

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report

19

When handed in at Local Office

6th February 1948

Port of

Sunderland

Received at London Office

12 FEB 1948

No. in Survey held at

SUNDERLAND

Date, First Survey 12th June 1947

Last Survey 2nd February 1948

Reg. Book

on the

S/S "BRANKSOME"

(Number of Visits)

Tons { Gross 1438.03  
Net 733.33

Built at

SUNDERLAND

By whom built

S.P. AUSTIN &amp; SON LTD.

Yard No.

391

When built

1948

Engines made at

SUNDERLAND

By whom made

N.E. MARINE ENG. CO. LTD.

Engine No.

4169

When made

1948

Boilers made at

SUNDERLAND

By whom made

"

Boiler No.

4169

When made

1948

Registered Horse Power

Owners

STEPHENSON, CLARKE

Port belonging to

LONDON

Nom. Horse Power as per Rule

= 183

230. = MN

Is Refrigerating Machinery fitted for cargo purposes

NO.

Is Electric Light fitted

YES.

Trade for which vessel is intended

OPEN SEA.

## ENGINES, &c.

Description of Engines

TRIPLE EXPANSION RECIPROCATING

Revs. per minute

78.

Dia. of Cylinders

16" x 25" x 45"

Length of Stroke

33"

No. of Cylinders

3.

No. of Cranks

3.

Crank shaft, dia. of journals

as per Rule 9.279

Crank pin dia.

9 3/4"

Crank webs

Mid. length breadth

Thickness parallel to axis

6"

Intermediate Shafts, diameter

as per Rule

Thrust shaft, diameter at collars

as per Rule

9.279

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule

10.427

Is the screw shaft fitted with a continuous liner

NO.

Bronze Liners, thickness in way of bushes

as per Rule

Thickness between bushes

as fitted

Is the after end of the liner made watertight in the

propeller boss 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

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

at YES. If so, state type

VICKERS "VISTA"

Length of Bearing in Stern Bush next to and supporting propeller

3'-9"

Propeller, dia. 13'-3"

Pitch 13'-0"

No. of Blades

4.

Material M. BRONZE

whether Moveable

NO.

Total Developed Surface

60.

sq. feet

Feed Pumps worked from the Main Engines, No.

2

Diameter 2 3/4"

Stroke 16 1/2"

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 16 1/2"

Can one be overhauled while the other is at work

YES.

Feed { No. and size

Pumps connected to the

Main Bilge Line

No. and size

ONE - BALLAST PUMP 200 T/H. TWO - GENERAL SERVICE 5 1/2" x 3 1/2" x 6"

Pumps { How driven

STEAM.

STEAM.

Ballast Pumps, No. and size

ONE - 9" x 11" x 10"

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

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

Suctions, connected both to Main Bilge Pumps and Auxiliary

Bilge Pumps:—In Engine and Boiler Room

ER FOR 1-2 1/2" P. 1-2 1/2" S.

AFT WEL 1-2 1/2"

In Pump Room

In Holds, &amp;c. NO. 1 HOLD 1-3" P. 1-3" S. NO. 2 HOLD 1-2 1/2" P. 1-2 1/2" S. NO. 3 HOLD 1-2 1/2" P. 1-2 1/2" S.

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

1 - 5"

Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges,

No. and size

1 - 4"

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

NONE.

How are they protected

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

MAY BE.

Is it fitted with a watertight door

YES.

worked from

MAIN BOILERS, &amp;c.—(Letter for record 9.) Total Heating Surface of Boilers

2666 sq. ft.

+ SUPERHEATERS 1050 sq. ft. = 3716 sq. ft.

Which Boilers are fitted with Forced Draft

MAIN

Which Boilers are fitted with Superheaters

MAIN.

No. and Description of Boilers

TWO - SINGLE ENDED MULTITUBULAR.

Working Pressure

220 LBS/SQ. IN.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

YES.

IS A DONKEY BOILER FITTED?

NO.

If so, is a report now forwarded?

Can the donkey boiler be used for other than domestic purposes

YES.

## PLANS.

Are approved plans forwarded herewith for Shafting

14.3.47.

Main Boilers

25.2.47.

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

10.9.47.

General Pumping Arrangements

21.7.47.

