

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 18/10/1940 When handed in at Local Office 18/10/1940 Port of West Hartlepool OCT 21 1940 Last date
No. in Survey held at West Hartlepool H. Hill Date, First Survey 14th February Last Survey 16th October 1940
Reg. Book. 87985 on the Steel SC. "EMPIRE GOLD" (Number of Visits 99)
Built at Haverlon Hill By whom built Furness Shipbuilding Co. Yard No. 325 Tons { Gross 8027.54
Engines made at Hartlepool By whom made Richardsons Westguth & Co Engine No. 2700 When built 1940 Net 4677.81
Boilers made at Hartlepool By whom made Richardsons Westguth & Co Boiler No. 2700 When made 1940
Registered Horse Power Owners Ministry of Shipping Port belonging to Middlesbrough
Nom. Horse Power as per Rule 668 674 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which Vessel is intended Ocean going Oil Tanker.

ENGINES, &c.—Description of Engines *Triple expansion vertical Surface Condensing*
 Dia. of Cylinders *27" x 44" x 76"* Length of Stroke *51"* No. of Cylinders *3* Revs. per minute *85.5*
 Crank shaft, dia. of journals *as per Rule 15.214* Crank pin dia. *16"* Crank webs *Mid. length breadth 2'-3 1/4"* No. of Cranks *3*
as fitted 15 1/2" *Mid. length thickness 10 1/8"* Thickness parallel to axis *10 1/8"*
 Intermediate Shafts, diameter *as per Rule 14.49* Thrust shaft, diameter at collars *as per Rule 15.214* Thickness around eye-hole *8 1/4"*
as fitted 14 3/4" *as fitted 15 3/4"*
 Tube Shafts, diameter *as per Rule* Screw Shaft, diameter *as per Rule 16.01"* Is the *tube* shaft fitted with a continuous liner *Yes*
as fitted *as fitted 16 1/4"* *as fitted 79"*
 Bronze Liners, thickness in way of bushes *as per Rule 13/16"* Thickness between bushes *as per Rule 79"* Is the after end of the liner made watertight in the
as fitted *as fitted 13/16"* propeller box *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 *1 1/2" x 6" Allen* Length of Bearing in Stern Bush next to and supporting propeller *5'-5"*
 Propeller, dia. *18'-3"* Pitch *Varying* No. of Blades *4* Material *Bronze* whether Moveable *No* Total Developed Surface *131.75* sq. feet
 Feed Pumps worked from the Main Engines, No. *4* Diameter *5"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
 Bilge Pumps worked from the Main Engines, No. *2* Diameter *5"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
 Feed Pumps { No. and size *2-12"x9"x24"; 1-9"x6"x10"* Pumps connected to the { No. and size *2@5"x24" | 5" connection Ballast Pump*
 { How driven *Steam* { Main Bilge Line { How driven *Main engine* *Steam*
 Ballast Pumps, No. and size *1-10"x12"x12"* Lubricating Oil Pumps, including Spare Pump, No. and size *1*
 Are two independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room *3 1/2" aff. well, 3 1/2" E.R. p., 3 1/2" E.R. s., 2 1/2" Cofferdam, 3 1/2" B.R. p., 3 1/2" B.R. s.*
 In Pump Room *Forward 1@2 1/2" Main P. Room Holds, &c. F.P. 1@3" Chain locker flat 1@2", 1@2" S. Otter float pos 2@2"*
1@1.3" port 1@3" starboard. Main P.R. 1@10.3" port, 1@3" starboard; Forward 1@2" port 1@2" starboard
 Main Water Circulating Pump Direct Bilge Suctions, No. and size *1-10" port* Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size *1-5" stand.* Are all the Bilge Suction Pipes in hold and tunnel well fitted with strum-boxes *mud box, valve & tail pipe*
 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 *Yes*
 What pipes pass through the deep tanks *Yes* 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 *none* Is it fitted with a watertight door *worked from*

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *10020 sq ft*
Which Boilers are fitted with Forced Draft *all* Which Boilers are fitted with Superheaters *all*
No. and Description of Boilers *3 - Single ended multitubular* Working Pressure *220 lb.*
IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*
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 *Yes* Main Boilers *Yes* Auxiliary Boilers ☒ Donkey Boilers ☒
(If not state date of approval)
Superheaters ☒ General Pumping Arrangements *12/3/40* Oil fuel Burning Piping Arrangements *8/10/40*
SPARE GEARS

SPARE GEAR.

