

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JUN 11 1937

Date of writing Report

19

When handed in at Local Office

7/6/1937

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Wallsend

Date, First Survey

30 July 1936

Last Survey

3 June 1937

Reg. Book.

on the

Steamer "INKOSI"

(Number of Visits 99)

Gross 6618

Net 4055

Built at

Wallsend

By whom built

Swan Hunter & Wigham Richardson Ltd

Yard No.

1525

When built

1937

Engines made at

Wallsend

By whom made

Wallsend Slipway & Eng Co. Ltd

Engine No.

921

When made

1937

Boilers made at

Wallsend

By whom made

Wallsend Slipway & Eng Co. Ltd

Boiler No.

921

When made

1937

Registered Horse Power

Owners

Charente S. S. Co. Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Rule

835

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which Vessel is intended

ENGINES, &c.—Description of Engines

Quadruple Expansion

Revs. per minute

Dia. of Cylinders 28"-4 1/2"-59"-84"

Length of Stroke 54"

No. of Cylinders 4

No. of Cranks 4

Crank shaft, dia. of journals

as per Rule 16.38"

Crank pin dia.

17 1/4"

Crank webs

Mid. length breadth 27"

Mid. length thickness 11"

Thickness parallel to axis 11"

Thickness around eye-hole 11"

PIN 7 3/8" JOURNAL 8 3/8"

Intermediate Shafts, diameter

as per Rule 15.6"

as fitted 16.5"

Thrust shaft, diameter at collars

as per Rule 16.38"

as fitted 16.58"

Tube Shafts, diameter

as per Rule 17.14"

as fitted 17.12"

Screw Shaft, diameter

as per Rule 17.14"

as fitted 17.12"

Is the

tube

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule 26.38"

as fitted 7/8"

Thickness between bushes

as per Rule 19.78"

as fitted 3/4"

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

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

75"

Propeller, dia.

18'-6"

Pitch

21'-0"

No. of Blades

4

Material

Bronze

whether Moveable

Yes

Total Developed Surface

116

sq. feet

Feed Pumps worked from the Main Engines, No.

None

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No.

2

Diameter

Stroke

25 1/2"

Can one be overhauled while the other is at work

Yes

Feed Pumps

No. and size

3 - 13 1/2" x 10" x 26"

Pumps connected to the

Main Bilge Line

No. and size

2 - 5 1/2" x 25"

10 1/2" x 13" x 24"

2 - 7 1/2" x 15"

1 Emergency

How driven

Steam

Steam

Electrical 5"

Ballast Pumps, No. and size

1 - 10 1/2" x 13" x 24"

1 - 8" CENTRIFUGAL

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

Yes

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

Bilge Pumps;—In Engine and Boiler Room

4 @ 2 1/2"

In Pump Room

In Holds, &c.

Nº1 - 2 @ 3"

Nº2 - 2 @ 3"

Nº3 - 2 @ 3"

Nº4 - 2 @ 2 1/2"

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

1 @ 12"

No. and size

1 - 5" 1 - 4"

1 - 5" Electrical Emergency

Pump (Boiler Room)

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

Yes

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

Yes

What Pipes pass through the bunkers

None

What pipes pass through the deep tanks

None

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

Upper Deck

MAIN BOILERS, &c.—(Letter for record

Yes)

Total Heating Surface of Boilers

12000 Square feet.

Is Forced Draft fitted

Yes

No. and Description of Boilers

4 S.E. Multitubular

Working Pressure

235 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

IS A DONKEY BOILER FITTED?

No

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

PLANS.

