

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

18 JUN 1942

Date of writing Report 17/6/42 When handed in at Local Office 17/6/42 Port of *W. Hartholme* ? 23<sup>rd</sup> July 1942  
 No. in Survey held at *Hartholme* Date, First Survey 8<sup>th</sup> Dec., 1941. Last Survey 12<sup>th</sup> June, 1942  
 Reg. Book. on the *"EMPIRE GUIDON"* (Number of Visits 56)  
 Built at *Haverston Hill* By whom built *James Shipbuilding Co. Ltd.* Yard No. 346 Tons { Gross  
 Engines made at *Hartholme* By whom made *Richardsons Westgarth & Co.* Engine No. 2420 Net  
 Boilers made at " By whom made " " Boiler No. 2720 When built 1942  
 Registered Horse Power Owners (MAN.) *ANNING Bros. - CARDIFF.* Port belonging to  
 Nom. Horse Power as per Rule 514 510 Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*  
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines *Trip Expansion Vertical Surface Condensing* Revs. per minute 76  
 Dia. of Cylinders *24½" x 39" x 70"* Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.99" Crank pin dia. 14¾" Crank webs Mid. length breadth shrunk Thickness parallel to axis 9"  
 as fitted 14¼" Mid. length thickness Thickness around eye-hole 6¾"  
 Intermediate Shafts, diameter as per Rule 13.33" Thrust shaft, diameter at collars as per Rule 13.99"  
 as fitted 13.56" as fitted 14¼"  
 Tube Shafts, diameter as per Rule 14.82" Is the { tube } shaft fitted with a continuous liner { *Yes*  
 as fitted 15¼" { screw }  
 Bronze Liners, thickness in way of bushes as per Rule 5¼" Is the after end of the liner made watertight in the  
 as fitted 3½" Thickness between bushes as fitted 1¼" 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 *Yes*  
 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 *Yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 shaft *No* If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'-0 7/8"  
 Propeller, dia. 17'-10½" Pitch 15'-6" No. of Blades 4 Material C.I. whether Moveable *No* Total Developed Surface 114 3/4 sq. feet  
 Feed Pumps worked from the Main Engines, No. 1 Diameter 4" Stroke 27" Can one be overhauled while the other is at work *Yes*  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work *Yes*  
 Feed { No. and size two 9½" x 4" x 21" Pumps connected to the { No. and size one 10½" x 13" x 24", one 9½" x 12", two 8" Bilge Pumps  
 Pumps { How driven Steam Main Bilge Line How driven Steam  
 Ballast Pumps, No. and size one 10½" x 13" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size *Yes*  
 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 E.R. 3" P.T.S., Ind. 5"S., B.R. 3" P.T.S. In Holds, &c. 3" No. 1 Hold 3" No. 2 Hold 3" No. 3 Hold P.T.S.  
 In Pump Room 5" Bilge main in tunnel F. PEAK 1'-4" - F. DEEP TANK 1'-4" P.T.S. - AFT PEAK 1'-4" - No. 5 Hold 3" P.T.S. - No. 6 Hold 3" P.T.S.  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size one 9" P. Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size one 5"S., one 3½" portable 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 *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 No. 1, 2, 3 Holds. P.T.S. Bilge Sacs. two Pocket Bunkers How are they protected *Wood Casings.*  
 What pipes pass through the deep tanks No. 6 Hold suction pipes. 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 *Escape trunk*  
 filled

MAIN BOILERS, &c.—(Letter for record *Yes*) Total Heating Surface of Boilers 4353 1/2 7248 1/2  
 Which Boilers are fitted with Forced Draft *all* Which Boilers are fitted with Superheaters *all*  
 No. and Description of Boilers 3 S.E. Multitubular Working Pressure 220 LB/SQ.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*  
 IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *Yes*  
 Can the donkey boiler be used for domestic purposes only *Yes*  
 PLANS. Are approved plans forwarded herewith for Shafting 29/10/41 Main Boilers 9/7/41 Auxiliary Boilers Donkey Boilers  
 (If not state date of approval)  
 Superheaters General Pumping Arrangements 11.12.41 (Yes) 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 11 Bilge tubes & 12 Stoppers. 6 main & 6 Aux Condenser tubes. 6 cyl. cover studs & nuts.  
 6 Valve chest studs & nuts. 6 pump ring studs & nuts.

The foregoing is a correct description.

W. J. Morgan

Manufacturer.



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Lloyd's Register  
Foundation

M195-0210



1941. Dec. 8. 1942. Jan. 15. Feb. 5. 6. 10. 18. 20. 23. 26. March 3. 4. 6. 10. 16. 17. 21. 24. 25. 30. 31.  
 April 7. 13. 14. 15. 17. 21. 22. 23. 27. 29. May 3. 6. 7. 8. 9. 12. 15. 17. 18. 19. 21. 23. 25. 27. 28. 29.  
 June 1. 2. 3. 4. 5. 8. 9. 10. 11. 12.

Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - - -  
 Total No. of visits 56.

Dates of Examination of principal parts—Cylinders 26.2.42 Slides 23.3.42 Covers 23.3.42  
 Pistons 23.3.42 Piston Rods 4.2.42 Connecting rods 26.2.42  
 Crank shaft 26.2.42 Thrust shaft 31.3.42 Intermediate shafts 29.4.42  
 Tube shaft ✓ Screw shaft 12.5.42 Propeller ✓  
 Stern tube 12.5.42 Engine and boiler seatings 18/5/42 Engines holding down bolts 19/6/42  
 Completion of fitting sea connections 27/5/42  
 Completion of pumping arrangements 27/42 Boilers fixed 17/6/42 Engines tried under steam 27/42  
 Main boiler safety valves adjusted 20/7/42 Thickness of adjusting washers P.B. 7/16 5 1/2" C. B. 1 1/2" 3 1/2" S. B. P 5/32 5 1/2"  
 Crank shaft material *steel* Identification Mark 5572 ERB Thrust shaft material *steel* Identification Mark 5553 ERB  
 Intermediate shafts, material *steel* Identification Marks 5572 ERB 5565, 5574, 5704, 5558 Identification Mark  
 Screw shaft, material *steel* Identification Mark 5571 ERB Steam Pipes, material *steel* Test pressure 660 Lb/sq. in. Date of Test 8/6/42  
 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 the use of oil as fuel been complied with ✓  
 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 27/19 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The engines & boilers of this vessel have been constructed under Special Survey & in accordance with the approved plans & Specifications. The workmanship & materials have been found good. The machinery has been forwarded to Harland & Wolff for fitting on board.*

*In my opinion, this vessel will be eligible to have record of +LMC - with date - on completion.*

*The machinery fitted on board in accordance with the approved plans & Rule Requirements, tried out under working conditions & found satisfactory & in my opinion is eligible for record of +LMC - 7.42. & notation of TS(CL) 7.42, (free draught & superheated). The ship's side inlet & discharge valves re. insured in accordance with Admiralty Notice MS/2385/40 MS 3199/40.*

The amount of Entry Fee ... £ 6 : 0 :  
 Special *4 1/2 LMC* ... £ 80 : 11 :  
 Donkey Boiler Fee ... £ 20 : 3 :  
 Travelling Expenses (if any) *1/5 LMC* ... £ 20 : 3 :  
*1/5 Superinsulation* 5 : 0 :  
 Committee's Minute  
 Assigned

When applied for, 10/6/1942  
 When received, 12/8/42

TUE 18 AUG 1942  
*+ LMC 7.42*  
*JD, CH*

*Clive Bell*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
*C Norman Stuart*

