

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office - 8 OCT 1943

Date of writing Report _____ When handed in at Local Office 4-10-1943 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey 30:11:42. Last Survey 2nd October 1943
 Reg. Book. _____ (Number of Visits 40) Gross 232.28
 on the S.S. "EMPIRE HARLEQUIN" Tons Net _____

Built at Aberdeen By whom built Messrs J. Hall & Co. Ltd. Yard No. 693 When built 1943

Engines made at Aberdeen By whom made J. Hall & Co. Ltd. Engine No. 399. When made _____

Boilers made at Dumbarton By whom made W. Penny & Sons Ltd. Boiler No. 4099. When made _____

Registered Horse Power _____ Owners The Admiralty Port belonging to _____

Nom. Horse Power as per Rule 152. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Towing

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 120

Dia. of Cylinders 16" 25" 42" Length of Stroke 24" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 8.33" Crank pin dia. 8 3/8" Crank webs Mid. length breadth 13 1/2" Thickness parallel to axis 5 1/2"
 as fitted 8 3/8" Mid. length thickness 5 1/4" Thickness around eye-holes 3 3/4"

Intermediate Shafts, diameter as per Rule _____ as fitted 4.93" Thrust shaft, diameter at collars as per Rule 8.33" as fitted 8 3/8"

Tube Shafts, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule 8.99" as fitted 9 1/4" Is the tube shaft fitted with a continuous liner No

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 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 Yes

If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 3-4"

Propeller, dia. _____ Pitch _____ No. of Blades 4 Material CI whether Moveable No Total Developed Surface _____ sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2 5/8" Stroke 14" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 5/8" Stroke 14" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size One - 6" x 4 1/4" x 6" Pumps connected to the { No. and size One 4" x 5" x 8"
 How driven Steam Duplex Main Bilge Line How driven Steam Duplex

Ballast Pumps, No. and size One - 4" x 5" x 8" Lubricating Oil Pumps, including Spare Pump, No. and size ✓

Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connec d to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room ER 1-2 1/2" BR 1-2" Emergency suction 1-2" Cofferdam 1-2"

In Pump Room ✓ In Holds, &c. 7 one Hold 1-2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-5" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2" 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 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 None How are they protected _____

What pipes pass through the deep tanks None 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 None Is it fitted with a watertight door ✓ worked from _____

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2940 sq. ft.

Which Boilers are fitted with Forced Draft No Which Boilers are fitted with Superheaters No

No. and Description of Boilers One single ended Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes 92 RPN 64470.

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 ✓ Main Boilers No Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)

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 As per Specification.

For ALEXANDER HALL & CO., LTD.
 The foregoing is a correct description.
W. J. Hall Manufacturer.



006248-006257-0144

^{1942.} Nov. 30. ^{1943.} Jan. 8. Feb. 2. 10. 23. 26. Mar. 25. Apr. 1. 6. 8. 16. 26. 29. May 6. 20. 27. June 16. 17. 24.
 During progress of work in shops -- July 19. Aug. 2. 9. 28. 30. Sept. 1. 2.
 1942 July 3. Aug. 10. 25. Sept. 20. 21. 22. 30. Oct. 2.
 During erection on board vessel --- Boiler: ^{1943.} Aug. 28. Sept. 20. 21. 30. Oct. 2.
 Total No. of visits 40.

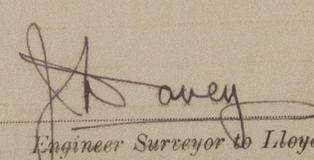
Dates of Examination of principal parts—Cylinders 29. 4. 43 Slides 16. 6. 43 Castles 29. 4. 43
 Pistons 20. 5. 43 Piston Rods 27. 5. 43 Connecting rods 20. 5. 43
 Crank shaft 20. 5. 43 Thrust shaft 17. 6. 43 Intermediate shafts 17. 6. 43
 Tube shaft ✓ Screw shaft 17. 6. 43 Propeller 17. 6. 43
 Stern tube 28. 6. 43 Engine and boiler seatings 28. 8. 43 Engines holding down bolts 25. 8. 43
 Completion of fitting sea connections 3. 7. 43
 Completion of pumping arrangements 22. 9. 43 Boilers fixed 28. 8. 43 Engines tried under steam 21. 9. 43
 Main boiler safety valves adjusted 21. 9. 43 Thickness of adjusting washers P 3/8" S 5/16"
 Crank shaft material O.H.I.S Identification Mark 303 Thrust shaft material O.H.I.S Identification Mark 1065
 Intermediate shafts, material O.H.I.S Identification Marks 1067 Tube shaft, material ✓ Identification Mark
 Screw shaft, material O.H.I.S Identification Mark 1069 Steam Pipes, material S.P. Puffer Test pressure 500 LBS Date of Test 29. 9. 43
 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 Yes If so, state name of vessel Engine specific etc HBN. 21066.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under Special Survey, in accordance with the Rules, approved plans and specification. The materials and workmanship are good. The engine and boiler has been securely fitted on board the vessel, tried under power and found satisfactory, and is eligible in my opinion to be classed, in the Register Book, with record of survey I LMC 1043, and notations of TS.09 fitted for Oil Fuel 10.43. F. above 150°F.

Report on Boiler attached. Gls Rpt N^o 64440. ✓

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	£ 3 : 0	When applied for,
ENGINE 3/8" 3/16"	22 : 16	4. 10. 1943
GLS A/Special BOILER, SUPERVISION SPECIFICATIONS	£ 19 : 12	
Donkey Boiler Fee GLS 1/2"	£ 5 : 14	When received,
Travelling Expenses (if any)	£ 4 : 18	19
	✓ :	


 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 12 NOV 1943
 Assigned + LMC 10.43 09.

