

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 26 SEP 1941

Date of writing Report 23/9/41 When made in at Local Office 23/9/41 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL. Date, First Survey 22<sup>nd</sup> October, 1940, Last Survey 17<sup>th</sup> September 1941  
Reg. Book. on the S.S. EMPIRE WOLFE (Number of Visits 80)

Built at West Hartlepool. By whom built Wm Gray & Co. Yard No. 1119 Tons { Gross 2873.42 Net 1684.56  
When built 1941.

Engines made at West Hartlepool. By whom made Central Marine Eng. Works. Engine No. 1119 When made 1941.

Boilers made at West Hartlepool. By whom made Central Marine Eng. Works. Boiler No. 1119 When made 1941.

Registered Horse Power Owners Ministry of War Transport Port belonging to West Hartlepool.

Nom. Horse Power as per Rule 269. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which Vessel is intended Ocean going.

**ENGINES, &c.**—Description of Engines *Inverted triple expansion* Revs. per minute 80.

Dia. of Cylinders 20-31-55 Length of Stroke 39 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 11.0 as fitted 11.4 Crank pin dia. 11.4 Crank webs Mid. length breadth 16 Thickness parallel to axis 6.5  
as fitted 11.4 Crank webs Mid. length thickness 6.5 shrunk Thickness around eye-hole 4.8

Intermediate Shafts, diameter as per Rule 10.47 as fitted 10.2 Thrust shaft, diameter at collars as per Rule 11.0 as fitted 11.4

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 11.78 as fitted 12.4 Is the { tube } shaft fitted with a continuous liner { screw } Yes

Bronze Liners, thickness in way of bushes as per Rule .657 as fitted .16 Thickness between bushes as per Rule .492 as fitted .32 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. One length.

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 4-3 3/8

Propeller, dia. 15-9 Pitch 14-9 No. of Blades 4 Material CAST IRON, whether Moveable No. Total Developed Surface 75 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 Stroke 26 Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2 Stroke 26 Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 2 @ 3 x 26 } @ 8 x 6 x 5 SINGLE Pumps connected to the { No. and size 2 @ 4 1/2 x 26 } @ 6 x 11 x 10 DUPLEX  
How driven MAIN ENGINE INDEPENDENT STM. Main Bilge Line How driven MAIN ENGINE INDEPENDENT STEAM.

Ballast Pumps, No. and size 1 @ 10 x 11 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size

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 4 @ 3 1 @ 4 In Holds, &c. No. 1. 2 @ 3 1/2 2 @ 3 BILGER RM 2 @ 3

In Pump Room ENGRM. 2 @ 3 1 @ 3 1/2 4 @ 2 1/2 TUNNEL WELL 1 @ 2 1/2

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4

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 MAIN + AUX BELOW

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate REST ABOVE

What Pipes pass through the bunkers Bilge pipes How are they protected Wood ceiling

What pipes pass through the deep tanks 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 No worked from

**MAIN BOILERS, &c.**—(Letter for record 5) Total Heating Surface of Boilers 3854 sq ft

Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters None

No. and Description of Boilers 2 Single ended Multitubular Working Pressure 200 lbs

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 2-10-40 Main Boilers 11-11-40 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

The foregoing is a correct description,  
for THE CENTRAL MARINE ENGINE WORKS,  
(20, Gray & Co. Ltd.)

J. H. [Signature]  
GENERAL MANAGER.

Manufacturer.



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Foundation

W997-0166

1940. Oct. 22. Nov. 8. 13. Dec. 10. 16. 18. 19. 1941. March 19. 26. April 7. 17. 18. 21. 22. 23. 24. 29. May 1. 5. 7. 8. 12.

Dates of Survey while building

During progress of work in shops - - - 14. 19. 20. 22. 26. June 4. 9. 12. 13. 19. 20. 21. 22. 24. 26. 27. July 1. 2. 3. 4. 7. 8. 16. 17. 21. 22. 23. 24. 26. 28. 29. 30. 31. August 12. 15. 16. 18. 20. 21. 22. 27. 29. 1941. June 9. July 2. 9. 22. 28. 30. August 12. 14. 19. 28. September 2. 9. 10. 12. 17.

Total No. of visits

80

Dates of Examination of principal parts - Cylinders 12-6-HI - 21-7-HI Slides 1-7-HI Covers 1-7-HI
Pistons 1-7-HI Piston Rods 1-7-HI Connecting rods 1-7-HI
Crank shaft 12-6-HI - 21-7-HI Thrust shaft 8-7-HI - 29-7-HI Intermediate shafts 28-7-HI - 31-7-HI
Tube shaft ✓ Screw shaft 1-7-HI - 30-7-HI Propeller 30-7-HI
Stern tube 13-7-HI Engine and boiler seatings 22-7-HI Engines holding down bolts
Completion of fitting sea connections 22-7-HI
Completion of pumping arrangements 9-9-HI Boilers fixed 9-9-HI Engines tried under steam 10-9-HI
Main boiler safety valves adjusted 9-9-HI Thickness of adjusting washers PORT 3 1/8" of 3 1/4" STARB. 3 1/8" of 3 1/4"
Crank shaft material INHOT STEEL Identification Mark 5405 REG Thrust shaft material INHOT STEEL Identification Mark 5470 REG.
Intermediate shafts, material INHOT STEEL Identification Marks 5472, 3, 4, 5, 6 REG Tube shaft, material - Identification Mark -
Screw shaft, material INHOT STEEL Identification Mark 3063 REG Steam Pipes, material SP STEEL Test pressure 600 lbs Date of Test 12-8-41
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. See engines and boilers of this vessel have been built under special survey and in accordance with the approved plans and specification. The workmanship and materials have been found good. Upon completion they were examined under full working conditions and found satisfactory. It is recommended that the machinery of this vessel be classed in the Register Book of L.M.C. 9.HI. 25B. F.D.

Table with 4 columns: Fee Type, Amount (£), When applied for, When received. Includes Entry Fee (£4:0), Special Supervision Fee (£65:7), Donkey Boiler Fee (£16:7), Travelling Expenses (£:). Total received £85:14.

Arthur W. Oxford, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE, 14 OCT 1941

Assigned

+ d.m.b. 9.41



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

Rpt. Date of No. in Reg. Bo Built Engine Boilers Nomin MUI Manuf Total No. an Tested Area Area In case Smalle Smalle Larges Thickn long. se Percen Percen Thickn Materi Length Dimen End p How a Tube Mean Girden at cent in each Tensile Pitch Front Thickn Pitch Main Diame Screw Diame