

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 18 APR 1943

Date of writing Report **Dec. 7th 1942** When handed in at Local Office **19** Port of **TORONTO, Canada**

No. in Survey held at **TORONTO, Canada** Date, First Survey **October 15th** Last Survey **Nov. 30th, 1942**

Reg. Book. on the **10,000 ton Cargo Vessel S.S. "FORT STAGER"** (Number of Visits **32**) Tons {Gross **7131.76**  
Net **4244.31**

Built at **Vancouver, B. C.** By whom built **West Coast Shipbuilders Ltd.** Yard No. **114** When built **1942**

Engines made at **Toronto, Ontario** By whom made **John Inglis Co. Ltd.** Engine No. **137-M56** When made **1942**

Boilers made at **-** By whom made **-** Boiler No. **-** When made **-**

Registered Horse Power **-** Owners **Wartime Merchant Shipping Ltd.** Port belonging to **-**

Nom. Horse Power as per Rule **504** Is Refrigerating Machinery fitted for cargo purposes **-** Is Electric Light fitted **Yes**

Trade for which Vessel is intended **-**

**ENGINES, &c.**—Description of Engines **Triple Expansion Superheat 575°F** Revs. per minute **76**

Dia of Cylinders **24.5"x37"x70"** Length of Stroke **48"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals as per Rule **13.98** Crank pin dia. **14.25** Mid. length breadth **24.5** Thickness parallel to axis **9"H.P.M.P.**  
as fitted **14.25** Crank webs **shrunk** Thickness around eye-hole **9.5"L.P.**

Intermediate Shafts, diameter as per Rule **-** Thrust shaft, diameter at collars as per Rule **13.98"** **7 5/8" Jour.**  
as fitted **-** as fitted **14.25"**

Tube Shafts, diameter as per Rule **-** Screw Shaft, diameter as per Rule **-** Is the {tube} shaft fitted with a continuous liner {  
as fitted **-** as fitted **-** }

Bronze Liners, thickness in way of bushes as per Rule **-** Thickness between bushes as per Rule **-** Is the after end of the liner made watertight in the  
as fitted **-** as fitted **-** 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  
shaft **-** 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. ft.

Feed Pumps worked from the Main Engines, No. **None** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **4.5** Stroke **26"** Can one be overhauled while the other is at work **Yes**

Feed {No. and size **Two 10"x7"x24" 4000 Imp. Gallons** Pumps connected to the {No. and size **-**  
Pumps (How driven **Independent** Main Bilge Line {How driven **-**

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 **-**

In Pump Room **-** In Holds, &c. **-**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **-** Independent Power Pump Direct Suctions to the Engine Room Bilges,  
No. and size **-** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **-**

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 **-** Are they fitted with Valves or Cocks **-**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **-** Are the Overboard Discharges above or below the deep water line **-**

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **-** Are the Blow Off Cocks fitted with a spigot and brass covering plate **-**

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 **S**) Total Heating Surface of Boilers **7140 Sq. Ft. (3 Boilers)**

Which Boilers are fitted with Forced Draft **All three boilers** Which Boilers are fitted with Superheaters **All three boilers**

No. and Description of Boilers **Three, Scotch Marine** Working Pressure **220 lbs. per Sq. In.**

**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** **No.**

**IS A DONKEY BOILER FITTED?** **No.** If so, is a report now forwarded? **-**

Can the donkey boiler be used for domestic purposes only **-**

**PLANS.** Are approved plans forwarded herewith for Shafting **N.E.M.No.694 6 Oct.1941.N.Y.** Main Boilers **John Heck** Auxiliary Boilers **-** Donkey Boilers **-**  
(If not state date of approval) **LLOYDS Approval 15.11.40** per C.M.