Are approved plans forwarded herewith for Shafting

Yes

Main Boilers

Yes

Auxiliary Boilers

Yes

Donkey Boilers

Yes

Superheaters

Yes

General Pumping Arrangements

Yes

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

Impeller shaft for Circulating pump: 1 Impeller shaft for Ballast Circulating Pump: 1 Screw shaft
 1 C.I. Propeller Boss: 3 Cast Iron & 1 Bronze propeller blades: 1 set of air pump, Tech. Ballast, General Services Pumps valves: 1 Steam chest for
 Feed Donkey Pumps: 1 set each Oil Tail Pressure Suction & delivery valves for pumps: 1 set piston rings for steam & water ends of Feed
 General Services, Ballast, & Oil Tail pumps: 1 set of escape Valve springs for Main Engine Steam chest, cylinders and for Donkey
 Pumps, & Bilge Pumps: 50 Condenser tubes: 1 air pump rod: 2 top end bearing bushes: 1 bottom end bearing bushes
 1 set of air pump head valves & head valve seating: 12 Mitchell Thrust shaft pads: 1 Main feed check valves: spare parts
 for Emergency Bilge pump: spares for Superheaters: spare plain & stay tubes for Main Boilers.

The foregoing is a correct description.
FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

J. W. Pherson.

Manufacturer.

DIRECTOR.

003513-003524-0214/12



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Lloyd's Register
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1936
During progress of work in shops --
Dates of Survey while building
During erection on board vessel --
Total No. of visits 99.

Dates of Examination of principal parts—Cylinders 14-12-36 Slides 14-1-37 Covers 20-11-36
Pistons 14-12-36 Piston Rods 1-12-36 Connecting rods 14-1-37
Crank shaft 25-11-36 Thrust shaft 16-11-36 Intermediate shafts (6) 2-11-36: 1-2-11-36: 3-4-12-36
Tube shaft — Screw shaft 13-11-36 Propeller 13-11-36
Stern tube 30-12-36 Engine and boiler seatings 2-3-37 Engines holding down bolts 22-3-37
Completion of fitting sea connections 2-3-37
Completion of pumping arrangements 27-5-37 Boilers fixed 22-3-37 Engines tried under steam
Main boiler safety valves adjusted 20-5-37 Thickness of adjusting washers PORT. SH. 5/16" STARBOARD SH. 5/16"
Crank shaft material Steel Identification Mark LLOYDS No 921 - J.E.S. Thrust shaft material Steel Identification Mark LLOYDS No 921 - J.E.S.
Intermediate shafts, material Steel Identification Mark LLOYDS No 921 - J.E.S. Tube shaft, material Steel Identification Mark —
Screw shaft, material Steel Identification Mark LLOYDS No 921 - J.E.S. Steam Pipes, material S.D. Steel Test pressure 705 lb Date of Test 31-3-37
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 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 Rules and approved plans, the material and workmanship are good. The machinery has been fitted on board in an efficient manner, tried under working conditions and found satisfactory and is eligible in my opinion to be classed with record of + LMC 6-37: T.S.C.L: F.D. + S.B (Spt). Fitted for oil fuel 6-37. F.P. above 150°F.

The amount of Entry Fee ... £ 6 : 0 :
Special ... £ 116 : 15 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 10 JUN 1937
When received, 14.7.37
TUE 15 JUN 1937
Committee's Minute
Assigned + LMC 6-37 S.D. CL.
J.H. Keller
Engineer Surveyor to Lloyd's Register of Shipping.
J.H. Keller
10.6.37

Memo to Report 1 on S.S. INKOSI Swan Hunter's No 1525.

Steering Gear trials at Sea on 2nd June 1937.

Approx. Condition of Ship 18-5' mean 12-11' 15-8'

Approx. displacement 6725 tons.

An opportunity was taken, while the ship was working up, to test the hand gear. Time taken to effect change over 15 Secs.

The following helm movements & times were taken:—
Midships to 15° S 43 Secs
15° S to Mid. 50 "
Mid. to 15° P 34 "
15° P to 15° S 2 m. 15 S. When a Complete Circle was made.
15° S to 15° P 2 m. 22 S
15° P to Mid. 52 Secs.

The ship was also kept to her Course for 15 minutes, with two men at each hand wheel, the normal helm movements being made. During these trials the speed of ship had worked up to about 12 or 13 knots. With steering engine operating vessel running about 14 knots the following helm movements & times were taken:—

At Bridge		At Engine	
Midships to H.P.	10 Secs	15 Secs	
H.P. to H.S.	15 "	25 "	
H.S. to H.P.	15 "	24 "	
H.P. to Mid.	8 "	13 "	

J.H. Keller
10.6.37