

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

NEWCASTLE-ON-TYNE FEB 1942

Date of writing Report

10

When handed in at Local Office

2/2/1942 Port of

No. in Survey held at
Reg. Book.

Wallsend.

Date, First Survey 27 July 1941 Last Survey 26 Jan 1942

(Number of Visits 63.)

Gross

on the

SS. 'EMPIRE. AIRMAN'

Tons

Net

Built at Sunderland.

By whom built Sir J. Laing & Sons Ltd

Yard No. 739

When built 1942

Engines made at Wallsend.

By whom made N.E. Marine Eng Co (1938) Ltd

Engine No. 3009

When made 1942

Boilers made at

By whom made

Boiler No. 3009

When made 1942

Registered Horse Power

Owners Ministry of War Transport

Port belonging to Sunderland

Nom. Horse Power as per Rule 674

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

Trade for which Vessel is intended

Carrying Petroleum in bulk.

Ocean going.

ENGINES, &c.—Description of Engines Triple Expansion

Revs. per minute 85

Dia. of Cylinders 27-44-76

Length of Stroke 51

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals

as per Rule 15.205

as fitted 15 1/2"

Crank pin dia. 16"

Crank webs

Mid. length breadth 2-3 3/4"

Mid. length thickness 1 1/2"

Thickness parallel to axis 9 1/2" x 10 1/2"

Thickness around eye-hole 8 1/2" x 8"

Intermediate Shafts, diameter

as per Rule

as fitted 14.48"

Thrust shaft, diameter at collars

as per Rule

as fitted 15.205

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted 16.00"

Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes

as per Rule

as fitted 789

Thickness between bushes

as per Rule

as fitted 592

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

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

shaft

no

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 5.5 1/4"

Propeller, dia. 18'-3"

Pitch 14'-6"

No. of Blades 4

Material Bronze

whether Moveable

no

Total Developed Surface 131 3/4 sq. feet

Feed Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

yes

Bilge Pumps worked from the Main Engines, No. 2

Diameter 5"

Stroke 27"

Can one be overhauled while the other is at work

yes

Feed Pumps

No. and size

2 12x9x24 1 9x6x10"

Pumps connected to the

Main Bilge Line

No. and size

2 10x12x12"

How driven

Steam

Main Bilge Line

How driven

Steam

M. Engo.

Ballast Pumps, No. and size

1 10x12x12"

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

1 10x12x12"

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

yes

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room

1 12 3/2" Eng R. 8"

1 12 3/2" Eng R. 8"

1 12 3/2" Baler Room P. 3 Aft.

1 12 3/2" Baler Room P. 3 Aft.

In Pump Room

4" P. 8"

For 1 12 3/2"

In Hold, &c.

2 1/2" P. 8"

1 12 3/2" P. 8"

1 12 3/2" P. 8"

1 12 3/2" P. 8"

1 12 3/2" P. 8"

1 12 3/2" P. 8"

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

1 12 5"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

1 12 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 filled 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 stakehold plates

yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

Are the Overboard Discharges above or below the deep water line

below

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

How are they protected

yes

Have they been tested as per Rule

yes

Are all Pipers, 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

none

Is it fitted with a watertight door

worked from

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

Total Heating Surface of Boilers

10020 sq. ft.

Is Forced Draft fitted

yes

No. and Description of Boilers

3 SB

Working Pressure

220 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

yes

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

yes

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

yes

PLANS.

Are approved plans forwarded herewith for Shafting

19.1.40

Main Boilers

17.2.41

Auxiliary Boilers

Donkey Boilers

Superheaters

7.4.41

General Pumping Arrangements

20.3.41

Oil fuel Burning Piping Arrangements

21.3.41

Settling tanks

18.10.41

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.

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

John Neill

Manufacturer.

DIRECTOR



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Lloyd's Register
Foundation

005436.005442-0170

1941
 July 27.31. Aug. 5.13.15.18.20.26.29. Sep. 1.2.4.5.8.16.18.25.29. Oct. 10.13.15.16.20.22
 23.24. Nov. 3.6.10.12.13.14.17.24.25.26.27. Dec. 1.3.5.10.11.12.15.16.17.18.19.22.23
 1942
 Jan. 2.5.6.7.8.14.15.20.26.
 Dates of Survey while building { During progress of work in shops - - {
 { During erection on board vessel - - - {
 Total No. of visits 63.

Dates of Examination of principal parts—Cylinders 20.24/10/41 Slides 17.11.41 Covers 24.10.41
 Pistons 17.11.41 Piston Rods 17.11.41 Connecting rods 17.11.41
 Crank shaft 15.10.41 Thrust shaft 14.11.41 Intermediate shafts 14.11.41
 Tube shaft / Screw shaft 3.11.41 Propeller 3.11.41 & 5.12.41
 Stern tube 23.10.41 3.11.41 Engine and boiler seatings 24.12.41 Engines holding down bolts 24.12.41
 Completion of fitting sea connections 17.11.41
 Completion of pumping arrangements 29.1.42 Boilers fixed 24.12.41 Engines tried under steam 14.15.26 & 29/1/42
 Main boiler safety valves adjusted 15.1.42 Thickness of adjusting washers 5874.75.76.77.78 & 5879 AEG
 Crank shaft material Steel Identification Mark Rht 15.10.41 Thrust shaft material Steel Identification Mark Rht 13.11.41
 Intermediate shafts, material Steel Identification Marks Rht 13.11.41 Tube shaft, material / Identification Mark /
 Screw shaft, material Steel Identification Mark Rht 3.11.41 Steam Pipes, material Steel Test pressure 660 Date of Test 30.12.41
 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 110
 Is this machinery duplicate of a previous case yes If so, state name of vessel *Eaglesdab* (except minor details) *Empire Silver* Nwe 99435.

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been made under Special Survey in accordance with the Approved Plans, the Requirements of the Rules & the Specification. The materials & workmanship are good & the machinery proved satisfactory under working conditions at quay.*

The machinery is eligible in my opinion to have the Records.
 + LMC. 1.42. 3SB (3pt) Rht F.D. CL Fitted for oil fuel 1.42 FP above 150°F.

NEWCASTLE-ON-TYNE.

The amount of Entry Fee ... £ 6 : 01 0
 Special + 25% ... £ 135 : 17 6
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 2 FEB 1942
 When received, 19

R. C. Moffitt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRL 20 FEB 1942
 Assigned *Fitted for oil fuel &c 3SB, CL.*