

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 3 - NOV 1942

Date of writing Report April 7th 1942 When handed in at Local Office 19 Port of TORONTO, CANADA

No. in Survey held at Toronto, Canada Date, First Survey Oct. 11th, 1941 Last Survey Feb. 10th 1942

Reg. Book. on the 10,000 ton cargo vessel - STEEL SINGLE SCREW STEAMER - "FORT DOUGLAS" (Number of Visits 40)

Built at Victoria, B.C. By whom built Victoria Machinery Depot Co., Ltd. Yard No. 21 When built 1942

Engines made at Toronto, Ontario By whom made John Inglis Co. Limited Engine No. 75 When made 1942

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

Registered Horse Power - Owners Wartime Merchant Shipping, Limited Port belonging to -

Nom. Horse Power as per Rule 504 <sup>505</sup> Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which Vessel is intended -

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

Dia of Cylinders 24 1/2" x 37" x 70" 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. 14.250" Crank webs Mid. length breadth 24 1/2" Thickness parallel to axis as fitted 14.25" Mid. length thickness 9" HP. MP. 9 1/2" LP Thickness around eye-hole 7-1/8" Pin 7-5/8" Journal

Intermediate Shafts, diameter as per Rule - as fitted - Thrust shaft, diameter at collars as per Rule 13.98" as fitted 14.25"

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 per Rule - 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 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 4.470" Stroke 26" Can one be overhauled while the other is at work Yes

Feed Pumps {No. and size Two, 10"x7"x24" 4000 Imp. Gal. Pumps connected to the Main Bilge Line {No. and size - How driven Independent 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 Yes Which Boilers are fitted with Superheaters All three boilers

No. and Description of Boilers Three, Scotch Marine Working Pressure 220 Lbs. 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 Oct. 6, 1941 N.Yk. Main Boilers Lloyd's Auxiliary Boilers John S. Heck, per C.M. Donkey Boilers -

(If not state date of approval) Approval 15/11/40.

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 & Springs for H.P.-M.P.-L.P. Pistons and H.P. Piston Valve, top & bottom. 1 set, Pads for Ahead Face of Thrust Bearing. 2 Bottom End Bolts & Nuts. 4 Tope End Bolts & Nuts. 2 Main Bearing Bolts & Nuts. 6 Coupling Bolts & Nuts. 1 Bottom End Bearing (2 Halves). 2 Pairs Top End Bearings. 1 Set Bottom End Bearing Liners. 1 Set Metallic Packings for H.P.-M.P.-L.P. Piston Rods & Valve Spindles. 1 Set (6) Air Pump Head Valve Discs. (Top & Bottom). 4 Pressure Glasses- 4 Springs - 4 Guide Rings - 8 Gaskets - 1 Pump Unit Complete for Lubricator. 1 Glycerine Gun. 1 (Valve & Seat for S.O.N.R. Valve) & Lift Valve on Suct. & Disch. Chests. 3 Carrying Bars for Crossheads. 1 Lifting Lb. for Main Bearings. 1 Wearing Gauge for Crankshaft. (1 Set of Spanners & Wrenches as per specification).

The foregoing is a correct description

The John Inglis Company Limited  
 Date 15/11/40 By J. M. K. [Signature]

Manufacturer.



002232-002240-0089

Oct. 11, 14, 23, 25, Nov. 5, 14, 18, 25, 29, Dec. 2, 9, 18, 22, J.S. & Dec. 6, 12, 13, 26, J.M.  
 During progress of work in shops - -  
 Jan. 9, 10, 11, 12, 14, 17, 18, 19, 20, 23, 25, 26, 27, 28, 31  
 Feb. 1, 2, 3, 5, 7, 8, 9, 10, J.B.  
 During erection on board vessel - - -  
 -  
 Total No. of visits 40 during progress of work in shops.

Dates of Examination of principal parts - Cylinders 26.12.41:12.12.41 Slides 28.1.42:28.1.42 Cover 26.12.51:12.12.41  
 HP. MP. HP. MP.  
 28.1.42 28.1.42  
 Pistons 9.1.42 Piston Rods 14.1.42 22.12.42 Connecting rods 14.1.42 22.12.41  
 Crank shaft 10.12.41 Thrust shaft 10.1.42 Intermediate shafts -  
 Tube shaft - Screw shaft - Propeller -  
 Stern tube - Engine and boiler seatings - Engines holding down bolts -

Completion of fitting sea connections - Boilers fixed - Engines tried under steam -  
 Completion of pumping arrangements - Thickness of adjusting washers -  
 Main boiler safety valves adjusted - 3968.J.S.10.10.41. 3942.J.S.2.8.41. 6441.0.N.12.9.41. MU  
 Crank shaft material O.H. Steel Identification Mark J.B.7.2.42 Thrust shaft material O.H. Steel Identification Mark J.B.7.2.42  
 Intermediate shafts, material - Identification Marks - Tube shaft, material - Identification Mark -  
 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. 6441, 3942, 3953, 7723, ~~2286~~ ~~2287~~ 7758, 7872, 2286 attached hereto.  
 Thrust shaft Lloyd's No. 6441 was examined in finished condition and found in good order.

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

First  
 The amount of Entry Fee \$ 30.00 :  
 Special Survey \$ 267.00 :  
~~Donkey Boiler Fee~~ £ :  
 Travelling Expenses (if any) \$ 10.00 :  
 When applied for, 10.8.1942  
 When received, ✓ 1942

John Stephen J. B. arked  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUE 10 NOV 1942

Committee's Minute  
 Assigned See Vol. 26, 5789