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

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

The foregoing is a correct description.

RESIDENT MANAGER.

Manufacturer.



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Lloyd's Register Foundation

011516-011523-0159

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132

53

12, 13, 15, 14, 13



Date of writing Report

No. in Survey  
Reg. Book.

on the

Master

Engines made at

Boilers made at

Nominal Horse Power

MULTITUBULAR

Manufacturers of

Total Heating Surface

No. and Description

Tested by hydraulic

Area of Firegrate

Area of each set

In case of donkey

Smallest distance

Smallest distance

Largest internal

Thickness

long seams

Percentage of strength

Percentage of strength

Thickness of butt

Material

Length of plain

Dimensions of stiff

End plates in steam

How are stays secured

Tube plates: Material

Mean pitch of stays

Girders to combustion

at centre 8'5"

in each 2

Tensile strength

Pitch of stays to drum

Working pressure

Thickness

Pitch of stays at

Working pressure

Diameter (At body of

Working pressure

Diameter (At turn of

Working pressure

Diameter (Over the

Working pressure

Diameter (Over the

Working pressure

Diameter (Over the

Working pressure

SUNDERLAND

Certificate to be sent to

The amount of Entry Fee ... £ : v : } When applied for,  
 Special ... £ 69 : 0 : } FEB 11 1948  
 Donkey Boiler Fee ... £ : v : } When received,  
 Travelling Expenses (if any) £ : v : } 19

Date

FRI. 12 MAR 1948

Committee's  
Minute

+ L.M.C. 2.48

F.O. O.G.

2. S.B. 220lb.

Spt

*W. E. Munro*  
 Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register  
FoundationDates  
of Survey  
while  
buildingDuring progress of  
work in shops - -During erection on  
board vessel - -

Total No. of visits

1947 Jan 12, 16, 23 Aug 8, 11, 15, 19 Sep 2, 4, 5, 10, 12, 15, 16, 17, 18, 19, 22, 23, 25, 30 Oct 2, 6, 7, 8, 10, 13, 14, 15, 21, 24, 27, 28, 29, 30, 31  
 Nov 5, 6, 7, 10, 12, 13, 14, 18, 20, 21 Dec 1, 4, 5, 11, 12, 15, 16, 18, 19, 23

1948 Jan 13, 15, 29 Feb 2

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Dates of Examination of principal parts - Cylinders 16.2.47, 13.6.47, Slides 13.10.47, Covers 13.10.47.  
 Pistons 13.10.47, Piston Rods 24.10.47, Connecting rods 30.10.47.  
 Crank shaft 15.10.47, Thrust shaft 29.10.47, Intermediate shafts ✓  
 Tube shaft ✓, Screw shaft W. 24.10.47, 3. 29.10.47, Propeller 14.11.47  
 Stern tube 17.9.47, Engine and boiler seatings 18.11.47, Engines holding down bolts 1.12.47.  
 Completion of fitting sea connections 15.9.47, Engines tried under steam 23.12.47.  
 Completion of pumping arrangements 13.1.48, Boilers fixed 21.11.47, P. Port BLR 3, P. Star BLR 3, P. Star BLR 3/8, P. Star BLR 3/8.  
 Main boiler safety valves adjusted 29.1.48, Thickness of adjusting washers 11/32, 3/16, 5/16, 3/8.  
 Crank shaft material OH STEEL, Identification Mark 413, 414, Thrust shaft material OH STEEL, Identification Mark 140.  
 Intermediate shafts, material W. 106, Identification Marks 141, Tube shaft, material ✓, Identification Mark 14.11.47.  
 Screw shaft, material OH STEEL, Identification Marks 141, Steam Pipes, material OH STEEL, Test pressure 660 LBS/SQ. INCH, Date of Test 18.12.47.  
 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.)

The machinery of this vessel has been constructed under Special Survey in accordance with the approved plans, Secretary's letters, and the Requirements of the Rules.  
 The workmanship, and materials are good.  
 The machinery has been efficiently fitted on board the vessel, and tried under working conditions and found satisfactory, and is eligible in my opinion for the record of:-

LMC 2.48 TS.(OG.) 2 SB (SPT) 220 LBS/SQ. INCH WP.