

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 2/9/35 When handed in at Local Office 2/9/35 Port of GLASGOW Received at London Office 25 SEP 1935

No. in Survey held at 13 Date, First Survey 13/11/34 Last Survey 11-9-1935
 Reg. Book. on the new steel S/S "INVENTOR" (Number of Visits 76)

Built at Glasgow By whom built D & W. Henderson & Co Ltd Yard No. 953 Tons Gross 6210
Net 3840

Engines made at Glasgow By whom made D & W. Henderson & Co Ltd Engine No. 953 When built 1935

Boilers made at Glasgow By whom made D & W. Henderson & Co Ltd Boiler No. 953 When made 1935

Registered Horse Power 587 Owners T & J. Harrison Port belonging to Sinepool

Nom. Horse Power as per Rule 587 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended 28-2-31

ENGINES, &c.—Description of Engines Triple expansion

Dia. of Cylinders 28-46-81" Length of Stroke 54" No. of Cylinders 3 Revs. per minute 75

Crank shaft, dia. of journals as per Rule 15.82" Crank pin dia. 16 1/4" Crank webs Mid. length breadth 26" No. of Cranks 3
as fitted 16 1/4" with 15.07" Mid. length thickness 10 3/4" Thickness parallel to axis 10 3/4"
as fitted 15 1/4" as per Rule 15.82" Thickness around eye-hole 7 7/8"

Intermediate Shafts, diameter as per Rule 15.07" Thrust shaft, diameter at collar as per Rule 15.82"
as fitted 15 1/4" as fitted 16"

Tube Shafts, diameter as per Rule 16.61" Screw Shaft, diameter as per Rule 16 3/4" Is the tube shaft fitted with a continuous liner yes
as fitted 16 3/4" as fitted 16 3/4"

Bronze Liners, thickness in way of bushes as per Rule 8.39" Thickness between bushes as per Rule 6.3" Is the after end of the liner made watertight in the propeller boss yes
as fitted 7/8" as fitted 3/4" 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 no If so, state type -

Length of Bearing in Stern Bush next to and supporting propeller 6'-0"

Propeller, dia. 18'-6" Pitch 19'-0" No. of Blades 4 Material Blade bronze whether Movable yes Total Developed Surface 108 sq. feet

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 3/4" Stroke 24" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 2 @ 10 1/2 - 8 x 24 Pumps connected to the Main Bilge Line { No. and size 1 @ 10 1/2 - 13 x 24 (Ballast pump) 1 @ 10 1/2 - 8 x 24
 How driven steam How driven steam

Ballast Pumps, No. and size 1 @ 10 1/2 - 13 x 24 Lubricating Oil Pumps, including Spare Pump, No. and size -

Are two independent means arranged for circulating water through the Oil Cooler -

Bilge Pumps;—In Engine and Boiler Room 2 @ 3 1/2" in engine room 2 @ 3 1/2" in stokehold Suctions, connected to both Main Bilge Pumps and Auxiliary In Pump Room - In Holds, &c. N°1 hold - 2 @ 3 1/2" N°2 hold - 2 @ 3 1/2" N°3 hold - 2 @ 3 1/2" N°4 hold - 2 @ 3 1/2" N°5 hold - 2 @ 3 1/2" N°6 hold - 1 @ 3 1/2" Tunnel well - 1 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one @ 5"

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 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 yes Is it fitted with a watertight door yes worked from upper decks -

MAIN BOILERS, &c.—(Letter for record (r)) Total Heating Surface of Boilers 9212 sq. ft. Working Pressure 215 lb.

Is Forced Draft fitted no No. and Description of Boilers 2 DB

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

Is the donkey boiler intended to be used for domestic purposes only no

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers - Donkey Boilers yes
 (If not state date of approval)

Superheaters no General Pumping Arrangements no 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 see attached list

The foregoing is a correct description
 FOR DAVID & WM HENDERSON & CO., LTD. (Ltd)

A.S. Macdonald Liquidator Manufacturer.



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1934 Nov: 13. 18 Dec: 10. 17. 26. 28 (1935) Jan: 7. 15. 21. 25. 30 Feb: 7. 8. 18. 21. 22. 26
 During progress of work in shops - Mar: 2. 7. 11. 20. 26. 27 Apr: 3. 4. 8. 11. 15. 17. 18. 25 May: 1. 7. 13. 16. 22. 23. 24. 27. 28. 30. 31
 Dates of Survey while building - June: 5. 6. 10. 11. 12. 13. 15. 17. 18. 24. 26. 27. 28 July: 2. 3. 5. 8. 9. 10. 18. 19. 22. 24. 26. 31 Aug
 During erection on board vessel - - - 1. 5. 8. 9. 14. 16. 20 Sep: 6. 11
 Total No. of visits 76

Dates of Examination of principal parts - Cylinders 25-4-35 Slides 12-6-35 Covers 16-5-35
 Pistons 13-5-35 Piston Rods 24-6-35 Connecting rods 25-4-35
 Crank shaft 17-4-35 Thrust shaft 17-4-35 Intermediate shafts 5-6-35
 Tube shaft - Screw shaft 13-6-35 Propeller 18-6-35
 Stern tube 13-6-35 Engine and boiler seatings 2-7-35 Engines holding down bolts 8-7-35
 Completion of fitting sea connections 2-7-35
 Completion of pumping arrangements 14-8-35 Boilers fixed 5-8-35 Engines tried under steam 11-9-35
 Main boiler safety valves adjusted 22-8-35 Thickness of adjusting washers Piston bl P 5/16" S 11/32" Steam bl P 3/8" S 21/64"
 Crank shaft material 1. steel Identification Mark * LLOYD'S No 5208 L.C.D. 17-4-35 Thrust shaft material 1. steel Identification Mark * LLOYD'S No 5208 L.C.D. 17-4-35
 Intermediate shafts, material 1. steel Identification Marks * LLOYD'S No 5208 L.C.D. 13-6-35 Tube shaft, material - Identification Mark -
 Screw shaft, material 1. steel Identification Mark * LLOYD'S No 5208 L.C.D. 13-6-35 Steam Pipes, material steel Test pressure 645 Date of Test 26-7-35
 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 no If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.)
 * In addition to these marks each shaft is stamped with its original forging test number.
 The engines are fitted with Andrew & Bamber's cam operated valve gear to each cylinder.
 All valve spindles horizontal. No of slide valves on each spindle HP-Stm 2, Ex 2. MP-Stm 4 Ex 6. LP-Stm 6 Ex 8.
 The materials and workmanship are good.
 The machinery has been constructed under special survey, satisfactorily fitted in the vessel, tried under steam and found good. *delectable in my opinion to have L.M.C. 9.35*
marked in the Register Book.
J. 21/9/35.

Certificate to be sent to Glasgow.

The amount of Entry Fee ... £ 6 : : When applied for,
 Special ... £ 104 : 7 : 17. 9. 35.
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 8. 11. 35.
 S. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 24 SEP 1935

Assigned + L.M.C. 9.35.

