

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 4 SEP 1945

Date of writing Report 3<sup>rd</sup> Sept 1945 When handed in at Local Office 3<sup>rd</sup> Sept 1945 Port of Leith

No. in Survey held at Burntisland Date, First Survey 3-5-45 Last Survey 27<sup>th</sup> August 1945

Reg. Book 23498 on the S.S. "EMPIRE PACIFIC." (Number of Visits 18) Tons { Gross 984 Net 380

Built at Burntisland By whom built Burntisland S. B. & Co. Ltd. Yard No. 298 When built 1945

Engines made at Sunderland By whom made J. Clark (1938) Ltd. Engine No. 1374 When made 1945

Boilers made at Sunderland By whom made J. Clark (1938) Ltd. Boiler No. 1374 When made 1945

Registered Horse Power 162 Owners Ministry of War Transport Port belonging to Burntisland

Nom. Horse Power as per Rule 162 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

Trade for which vessel is intended Ocean-going

## ENGINES, &amp;c.—Description of Engines

Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks Revs. per minute

Crank shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eye-hole

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 as fitted Is the { tube screw } shaft fitted with a continuous liner {

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as fitted Is the after end of the liner made watertight in the propeller boss

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

at If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet

Feed Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Feed Pumps { No. and size How driven } Pumps connected to the Main Bilge Line { No. and size How driven } Type - 7" x 8" x 10" Steam

Ballast Pumps, No. and size 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 1 P. & 1 S. = 2" dia. 1 - 2 1/2" aft end of engine room.

In Pump Room ✓ In Holds, &c. Nº 1 Hold 1 P. & 1 S. = 2 1/2" dia. Nº 2 Hold 1 P. & 1 S. = 3" dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size one at 6" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one at 4 1/2" dia.

Are all the Bilge Suction Pipes in holds ✓ 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, except main injection 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 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 ✓ Is it fitted with a watertight door ✓ worked from ✓

## MAIN BOILERS, &amp;c.—(Letter for record ) Total Heating Surface of Boilers

Which Boilers are fitted with Forced Draft Which Boilers are fitted with Superheaters

No. and Description of Boilers Working Pressure

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting (If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

Superheaters General Pumping Arrangements

Oil fuel Burning Piping Arrangements

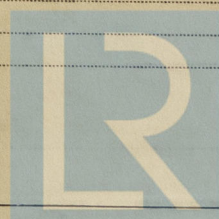
## SPARE GEAR.

Has the spare gear required by the Rules been supplied See Gen. Rpt. N. 34201

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.



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Dates of Survey while building { During progress of work in shops - - { 25/5/45, 3/6/45, 11/6/45, 22/6/45, 25/6/45, 3/7/45, 9/7/45, 11/7/45, 24/7/45  
During erection on board vessel - - { 30/7/45, 1/8/45, 14/8/45, 26/8/45, 27/8/45  
Total No. of visits 18

Dates of Examination of principal parts - Cylinders Slides Covers  
Pistons Piston Rods Connecting rods  
Crank shaft Thrust shaft Intermediate shafts  
Tube shaft Screw shaft in place 11-5-45 Propeller in place 11-5-45  
Stern tube in place 11-5-45 Engine and boiler seatings 3-5-45 Engines holding down bolts 5-6-45  
Completion of fitting sea connections 11-5-45 In dock 1-8-45  
Completion of pumping arrangements 1-8-45 Boilers fixed 22-6-45 Engines tried under steam At Sea 26-8-45  
Main boiler safety valves adjusted 1-8-45 Thickness of adjusting washers Port 13 1/2" P.V. 3 1/8" SV 3/8" Star 13 1/2" P.V. 3 1/8" SV 3/8"  
Crank shaft material Identification Mark Thrust shaft material Identification Mark  
Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
Screw shaft, material Identification Mark Steam Pipes, material Steel Test pressure 600 lbs Date of Test June 1945  
Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150° F. yes  
Have the requirements of the Rules for the use of oil as fuel been complied with yes  
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  
Is this machinery duplicate of a previous case If so, state name of vessel Empire Pallin

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery - Sunderland Report 71-34-20  
has been efficiently fitted on board, the materials and workmanship being sound and good.  
On completion of the installing of the machinery, the safety valves of both  
boilers were adjusted under steam to 206 lbs, & the Main & Auxiliary  
machinery was tried out under working conditions, in dock & at sea,  
& it was found to function satisfactorily.

This Machinery, in our opinion, is in a safe working condition, &  
is eligible to be classed in the Register Book with the notation  
+ L.M.C. 8-45, & the records of T.S.O.G. 2 S.B.(F.D), "fitted to burn Oil fuel 8-45"

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	£	:	:	When applied for,
1/5 Special	8	2	0	2/9/1945
1/5 Specification	2	0	6	
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	1	9:3	19

For J. F. Campbell & Self, John Houston  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned  
+ L.M.C. 8.45 J.D. OG



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