFICENT*Built at *Funderland* By whom built *Wm Pickens & Sons*Yard No. *231*Tons { Gross *2944*
Net *1674*
When built *1931*Engines made at *Funderland* By whom made *George Rank Ltd*Engine No. *1192* when made *1931*Boilers made at *Funderland* By whom made *do*Boiler No. *1192* when made *1931*

Registered Horse Power

Owners *Westall Steamship Co. Ltd.*Port belonging to *Funderland.*Nom. Horse Power as per Rule *277*Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *Yes*Trade for which Vessel is intended *Coal.*

ENGINES, &c.—Description of Engines

*Triple expansion*Revs. per minute *70*Dia. of Cylinders *22 1/2, 37, 61"* Length of Stroke *47"*No. of Cylinders *3*No. of Cranks *3*

Crank shaft, dia. of journals

as per Rule *11.739"*as fitted *12 1/4"*Crank pin dia. *12 1/2"*

Crank webs

Mid. length breadth *18 1/2"*Thickness parallel to axis *7 1/8"*Mid. length thickness *7 1/8"*Thickness around eye-hole *5 1/8"*

Intermediate Shafts, diameter

as per Rule *11.18"*as fitted *12 1/4"*

Thrust shaft, diameter at collars

as per Rule *11.739"*as fitted *12 1/4"*

Tube Shafts, diameter

as per Rule *12.503"*as fitted *12 1/8"*

Screw Shaft, diameter

as per Rule *12.503"*as fitted *12 1/8"*Is the *tube* shaft fitted with a continuous liner *Yes*

Bronze Liners, thickness in way of bushes

as per Rule *4 1/8"*as fitted *4 1/8"*

Thickness between bushes

as per Rule *4 1/8"*as fitted *4 1/8"*

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 *4-2 1/2"*Propeller, dia. *15-10 1/2"* Pitch *15-6"*No. of Blades *4*Material *C. Iron* whether Movable *No*Total Developed Surface *79* sq. feetFeed Pumps worked from the Main Engines, No. *2*Diameter *3"*Stroke *26"*Can one be overhauled while the other is at work *Yes*Bilge Pumps worked from the Main Engines, No. *2*Diameter *3"*Stroke *26"*Can one be overhauled while the other is at work *Yes*Feed Pumps { No. and size *One 7 1/2" x 5" x 6"*How driven *Steam*

Pumps connected to the

Main Bilge Line

{ No. and size *Two 9 x 10" x 10"*How driven *Steam*Ballast Pumps, No. and size *Two 9 x 10" x 10"*Lubricating Oil Pumps, including Spare Pump, No. and size *None*Are two independent means arranged for circulating water through the Oil Cooler *None*

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room *Two 2 3"*In Holds, &c. *No 1 2 2 1/2", No 2, 2 2 1/2" After Hold 2 2 3"*Main Water Circulating Pump Direct Bilge Suctions, No. and size *1 2 5 1/2"*

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size *1 2 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 *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 *None*How are they protected *-*What pipes pass through the deep tanks *Lead linings*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 *-*

MAIN BOILERS, &c.—(Letter for record *S*)

Total Heating Surface of Boilers *4488*Is Forced Draft fitted *No*No. and Description of Boilers *Two 6 ft 6 in S.E.*Working Pressure *180-250*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 *18/10/30* Main Boilers *Yes*Auxiliary Boilers *-*Donkey Boilers *-*Superheaters *-*

(If not state date of approval)

General Pumping Arrangements *Yes*Oil fuel Burning Piping Arrangements *-*

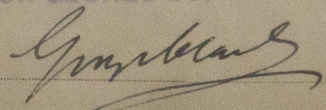
SPARE GEAR.

State the articles supplied:—

2 connecting Rod top end, Two connecting rod bottom end both & nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts & nuts & in of various sizes, 1 C.I. Propeller, 6 junk iron bolts & nuts, 1 set each of valves for air circulation & ballast pumps, 6 cast-iron tubes & boiler tubes 2 safety valve springs, 1 main & 1 aux feed check valve.

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.



Manufacturer.



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Lloyd's Register
Foundation

W342-0042

044

Dates of Survey while building
 During progress of work in shops - - 1930. Dec. 12, 19, 25, 31. 1931. Jan. 5, 7, 8, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, Feb. 2, 3, 4, 5, 6, 9, 10, 12, 13, 16, 17, 18, 19, 20, 23, 24, 25, 27, Mar. 5, 9, 10, 12, 13, 16, 17, 18, 19, 23, 24, Apr. 1, 2, 9, 10, 14, 15, 16, 17, 20, 21, 22, 23, 24, 27, 28, 29, 30, May 1, 4
 During erection on board vessel - - -
 Total No. of visits 68

Date of writing
 No. in Book.

Master
 Engines made
 Boilers made
 Nominal Horsepower

MULTIT

Manufacture

Total Heating

No. and Des

Tested by

Area of Fire

Area of each

In case of do

Smallest dist

Smallest dist

Largest inter

Thickness

Long. seams

Percentage of

Percentage of

Thickness of

Material

Length of pla

Dimensions of

End plates in

How are stay

Tube plates:

Mean pitch of

Girders to co

Centre

Each

Tensile streng

Stays

Press

Thickness

Pitch of stays

Working Press

At bo

Over

Working press

At tw

Over

Dates of Examination of principal parts--Cylinders 17/2/31 Slides 13/1/31 Covers 22/1/31
 Pistons 21/1/31 Piston Rods 3/1/31 Connecting rods 13/2/31
 Crank shaft 7/1/31 Thrust shaft 9/4/31 Intermediate shafts 9/4/31
 Tube shaft - Screw shaft 9/4/31 Propeller 13/3/31
 Stern tube 18/3/31 Engine and boiler seatings 16/4/31 Engines holding down bolts 24/4/31
 Completion of fitting sea connections 14/4/31
 Completion of pumping arrangements 30/4/31 Boilers fixed 27/4/31 Engines tried under steam 28/4/31
 Main boiler safety valves adjusted 28/4/31 Thickness of adjusting washers PORT BOILER 1 7/16 5 1/16 STD BOILER 1 7/16 5 1/16
 Crank shaft material I. STEEL Identification Mark 4994 Thrust shaft material I. STEEL Identification Mark 2682
 Intermediate shafts, material I. STEEL Identification Marks 8177 Tube shaft, material - Identification Mark -
 Screw shaft, material I. STEEL Identification Mark 5062 Steam Pipes, material S. D. STEEL Test pressure 540 Date of Test 20/4/31
 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 Yes.
 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 machinery of this vessel has been built under special survey & the workmanship & materials are good. On completion the engines & boilers were satisfactorily fitted in the vessel & tried under a full head of steam. The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the notation LMC-5-31 marked in Red in the Register Register Book also Tail Shaft C.L.

The amount of Entry Fee ... £ 4 : : When applied for, 3 MAY 1931
 Special ... £ 66-11-0 : :
 Donkey Boiler Fee ... £ : : When received, 24.10.1931
 Travelling Expenses (if any) £ : :

Charlotte
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 27 MAY '31 TUE. 20 OCT 1931

Assigned + L.M.C. 5, 31 C.L.

CERTIFICATE WRITTEN.

Certificate to be sent to LLOYD'S REGISTER

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