

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

24 SEP 1942

Date of writing Report

19

When handed in at Local Office

19

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle on Tyne

Date, First Survey

10th Oct. 1941

Last Survey

9th Sept. 1942

Reg. Book.

on the 3¹/₂ EMPIRE REYNOLDS

(Number of Visits 85)

Gross 8128

Net 4634

Built at Newcastle

By whom built

Swan, Hunter & Wigham Richardson

Yard No. 1712

When built 1942-

Engines made at ditto

By whom made

ditto

Engine No. 1712

When made "

Boilers made at ditto

By whom made

ditto

Boiler No. 1712

When made "

Registered Horse Power

Owners

Port belonging to

Horse Power as per Rule 629

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which Vessel is intended

Ocean going. Carrying Petroleum in bulk

Engines, &c.—Description of Engines

3 Cyl. Triple Exp. Recip

Revs. per minute 84

Dia. of Cylinders

26¹/₂ + 44 + 73

Length of Stroke 48

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals

as per Rule 14.66

as fitted 15 1/4

Crank pin dia. 15 1/4

Crank webs

Mid. length breadth

shrink

Thickness parallel to axis

9.5625

Intermediate Shafts, diameter

as per Rule 13.96

as fitted 14

Thrust shaft, diameter at collars

as per Rule 14.66

as fitted 14 3/4

Stern Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule 15.42

as fitted 15 1/2

Is the

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule 24.7/32

as fitted 25/32

Thickness between bushes

as per Rule 18.5/32

as fitted 23/32

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

Light fit

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

Propeller, dia.

17'-6"

Pitch 14'-6"

No. of Blades 4

Material M. B. & C.

whether Moveable

No

Total Developed Surface

104 sq. feet

Main Pumps worked from the Main Engines, No.

None

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Auxiliary Pumps worked from the Main Engines, No.

2

Diameter 6"

Stroke 26"

Can one be overhauled while the other is at work

Yes

Ballast Pumps, No. and size

2 of 10 1/2" x 8" x 21"

Pumps connected to the

No. and size

One Ballast 10" x 11" x 10" dup.

and 2 Single acting 6" x 26"

(200 tons/hr) (98 tons/hr total)

How driven

Indep. Steam

Main Bilge Line

How driven

Indep. Steam

by Main Engines

Lubricating Oil Pumps, including Spare Pump, No. and size

One 10" x 11" x 10" duplex

Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary

Pumps

In Engine and Boiler Room

In Pump Room

2 of 4" in each Pump Rm.

In Holds, &c.

2 of 2 1/2" in For. Hold, 1 of 2" in Pump Rm, 2 of 2" in 7th Store.

Main Water Circulating Pump Direct Bilge Suctions, No. and size

One of 9" dia

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

One of 5" dia on 5th Side

Are all the Bilge Suction Pipes in holds and bilges fitted with strum-boxes

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Overboard Discharges above or below the deep water line

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

How are they protected

Have they been tested as per Rule

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

Total Heating Surface of Boilers

9555 sq. ft.

Working Pressure 220 lbs./sq. in.

A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

A DONKEY BOILER FITTED? None

If so, is a report now forwarded?

Are approved plans forwarded herewith for Shipping

(If not state date of approval)

General Pumping Arrangements

Pumping Arrangements in E.R.

SPARE GEAR.

Is the spare gear required by the Rules been supplied

Is the principal additional spare gear supplied

12 gauge glasses; 50 ferrules & 100 packings for Condenser,

6 piston bolts, 4 cam rollers & spindles for HP. Valve gear, 1 Valve spindle for HP. Valve,

12 plain tubes for Boilers; & for Superheaters 20% of jointing washers, 10% Studs & nuts,

10% Header plugs & 2% clamps. etc.

The foregoing is a correct description.

G. J. Dwyer

Manufacturer.



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005187-005193-0114

1941
 6 Oct. 10. 30. Nov. 3. 5. 6. 20. 21. Dec. 12. 23. 31. Jan 13. 27. Feb. 4. 9. 12. 20. 24. Mar. 20. Apr. 1. 13. 17. 24. 28. 29. May 1. 4. 6. 7. 8. 11. 12. 13. 14. 18. 19. 22. 26. 28. 29. June 1. 2. 3. 4. 5. 8. 9. 10. 12. 16. 17. 18. 1
 1942
 22. 23. 25. 29. 30. July 1. 2. 3. 10. 17. 20. 21. 23. 24. 27. 28. 29. 31. Aug. 4. 6. 10. 14. 20. 21. 22. 27. Sept. 1. 5. 7. 8. 9.
 Total No. of visits 85.

Dates of Examination of principal parts—Cylinders 29/6/42 Slides 20/7/42 Covers 29/6/42
 Pistons 20/7/42 Piston Rods 20/7/42 Connecting rods 20/7/42
 Crank shaft 29/6/42 Thrust shaft 1/7/42 Intermediate shaft 1/7/42
 Tube shaft ✓ Screw shaft 12/6/42 Propeller 12/6/42 + 22/6/42.
 Stern tube 17th + 19th/6/42 Engine and boiler seatings 19/6/42 ; 11/8/42 Engines holding down bolts 6/8/42
 Completion of fitting sea connections 19/6/42
 Completion of pumping arrangements 31/8/42 Boilers fixed 11/8/42 Engines tried under steam 31/8/42 + 5/9/42
 Main boiler safety valves adjusted 27th + 31st/8/42 Thickness of adjusting washers Port Blk 5/16 1 1/2 1/4 7/8 3/8 7/32. Star Blk 1/2 1/2 7/8 3/8 7/32.
 Crank shaft material 2. Stl. Identification Mark 10998 HAI 29/6/42 AW. Thrust shaft material 2 Stl. Identification Mark 10998 HAI 310
 Intermediate shaft material 2. Stl. Identification Marks 10998 HAI 308. Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material 2 Stl. Identification Mark 10998 HAI 308. Steam Pipes, material S.D. Stl. Test pressure 660 lb. Date of Test 12/5/42
 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 not desired
 Is this machinery duplicate of a previous case Yes. If so, state name of vessel 4 1/2 Empire Garrick
 General Remarks (State quality of workmanship, opinions as to class, &c. SHANKS 1710. HULL Rpt No 100587

The Machinery of this Vessel has been constructed under Special Survey in accordance with the approved plans and the Society's Rules, and the materials + workmanship are good.

The Machinery has been efficiently installed on board, tried under working conditions at quay with satisfactory results, and is eligible in my opinion for record + LMC. 9.42, and the notations, 3 SB. Sst F.D 220 lbs. CL.

The amount of Entry Fee ... £ 6 : 0 :
 Special + Spec. ... £ 133 : 1 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 22 SEP 1942
 When received, 19

A Watt

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 29 SEP 1942

Assigned

f Lmb. 9.42
 3itt. for oil fuel n
 22, Ch.



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