

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 29 DEC 1947

Writing Report 24-12-1947 When handed in at Local Office 24-12-1947 Port of WEST HARTLEPOOL

Survey held at WEST HARTLEPOOL Date, First Survey 25th January, 1944 Last Survey 27th August, 1945 (Number of Visits 82)

Book on the S.S. 'CULLIN SOUND' Tons Gross Net

at WEST HARTLEPOOL By whom built W. GRAY & CO LTD Yard No. 1171 When built 1945

Engines made at KILMARNOCK By whom made GLENFIELD & KENNEDY LTD Engine No. A 176 When made 1943

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS Boiler No. 1171 When made 1945

Registered Horse Power 2500 Owners ADMIRALTY Port belonging to -

Horse Power as per Rule 542 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted YES

For which vessel is intended - MN=670

Engines, &c.—Description of Engines STEAM RECIPROCATING TRIPLE EXPANSION Revs. per minute 76

No. of Cylinders 3 No. of Cranks 3 Length of Stroke 48" Mid. length breadth 22" Thickness parallel to axis 9" shrunk

Crank pin dia. 14 3/4" Crank webs Mid. length thickness 9" Thickness around eye-hole 6 3/8"

Intermediate Shafts, diameter as per Rule 13.32" as fitted 13 3/8" Thrust shaft, diameter at collars as per Rule 14 1/4" as fitted 14 1/4"

Shafts, diameter as per Rule 14.84" as fitted 15 1/4" Is the screw shaft fitted with a continuous liner YES

Liners, thickness in way of bushes as per Rule 7.53" as fitted 8 1/2" Thickness between bushes as per Rule 5.6" as fitted 2 1/2" Is the after end of the liner made watertight in the

bell boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ONE LENGTH

Does the liner do 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 -

When 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

Propeller, dia. 18-3" Pitch 15-10" No. of Blades 4 Material BRONZE whether Moveable NO Total Developed Surface 98.5 sq. feet

Can one be overhauled while the other is at work -

Engines Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work YES

How driven STEAM Pumps connected to the Main Bilge Line No. and size 2 at 4" x 27" 1 at 10" x 12" x 12" Duplex 1 at 9 1/2" x 7 x 21" Single

How driven STEAM Lubricating Oil Pumps, including Spare Pump, No. and size -

Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary

In Engine and Boiler Room 4-3", 1-5" OILY BILGE 2-2" In Holds, &c. No. 1-2 at 3", No. 2-2 at 3 1/2", No. 3-2 at 3", No. 4-2 at 3"

Water Circulating Pump Direct Bilge Suctions, No. and size 1-9" Independent Power Pump Direct Suctions to the Engine Room Bilges, and size 1-5"

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 ON RESERVOIRS 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

How are they protected - Have they been tested as per Rule -

Do 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 NO worked from -

MAIN BOILERS, &c.—(Letter for record 5.) Total Heating Surface of Boilers 7941 sq. ft. (supra 2866 sq. ft.) = 10806 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 lbs per sq. in.

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 Main Boilers 22.2.41 Auxiliary Boilers - Donkey Boilers -

(If not state date of approval) Superheaters - General Pumping Arrangements YES Oil fuel Burning Piping Arrangements YES

SPARE GEAR.

Is the spare gear required by the Rules been supplied

State the principal additional spare gear supplied TO ADMIRALTY SPECIFICATION.

The foregoing is a correct description. FOR THE CENTRAL MARINE ENGINE WORKS,

(Ed. Gray & Co. Ltd.)

John H. ... GENERAL MANAGER.

Manufacturer.



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W426-0111

WEST HARTLEPOOL.

Dates of Survey while building
 During progress of work in shops - - 1944. Jan 25. April 20. May 30. July 3. 21. Aug. 3. 4. 21. 22. Sept. 1. 6. 13. 20. 22. 23. 26. 28. 30. -
 7. 18. 14. 19. 20. 23. 24. 25. 26. 27. 28. 30. 31. Nov. 1. 2. 3. 4. 5. 7. 8. 9. 10. 13. 14. 15. 16. 17. 18. 20. 21. 22. 23. 28. 29. Dec.
 6. 7. 12. 13. 14. 15. 16. 21. 22. 29. 1945. Jan. 8. 9. 10. 12.
 During erection on board vessel - - - M'BRO. 1945 March 24. April 4. 10. May 3. 17. July 25. Aug. 7. 9. 10. 27. 29.
 Total No. of visits 82

Dates of Examination of principal parts - Cylinders - Slides - Covers -
 Pistons - Piston Rods - SEE GIBSON NO. 6717. Connecting rods -
 Crank shaft - Thrust shaft 1-11-44, 1-9-44, Intermediate shafts 10-10-44
 Tube shaft - Screw shaft 22-8-44 Propeller 7-11-44
 10-10-44. Stern tube 7-11-44. Engine and boiler seatings 8-11-44. Engines holding down bolts 13-11-44.
 Completion of fitting sea connections 2-11-44
 Completion of pumping arrangements 8-1-45 Boilers fixed 6-12-44. Engines tried under steam 8-12-44, 9-1-45.
 Main boiler safety valves adjusted 8-1-45 Thickness of adjusting washers P. 5/16 3/4 1 1/2 2 1/4 C 5/16 1/4 1/32 5 3/8 23 7/32
 Crank shaft material STEEL Identification Mark 506. Thrust shaft material STEEL Identification Mark 3735 C.P.
 Intermediate shafts, material STEEL Identification Marks 3736-7-8-9 Tube shaft, material - Identification Mark -
 Screw shaft, material STEEL Identification Mark 3634 C.P. Steam Pipes, material STEEL Test pressure 600 lbs. Date of Test 13-12-44, 8-1-45.
 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 - 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..... If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The engines and boilers of this vessel have been built under special survey and in accordance with approved plans.
 The workmanship materials have been found good
 Upon completion they were examined under full working conditions and found satisfactory
 The electric installation was to Admiralty Supervision
 It is recommended that the machinery of this vessel is eligible for records
 + L.M.C 8-45, 2 S.B. F.D. 220 H.P.O. (3pt) Fitted for oil fuel 8-45 F.P. above 150° F. T.S. C.L.

The amount of Entry Fee	£	:	When applied for,
Special	£	:	19
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	£	:	19

John Sudalay per pro. A.O. Oxford.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned

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