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

## SPARE GEAR.

Has the spare gear required by the Rules been supplied **Yes**

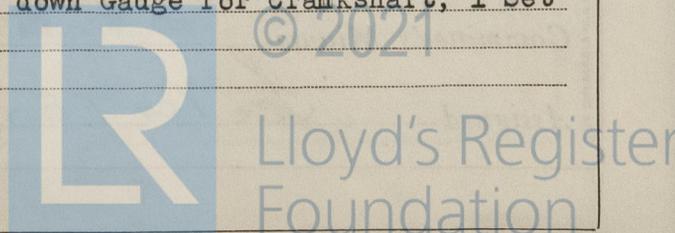
State the principal additional spare gear supplied **1 Set Piston rings and Springs for HP.MP.Lp pistons and HP piston valve,  
top and bottom. 1 set of pads for ahead face of Thrust Bearing, 2 Bottom end Bolts and Nuts. 4 Top  
end Bolts and Nuts, 2 Main Bearing Bolts and Nuts, 6 Coupling Bolts and Nuts, 1 Bottom end Bearing  
(2 Halves) 2 Pairs Top end Bearings, 1 Set Bottom end Bearing Liners, 1 Set Metallic Packing for  
HP.MP.LP. Piston Rods and Valve Spindles. 1 Set (6) Air Pump Head Valve Discs (Top and Bottom)  
4 Pressure Glasses, 4 Springs, 4 Guide Rings, 8 Gaskets, 1 Pump Unit complete for Lubricator. 1  
Glycerine Gun, 1 Valve and Seat for S.O.N.R. Valve and Lift Valve on Suc. and Disch. Chests, 3 carry-  
ing bars for Crossheads, 1 lifting bar for Main Bearings, 1 Wear down Gauge for Crankshaft, 1 Set  
Spanners and Wrenches as per specification.**

The foregoing is a correct description

The John Inglis Company Limited

Date **Dec. 17, 1942.** By **John McKelvie**

Manufacturer.



Dates of Survey while building:
   
 During progress of work in shops: Oct. 15, 17, 20, 22, 23, 24, 26, 27, 28, 30, 31; Nov. 2, 4, 5, 6, 7, 9, 10, 11, 13, 14, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 30.
   
 During erection on board vessel:
   
 Total No. of visits: 32

Dates of Examination of principal parts:
   
 Cylinders: HP 30.10.42, MP 21.10.42, LP 13.10.42
   
 Slides: HP 30.10.42, MP 21.10.42, LP 13.10.42
   
 Covers: HP 30.10.42, MP 21.10.42, LP 13.10.42
   
 Pistons: 20.11.42
   
 Piston Rods: 16.11.42
   
 Connecting rods: 10.11.42
   
 Crank shaft: 27.10.42
   
 Thrust shaft: 4.11.42
   
 Intermediate shafts: -
   
 Tube shaft: -
   
 Screw shaft: -
   
 Propeller: -
   
 Stern tube: -
   
 Engine and boiler seatings: -
   
 Engines holding down bolts: -

Completion of fitting sea connections: -
   
 Completion of pumping arrangements: -
   
 Boilers fixed: -
   
 Engines tried under steam: -
   
 Main boiler safety valves adjusted: -
   
 Thickness of adjusting washers: LLOYDS 3623D.H.G.L.P.15.5.42
   
 Crank shaft material: O.H. Steel
   
 Identification Mark: J.B.F.27.10.42
   
 Thrust shaft material: LLOYDS 5574
   
 Identification Mark: P.W.W.10.7.42
   
 Intermediate shafts, material: LLOYDS 3929A.I.J.T.4.6.42
   
 Identification Mark: J.B.F.27.10.42
   
 Tube shaft, material: -
   
 Identification Mark: J.B.F.4.11.42
   
 Screw shaft, material: -
   
 Identification Mark: -
   
 Steam Pipes, material: -
   
 Test pressure: -
   
 Date of Test: -

Is an installation fitted for burning oil fuel: -
   
 Is the flash point of the oil to be used over 150°F: -
   
 Have the requirements of the Rules for the use of oil as fuel been complied with: -
   
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo: -
   
 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: Yes
   
 If so, state name of vessel: N.E.M. Type

General Remarks (State quality of workmanship, opinions as to class, &c.): The Main Engine was built under the Special

Survey of the Society's Surveyors to the requirements of the Rules and in accordance with the approved plans.

The workmanship was good and the materials were made at an approved works and tested as required by the Rules to the satisfaction of the Society's Surveyors.

In my opinion this main engine is eligible to be classed in the Society when satisfactorily installed and tried under steam to the satisfaction of the Society's Surveyors.

Forging reports Nos. 8727, 7095, 8643, 8371, 3488B, 3623D, 3926C, 8108, 8336 and 5574 are attached hereto.

Thrust shaft LLOYDS 5574 P.W.W.10.7.42.J.B.F.4.11.42 was examined in finished condition and found satisfactory.

(Empty space for additional remarks or notes)

Certificate to be sent to:
   
 The amount of/Entry Fee: \$ 30.00
   
 Special Survey: £ 267.00
   
 Donkey Boiler Fee: £
   
 Travelling Expenses (if any): £ 10.00
   
 When applied for: 17. 2. 19. 43 YCR.
   
 When received: RR.

Jas B Lickers
   
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute:
   
 Assigned: See Ycr FE rH. 5880

FRI. 16 APR 1943



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