

28 DEC 1943

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report

20 DEC 1943

When handed in at Local Office

20 DEC 1943

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

NEWCASTLE-ON-TYNE

Date, First Survey

18 June, 1943

Last Survey

29 November 1943

Reg. Book

(Number of Visits 43)

on the SS "EMPIRE DUCHESS"

Tons

Gross

Net

Built at Sunderland By whom built Short Bros. Ltd.

Yard No. 478

When built 1943

Engines made at

By whom made J. Dickinson & Sons Ltd.

Engine No. 2724

When made 1943

Boilers made at Wallsend

By whom made N.E. Marine Eng. Co. Ltd.

Boiler No. 3061

When made 1943

Registered Horse Power

Owners Ministry of War Transport

Port belonging to Sunderland

Nom. Horse Power as per Rule

510

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

Trade for which vessel is intended

beacon going

ENGINES, &c.—Description of Engines

See Sunderland

Revs. per minute

Dia. of Cylinders

Length of Stroke

No. of Cylinders

No. of Cranks

Crank shaft, dia. of journals

as per Rule

Crank pin dia.

Report No. 23755

Mid. length breadth

Thickness parallel to axis

as fitted

Mid. length thickness

shrunk

Thickness around eye-hole

Intermediate Shafts, diameter

as per Rule

Thrust shaft, diameter at collars

as fitted

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule

14.82

Is the

tube

screw

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule

753

Thickness between bushes

as per Rule

565

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

yes

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

yes

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

at

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

5' 1"

Propeller, dia.

17-10 1/2

Pitch

15.6

No. of Blades

4

Material

C.I.

whether Moveable

no

Total Developed Surface

114 1/4

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.

Diameter

Stroke

Can one be overhauled while the other is at work

Feed

No. and size

2 1/2 x 9 1/2 x 21

Pumps connected to the

Main Bilge Line

No. and size

1 1/2 x 10 1/2 x 13 x 24

1 1/2 x 9 1/2 x 21

2 1/2 x 4 x 27

Pumps

How driven

Steam

How driven

Steam

How driven

M. Engine

Ballast Pumps, No. and size

1 1/2 x 10 1/2 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 1/2 3" Eng. Room

2 1/2 3" Blk. Room

In Pump Room

In Holds, &c. 3" P+S in each hold

2 1/2" tunnel well

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

1 1/2 9"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

1 1/2 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 bilges

How are they protected

lumber boards

What pipes pass through the deep tanks

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

no

worked from

MAIN BOILERS, &c.—(Letter for record

3)

Total Heating Surface of Boilers

7248

Which Boilers are fitted with Forced Draft

yes

Which Boilers are fitted with Superheaters

all

No. and Description of Boilers

3 SB

Working Pressure

220

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

yes

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

yes

Can the donkey boiler be used for domestic purposes only

yes

PLANS.

Are approved plans forwarded herewith for Shafting

Standard B Main Boilers

Standard B Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

Standard

General Pumping Arrangements

9.10.41

Oil fuel Burning Piping Arrangements

yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

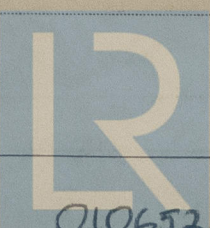
The foregoing is a correct description.

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

John Neill

Manufacturer.

DIRECTOR



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Lloyd's Register

Foundation

010652-010661-0031

During progress of work in shops {
Dates of Survey while building {
During erection on board vessel - - - {
Total No. of visits 43

Dates of Examination of principal parts - Cylinders Slides Covers
Pistons Piston Rods Connecting rods
Crank shaft Thrust shaft Intermediate shafts
Tube shaft Screw shaft 18.8.43. Propeller 18.8.43.
Stern tube 9.8.43. Engine and boiler seatings 10.9.43. Engines holding down bolts 10.9.43.
Completion of fitting sea connections 6.8.43.
Completion of pumping arrangements 10.12.43. Boilers fixed 10.9.43. Engines tried under steam 23.9.43. 7.4.12.43.
Main boiler safety valves adjusted 10.9.43. Thickness of adjusting washers P S 2 1/4 Spt 8 C S 1 3/32 Spt 7 3/32 S S 1 3/32 Spt 8
Crank shaft material Identification Mark Thrust shaft material Identification Mark
Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
Screw shaft, material Steel Identification Mark 1062 T.T. Steam Pipes, material Steel Test pressure 660 Date of Test Various
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 4th If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been made & installed 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 record
+ LMC 12.43. 3SB Spt FD CL

The amount of Entry Fee ... £ : :
3/5 Special +25% ... £ 75:7-6 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 21 DEC 1943
When received, 19

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

TUES. 4 JAN 1944

Committee's Minute

Assigned

+ LMC 12.43 70 CL



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