

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

28 MAY 1935

Date of writing Report

10

When handed in at Local Office

27 MAY 1935

Port of

Sunderland.

No. in Survey held at
Reg. Book.

Sunderland.

Date, First Survey Dec 18

Last Survey May 23 1935

(Number of Visits 41)

on the

Steel Screw Steamer "THORNABY"

Built at

Newcastle

By whom built

Hawthorn Leslie & Co. Ltd

Yard No.

596

Gross Tons

Net

When built 1935.

Engines made at

Sunderland

By whom made

North Eastern Marine Engineering Co. Ltd

Engine No.

2814

When made

1935

Boilers made at

Sunderland

By whom made

North Eastern Marine Engineering Co. Ltd

Boiler No.

2814

When made

1935

Registered Horse Power

Owners

Tyne Tees Steamer Shipping Co. Ltd

Port belonging to

Middlesbrough

Nom. Horse Power as per Rule

148.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

Trade for which Vessel is intended

Coasting.

ENGINES, &c.—Description of Engines

Triple Expansion.

Revs. per minute 83

Dia. of Cylinders

16" x 26" x 44"

Length of Stroke

30"

No. of Cylinders

3 16 1/4"

No. of Cranks

3 5 1/2"

Crank shaft, dia. of journals

as per Rule 8.68"

Crank pin dia.

9"

Crank webs

Mid. length breadth 16 1/4"

Thickness parallel to axis 5 1/2"

Mid. length thickness 5 1/2"

Thickness around eye-hole 4 1/2"

Intermediate Shafts, diameter

as per Rule 8.26"

as fitted 8 3/8"

Thrust shaft, diameter at collars

as per Rule 8.68"

as fitted 9"

Tube Shafts, diameter

as per Rule 9.26"

Screw Shaft, diameter

as per Rule 9 1/2"

Is the

tube screw

shaft fitted with a continuous liner

Yes.

Bronze Liners, thickness in way of bushes

as per Rule 5.48"

as fitted 5/8"

Thickness between bushes

as per Rule 43"

as fitted 9/16"

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

Yes.

Is an approved Oil Gland or other appliance fitted at the after end of the tube

If so, state type

Yes.

Length of Bearing in Stern Bush next to and supporting propeller

3'-2"

Propeller, dia.

12'-0"

Pitch

11'-8"

No. of Blades

4

Material

C.I.

whether Movable

No.

Total Developed Surface

46 sq. feet

Feed Pumps worked from the Main Engines, No.

2

Diameter

2 3/4"

Stroke

1'-3"

Can one be overhauled while the other is at work

Yes.

Bilge Pumps worked from the Main Engines, No.

2

Diameter

2 3/4"

Stroke

1'-3"

Can one be overhauled while the other is at work

Yes.

Feed Pumps

No. and size 1 @ 4" x 6" x 12"

How driven

Steam

Pumps connected to the

Main Bilge Line

No. and size 1 @ 6" x 4" x 9"

How driven

Steam.

Ballast Pumps, No. and size

1 @ 6" x 4" x 9"

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

Are two independent means arranged for circulating water through the Oil Cooler

Bilge Pumps;—In Engine and Boiler Room

1 @ 2 1/2" x 1 @ 2" in E.R.

Suctions, connected to both Main Bilge Pumps and Auxiliary

3 @ 2 1/2" in Boiler Room

1 @ 2 1/4" in Tunnel

In Pump Room

In Holds, &c.

2 @ 2" in aft hold, 2 @ 3" in

Fore Hold.

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

1 @ 4"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

1 @ 3 1/2"

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

above

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

For Bilge Suctions

How are they protected

head casings.

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

Yes.

Is it fitted with a watertight door

Yes.

worked from

steering engine

MAIN BOILERS, &c.—(Letter for record S)

Total Heating Surface of Boilers

2632 sq. ft.

Is Forced Draft fitted

No.

No. and Description of Boilers

2 S.E.

Working Pressure

200.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes.

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

(If not state date of approval)

Superheaters

General Pumping Arrangements

Main Boilers

Yes.

Auxiliary Boilers

Donkey Boilers

Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

one Cast iron Propeller, one Propeller Shaft,
 6 junk ring bolts & nuts, Set of Lockwood & Bartlett Packing for H.P. & M.P. pistons,
 2 main & 2 aux. feed check valve lids, Complete set of valves & guards for
 feed donkey, one set air pump valves, one pair bottom end bearings,
 25 Condenser tubes & gaskets, 6 plain boiler tubes, 2 Safety valve springs,
 1 eccentric strap

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Archd. J. Berry
 MANAGER

Manufacturer.



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Lloyd's Register
 Foundation

003252-003262-0012

1934 Dec. 18. 20. 1935 Jan. 16. 21. 23. 25. 28. 30. Feb. 1. 4. 6. 8. 11. 13. 15. 18. 20. 22. 23. 25. 27.
 During progress of work in shops - - -
 Dates of Survey while building
 During erection on board vessel - - -
 Total No. of visits 41

JAN. 23. 25
 FEB. 1. 13. 23 / 35
 Dates of Examination of principal parts—Cylinders Slides 20. 2. 35. Covers 22. 2. 35.
 Pistons 4. 2. 35 13. 2. 35. Piston Rods 4. 2. 35 13. 2. 35. Connecting rods 1. 3. 35.
 Crank shaft 30. 1. 35 1. 2. 35 4. 2. 35 Thrust shaft 22. 2. 35. Intermediate shafts 15. 4. 35.
 Tube shaft 15. 4. 35. Screw shaft 6. 2. 35 10. 4. 35 15. 4. 35 Propeller 15. 4. 35. 30. 4. 35 (Nwc)
 Stern tube 15. 4. 35. 18. 4. 35 (Nwc) Engine and boiler seatings 30. 4. 35 (Nwc) Engines holding down bolts 14. 5. 35.
 Completion of fitting sea connections 30. 4. 35 (Nwc)
 Completion of pumping arrangements 23. 5. 35. Boilers fixed 15. 5. 35. Engines tried under steam 13. 5. 35.
 Main boiler safety valves adjusted 23. 5. 35. Thickness of adjusting washers Port Bl. P. 3/8" S. 7/16" St. Bl. P. 3/8" S. 3/8"
 Crank shaft material Steel Identification Mark No 7715 W.H.F. 22. 2. 35 Thrust shaft material Steel Identification Mark No 7742 W.H.F. 22. 2. 35
 Intermediate shafts, material Steel Identification Mark No 7742 W.H.F. 15. 4. 35 Tube shaft, material Steel Identification Mark No 7742 W.H.F. 15. 4. 35
 Screw shaft, material Steel Identification Mark No 7742 W.H.F. 15. 4. 35 Steam Pipes, material Steel Test pressure 600 Date of Test 14. 5. 35.
 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.)
 This machinery has been built under Special Survey in accordance with the Rules of the Society.
 The materials & workmanship are good.
 The machinery has been securely fitted on board the vessel & tried under steam with satisfactory results & is eligible in my opinion to have the notation L.N.C. 5. 35, T.S. (CL) in the Register Book.

Certificate to be sent to **SUNDERLAND**

The amount of Entry Fee ... £ 3 : - : When applied for,
 Special ... £ 34 : - : 27 MAY 1935
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 12. 6. 35
 TUE. 18 JUN 1935

Assigned + Lmb 5.35 C.L.

John Fraser
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

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