Rpt. C.11

Rpt. 4. N.E. Dom. Installing Contract No 3070 No. 102336

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 SEP 1944

Date of writing Report ..... 19..... When handed in at Local Office 11/9/1944 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book Survey held at Newcastle on Tyne Date, First Survey 25 Oct/1943 Last Survey 30 Aug 1944 (Number of Visits 60)

on the "EMPIRE LADY" Tons Gross 7046 Net 4747

Built at Newcastle By whom built Shipbuilding Corpn (Tyne Branch) Yard No. 8. When built 1944-8. (INSTALLING No C. 3070.)

Engines made at Newcastle By whom made N.E. Marine Eng Co (1938) Ltd Engine No. 3057 When made 1944.

Boilers made at main BIRKENHEAD AUXY. BLR. " " By whom made Cammell Laird & Co Ltd Boilers No. 2223. When made 1941 BLR No. 2239. " " 1943

Registered Horse Power ..... Owners Min. of War Transport. Port belonging to NEWCASTLE.

Nom. Horse Power as per Rule 554. Is Refrigerating Machinery fitted for cargo purposes yes. Is Electric Light fitted yes.

Trade for which vessel is intended ocean going.

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76.

Dia. of Cylinders 24½ · 37 · 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 13·98 as fitted 14¼ Crank pin dia. 14¼ Crank webs Mid. length breadth 26½ Mid. length thickness 9" + 9½" Thickness parallel to axis 9" + 9½" shrunk Thickness around eye-hole 7⅛ · 7⅜

Intermediate Shafts, diameter as per Rule 13·32 as fitted 13⅝" **Thrust shaft,** diameter at collars as per Rule 13·98 as fitted 14½"

Tube Shafts, diameter as per Rule ✓ as fitted ✓ **Screw Shaft,** diameter as per Rule 14·84 as fitted 15¼" Is the ~~tube~~ screw shaft fitted with a continuous liner ✓ yes

Bronze Liners, thickness in way of bushes as per Rule ·753 as fitted 13/16" Thickness between bushes as per Rule ·565 as fitted 21/32" 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 ✓ In one piece. 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 ✓ a tight fit. 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 at no If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller 5'-1"

Propeller, dia. 17'-10½" Pitch 15·6' No. of Blades 4 Material CI whether Moveable no Total Developed Surface 114¾ sq. feet

Feed Pumps worked from the **Main Engines,** No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

Bilge Pumps worked from the **Main Engines,** No. zero Diameter 4½" Stroke 26" Can one be overhauled while the other is at work yes

Indept. **Feed Pumps** No. and size 2 @ 7" x 9½" x 21" + 1 @ 9½" x 7" x 21" How driven Steam **Pumps** connected to the **Main Bilge Line** No. and size 1 @ 10½" x 13" x 24" + 1 @ 9½" x 7" x 21" + 2 @ 4½" x 26" How driven Steam M. Eng.

Ballast Pumps, No. and size 1 @ 10½" x 13" x 24" **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 2 @ 3" in Eng Room 2 @ 3" in Boiler Room

In Pump Room ✓ In Holds, &c. 1 P+S 3" in each hold.

1 @ 2½" in Tunnel Well

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" **Independent Power Pump Direct Suctions** to the Engine Room Bilges, No. 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 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 forward bilge suctions How are they protected limber boards

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 S) Total Heating Surface of Boilers 8246 SQ. FT.

Which Boilers are fitted with Forced Draft 2 Mt 1 Auxyes Which Boilers are fitted with Superheaters 2 Main Boilers only.

No. and Description of Boilers 2 SB + 1 Aux SB Working Pressure 220 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes also for Auxy Blr. LIVERPOOL RPT 116658. " " 120062.

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 Standard Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)

Superheaters Standard General Pumping Arrangements 6-9-44. 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 2 m. brg bolts + nuts, 12 tubes for Main Condenser with 24 ferrules + 50 packings, 2 Safety Valve Springs (1 for Main + 1 for Auxy Blrs), etc etc.

The foregoing is a correct description. THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

John Neill DIRECTOR Manufacturer.

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003377-003384-0186

Dates of Survey while building

During progress of work in shops - - 1943 Oct. 25. Nov. 8. 12. 1944 Jan. 11. Feb. 8. 11. 23. 28. Mar. 2. 3. 6. 13. 20. 21. 22. 23. 29. 30. Apr. 3. 5. 6. 7. 13. 14. 21. 26.
May 5. 10. 15. 22. 25. 31. June 1. 6. 7. 8. 14. 21. 23. 27. 29. 30. July 4. 5. 6. 25. 26. 28. Aug. 2. 3. 8. 10. 11. 14. 18. 25

During erection on board vessel - - - 28. 29. 30.

Total No. of visits 60.

Dates of Examination of principal parts—Cylinders 30. 3. 44. Slides 15. 5. 44 Covers 30. 3. 44

Pistons 15. 5. 44 Piston Rods 15. 5. 44 Connecting rods 15. 5. 44

Crank shaft 11. 1. 44 Thrust shaft 5. 11. 43 Intermediate shafts 14. 4. 44

Tube shaft ✓ Screw shaft 22-5-44 Propeller 25-7-44

Stern tube 8-6-44 Engine and boiler seatings 8-6-44 Engines holding down bolts 11-8-44

Completion of fitting sea connections 20-6-44

Completion of pumping arrangements 14-8-44 Boilers fixed 10-8-44 Engines tried under steam 14th & 25th 8-44.

Main boiler safety valves adjusted 14-8-44 Thickness of adjusting washers P. Valve 5/16 S. Valve Spl 3/8 Port Main 1/4 Starbd 3/8 25/64 7/32. Aux. Pri. PV. 11/32 SV. 11/32.

Crank shaft material F. Steel Identification Mark Rell 11.1.44 7042 → 8018 CP. Thrust shaft material F. Steel Identification Mark Rell 11.43 8564 ERB

Intermediate shafts, material F. Steel Identification Marks Rell 14.4.44 8473. 8477 8641. 8694 8566 + 8570 ERB. Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material F. Stl Identification Mark 8564. E.R.B. Steam Pipes, material S.D. Stl. Test pressure 660 lb. Date of Test 4-7-44 to 11-8-

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 not desired.

Is this machinery duplicate of a previous case No. ✓ If so, state name of vessel Similar to Empire Flag. Mac Rpt 101648.

General Remarks (State quality of workmanship, opinions as to class, &c.

The machinery has been constructed and fitted on board under special Survey in accordance with the approved plans, specifications and the Society's Rules. The materials & workmanship are good. The machinery was tested satisfactorily under working conditions and is eligible, in our opinion, for record +LMC. 8.44 and the notations Cl. 2SB(Spl) & 1 Aux. SB. 220 lb. F.D.

Spec. Surv. Fee. £102-14-0
plus 25% for Spec. 25-18-6
£128-7-6

Deduct Blr. Fees charged at Liverpool
2. M. Blrs. Rpt 116658 = 31-19-0
1 Aux Blr " 120062 = 12-4-4
1/3 of £36-13-0
44-3-4
£84-4-2

The amount of Entry Fee ...	£	6 :	0 :	When applied for, 12 SEP 1944 19..
Special plus 25% for Spec. less Blr. Fees at Liverpool ...	£	84 :	4-2	
~~Donkey Boiler Fee~~	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19..

A. Watt. for R. Moffitt & self.
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute TUES. 19 SEP 1944

Assigned +LMC 8.44 2SB Spl 1 Aux SB } 220 lb

Certificate to be sent to NEWCASTLE-ON-TYNE

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

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