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

State the principal additional spare gear supplied 1 - piston & 1 bucket for main cargo pumps.

The foregoing is a correct description.
For RICHARDSON, WESTGARTH & Co. LIMITED.

W. E. Forendge

Manufacturer.

DIRECTOR

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Foundation

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1940. Feb. 14. 19. 21. 22. 23. 26. 27. March 4. 6. 14. 19. 21. 28. April 3. 16. 18. 23. May 2. 4. 13. 14. 20. 22. 23.
 During progress of work in shops - - 28. 30. June 4. 6. 7. 10. 13. 14. 17. 18. 19. 20. 21. 24. 26. 27. 28. July 1. 3. 5. 8. 9. 10. 11. 12. 16. 17. 18. 22. 23. 24. 25. 26. 29. 30.
 Aug. 2. 8. 7. 13. 15. 20. 22. 26. 27. 28. 29. 30. Sept. 4. 6. 3. 9. 11. 12. 16. 17. 18. 19. 20. 21. 24. 25. 26. 27. 28. Oct. 1. 2. 3. 4. 7. 8. 10. 11. 18. 16.
 During erection on board vessel - - Sept. 26. 30. Oct. 2. 3. 9. 15. 18. Oct. 23. 29. 31. Nov. 6. 11. 14. 20. 24. 30. Dec. 4. 11. 18. 19. 26. 31. Jan. 2. 3. 6. 7.
 Total No. of visits 99 During Erection 24. (Incl.)

Dates of Examination of principal parts—Cylinders 14/2/40, 2/7/40 Slides 14.2.40, 2.7.40 Covers 14.2.40, 2.7.40
 Pistons 2.7.40 Piston Rods 16.4.40, 18.4.40 Connecting rods 30.8.40
 Crank shaft 26.7.40 Thrust shaft 5.7.40 Intermediate shafts 27.9.40
 Tube shaft ✓ Screw shaft 27.9.40 Propeller 3/10/40 ✓
 Stern tube 27.9.40 Engine and boiler seatings 18/10 14/11/40 Engines holding down bolts 7/12/40

Completion of fitting sea connections 2/10/40

Completion of pumping arrangements 4/1/41

Main boiler safety valves adjusted 16/12/40

Crank shaft material Steel

Identification Mark 2566 AEG

Thrust shaft material Steel

Identification Mark 9054 H.A.I.

Intermediate shafts, material Steel

Identification Marks 3206 AEG

Tube shaft, material ✓

Identification Mark ✓

Screw shaft, material Steel

Identification Mark 9054 H.A.I.

Steam Pipes, material S.D. Steel

Test pressure 660 LBS

Date of Test 9-16/9/40

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

Not

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.)

The engines & boilers of the vessel have been constructed under Special Survey & in accordance with the approved plans.

The workmanship & material have been found good.

This machinery has been forwarded to Haverton Hill to be fitted on board by Messrs. Furness Shipbuilding Co. in their Yard No 325.

In our opinion, the vessel will be eligible to have record of +LMC - with date - upon completion.

The machinery fitted on board in accordance with the approved plans & Rule Requirements, tried under steam, & found working satisfactorily, & in our opinion is eligible for record of +LMC 1, 41 notation of T.S.C. L 141, forced draught & superheated. The ship's side inlet & discharge valves reinforced in accordance with Admiralty Notice MS 2385/40, MS 3199/40.

The amount of Entry Fee ... £ 6 : 0 :
 Special 4/5 LMC ... £ 86 : 14 :
 Donkey Boiler Fee ... £ 22 : - :
 Travelling Expenses (if any) £ : - :
 When applied for, 18th Oct. 1940
 Applied for at 11.41
 When received, 19.11.40
 12.12.1940.

R. J. Easthope,
 Arthur W. Oxford, Clive Bell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 21 FEB 1941

Assigned 1.41
 Assigned 1.41 for oil fuel 1.41 to 20, Ch.



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