

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 31245

Date of writing Report *11 JULY 1933* When handed in at Local Office *11 JULY 1933* Port of *SUNDERLAND* Received at London Office *12 JUL 1933*

No. in Survey held at *Sunderland* Date, First Survey *14 Feb.* Last Survey *3 July 1933*  
 Reg. Book: on the *Screw Steamer "PARKWOOD"* (Number of Visits *42*)

Built at *Burstonland* By whom built *Burstonland S. B. Co Ltd* Yard No. *144* Tons {Gross *1049*, Net *585* When built *1933*

Engines made at *Sunderland* By whom made *North Eastern Mar. Eng. Co. Ltd* Engine No. *2495* when made *1933*

Boilers made at *Sunderland* By whom made *North Eastern Mar. Eng. Co. Ltd* Boiler No. *2495* when made *1933*

Registered Horse Power *105* Owners *Joseph Constantine Steamship Line Ltd* Port belonging to *Middlesbrough*

Nom. Horse Power as per Rule *105* Is Refrigerating Machinery fitted for cargo purposes *no.* Is Electric Light fitted *no.*

Trade for which Vessel is intended

**ENGINES, &c.**—Description of Engines *Installed triple expansion*

Dia. of Cylinders *13 1/2" - 23" - 38"* Length of Stroke *24"* No. of Cylinders *3* Revs. per minute *88*

Crank shaft, dia. of journals as per Rule *4 1/8"* as fitted *4 1/8"* Crank pin dia. *4 1/8"* Crank webs Mid. length breadth *1'-1"* No. of Cranks *3* Thickness parallel to axis *4 13/16"* 3"  
 as fitted *4 1/8"* Mid. length thickness *4 13/16"* shrunk Thickness around eye-hole *3 5/16" - 1 4/16"*

Intermediate Shafts, diameter as per Rule *none* as fitted *none* Thrust shaft, diameter at collars as per Rule *4 1/8"* as fitted *4 1/8"*

Tube Shafts, diameter as per Rule *none* as fitted *none* Screw Shaft, diameter as per Rule *8.09"* as fitted *8 1/2"* Is the *none* screw shaft fitted with a continuous liner *Yes.*

Bronze Liners, thickness in way of bushes as per Rule *14/32"* as fitted *9/16"* Thickness between bushes as per Rule *13/32"* as fitted *1/2"* 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 full length fit*

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 shaft *no.*

Propeller, dia. *11'-6"* Pitch *11'-6"* No. of Blades *4* Material *C.I.* whether Moveable *no.* Total Developed Surface *52* sq. feet

Feed Pumps worked from the Main Engines, No. *2* Diameter *2 1/4"* Stroke *15"* Can one be overhauled while the other is at work *Yes.*

Bilge Pumps worked from the Main Engines, No. *2* Diameter *2 1/4"* Stroke *15"* Can one be overhauled while the other is at work *Yes.*

Feed Pumps { No. and size *2 6" x 4" x 6"* How driven *Steam* Pumps connected to the Main Bilge Line { No. and size *one 8" x 9" x 8"* How driven *Steam.*

Ballast Pumps, No. and size *1 @ 8" x 9" x 8"* Lubricating Oil Pumps, including Spare Pump, No. and size *none.*

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 @ 2 1/2"* In Holds, &c. *2 @ 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 @ 3"*

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 man-boxes, placed above the level of the working floor, with straight gal 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 *Hold Suctions (p.r.s.) iron* How are they protected *wood casing*

What pipes pass through the deep tanks *none* Have they been tested as per Rule *Yes.*

Are all Pipts, 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 *none* Is it fitted with a watertight door *worked from*

**MAIN BOILERS, &c.**—(Letter for record *S*) Total Heating Surface of Boilers *1906 sq. ft. & front tube plate 1841 sq. ft.*

Is Forced Draft fitted *no.* No. and Description of Boilers *1 S.B.* Working Pressure *200 lbs/sq. in.*

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 (If not state date of approval) *Yes.* Main Boilers *Yes.* Auxiliary Boilers *Yes.* Donkey Boilers *Yes.*

Superheaters *none.* General Pumping Arrangements *Yes.* Oil fuel Burning Piping Arrangements *none.*

SPARE GEAR. State the articles supplied:—

*1 Cast Iron Propeller, 2 Bottom end bolts & nuts, 2 Top end bolts & nuts, 2 main bearing bolts & nuts, 6 Coupling bolts & nuts, 2 Feed Pump valves, 2 bilge pump valves, 1/2 cwt. assorted plate, 1/2 cwt. assorted iron bars, 50 assorted bolts & nuts.*

The foregoing is a correct description,  
*Archd. L. Berry* Manufacturer.



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

1933. Feb. 14, 21, 28. Mch. 7, 9, 14, 21, 22, 24, 29. Apr. 4, 5, 12, 21, 24, 25, 27. May. 1, 2, 9, 10, 12, 18, 19. 22, 24, 28, 29, 30. June. 1, 2, 12, 13, 14, 15, 19, 20, 23, 26, 28, 30. July. 3

Dates of Survey while building

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

Total No. of visits 42

Dates of Examination of principal parts - Cylinders FEB. 21, 28 MAR. 4, 14 APR. 24 MAY 2. Slides 19. 5. 33. Covers 14. 3. 33.  
Pistons 10. 5. 33. Piston Rods 10. 5. 33. Connecting rods 14. 3. 33 19. 5. 33.  
Crank shaft 4. 3. 33 5. 4. 33. 21. 4. 33. Thrust shaft 21. 4. 33. Intermediate shafts none.  
Tube shaft none. Screw shaft 19. 5. 33 29. 5. 33. Propeller 1. 6. 33.  
Stern tube 30. 5. 33. Engine and boiler seatings 12. 6. 33. Engines holding down bolts 19. 6. 33.

Completion of fitting sea connections (See Rpt.)  
Completion of pumping arrangements 30. 6. 33. Boilers fixed 19. 6. 33. Engines tried under steam 30. 6. 33.

Main boiler safety valves adjusted 30. 6. 33. Thickness of adjusting washers T. 13/32 S. 1/32 S. 1/16  
Crank shaft material Steel Identification Mark LLOYDS 6469 W.H.F. 21. 4. 33 Thrust shaft material Steel Identification Mark LLOYDS 6469 W.H.F. 21. 4. 33  
Intermediate shafts, material none Identification Marks Tube shaft, material none Identification Mark  
Screw shaft, material Steel Identification Mark 6469 W.H.F. 29. 5. 33 Steam Pipes, material Steel Test pressure 600 Date of Test 16. 3. 33 19. 6. 33

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 Yes. If so, state name of vessel "LINWOOD" (except Superheat).

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

This machinery has been built under Special Survey in accordance with the Rules of the Society.  
The materials & workmanship are good.  
The machinery has been securely fitted on board the vessel & tried under steam with satisfactory results & is reliable, in my opinion, to have notation 100 L.M.C. 7. 33 T.S. (CL) in the Register Book.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for.  
Special ... £ 26 : 5 : 0 7 JULY 1933  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : 17. 7. 33

J. P. Raw. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned + L.M.C. 7. 33 C.L.



SUNDERLAND

Certificate to be sent to

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

Date of writing  
In the Surveyor's Reg. Book.  
on the  
Master  
Engines made at  
Boilers made at  
Nominal Horse  
MULTITUB  
Manufacturers of  
Total Heating S  
No. and Descrip  
Tested by hydran  
Area of Firegrat  
Area of each set  
In case of donkey  
Smallest distance  
Smallest distance  
Largest internal  
Thickness 1 1/2  
Long. seams T.H  
Percentage of stre  
Percentage of stre  
Thickness of butt s  
Material  
Length of plain pa  
Dimensions of stiff  
End plates in stea  
How are stays secu  
Tube plates: Mate  
Lean pitch of stay  
Riders to combust  
Centre 8 1/4"  
each 2 @  
Tensile strength  
Pitch of stays to ditto  
Working pressure by  
Thickness 29/32  
Pitch of stays at wid  
Working Pressure  
Diameter { At body of st  
or  
Over threads.  
Working pressure by  
Diameter { At turned off p  
or  
Over threads.