

REPORT ON MACHINERY.

No. 34629

Received at London Office

WED. DEC. -9 1914

Date of writing Report

19

When handed in at Local Office

19

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

18/12/13

Last Survey

24-11-1914

Reg. Book.

61 on the STEEL TWIN SCREW S.S. "SIR HARVEY ADAMSON"

(Number of Visits)

51

Tons

Gross

Net

Master

Built at

Glasgow

By whom built

Messrs. A. & J. Inglis, Ltd.

When built

1914

Engines made at

Glasgow

By whom made

Messrs. A. & J. Inglis Ltd

when made

1914

Boilers made at

Glasgow

By whom made

Messrs. A. & J. Inglis Ltd

when made

1914

Registered Horse Power

Owners

British India Steam Nav. Co. Ltd

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

155

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Twin screw triple expansion

No. of Cylinders

6

No. of Cranks

6

Dia. of Cylinders

2 (11 1/2 x 20 x 31)

Length of Stroke

22

Revs. per minute

Dia. of Screw shaft

as per rule

4.34

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

Is the after end of the liner made water tight

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

No

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

liners are fitted, is the shaft lapped or protected between the liners

Yes

Length of stern bush

28 1/2

Dia. of Tunnel shaft

as per rule

6.24

Dia. of Crank shaft journals

as per rule

6.5-5.5

Dia. of Crank pin

as fitted

6.3/4

Size of Crank webs

4.5 x 1.5

Dia. of thrust shaft under

collars

Dia. of screw

8-6

Pitch of Screw

10-6

No. of Blades

3

State whether moveable

Yes

Total surface

3300

No. of Feed pumps

1 each

Diameter of ditto

2 1/4

Stroke

10

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1 each

Diameter of ditto

2 1/2

Stroke

10

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

5 x 4 x 12

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

2-2" each side

Independent Bilge suction

2 1/4"

In Holds, &c.

Tunnel well

2 1/4"

After hold

2 1/4"

Forward

2 1/4"

Wing suction

2"

No. of Bilge Injections

2

sizes

3 1/2"

Connected to condenser, or to circulating pump

C. P.

Is a separate Donkey Suction fitted in Engine room & size

Yes

2 1/4"

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine room always accessible

Yes

Are the sluices on Engine room bulkheads always accessible

Yes

Are all connections with the sea direct on the skin of the ship

Yes

Are they 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 Discharge Pipes 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 are carried through the bunkers

Forward suction

How are they protected

Wooded bunkways

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes

Dates of examination of completion of fitting of Sea Connections

26-10-14

of Stern Tube

3-11-14

Screw shaft and Propeller

3-11-14

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Top grating in Eng. Room

Is a Report also sent on the Hull of the Ship?

Yes

Is the

Screw

Shaft

Tunnel

watertight

Yes

BOILERS, &c.—(Letter for record

8)

Manufacturers of Steel

Messrs. W. Beaudoune & D. Colville, Ltd.

Total Heating Surface of Boilers

23908

Ftis Forced Draft fitted

Yes

No. and Description of Boilers

2

Single ended

Marine

Working Pressure

216

Tested by hydraulic pressure to

480

Date of test

14-9-14

No. of Certificate

12571

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

36.5

No. and Description of Safety Valves to

each boiler

2

Spring loaded

Area of each valve

5.93

Pressure to which they are adjusted

216

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9 1/2"

Mean dia. of boilers

11-0"

Length

11-0"

Material of shell plates

Steel

Thickness

1 1/32"

Range of tensile strength

28/32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D. P. & T. R.

long. seams

T. P. D. B. S.

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/4"

width of butt straps

18 1/2"

Per centages of strength of longitudinal joint

rivets

91

plate

84.5

Working pressure of shell by rules

244

Size of manhole in shell

14 x 13"

Size of compensating ring

3 x 9 x 7 x 1 1/2"

No. and Description of Furnaces in each boiler

2

Corrugated

Material

Steel

Outside diameter

3-6 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

9 1/16"

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

225

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8"

Pitch of stays to ditto: Sides

4 5/8 x 4 1/8"

Back

4 1/8 x 4 1/8"

Top

4 1/8 x 4 1/8"

Bottom

4 1/8 x 4 1/8"

If stays are fitted with nuts or riveted heads

rivets in shell

Working pressure by rules

214

Material of stays

Steel

Diameter at smallest part

1.69

Area supported by each stay

62

Working pressure by rules

216

Material of stays

Steel

Material

Steel

Thickness

1 1/32"

Pitch of stays

15 1/4 x 15 1/4"

How are stays secured

Sum. D. Nuts

Working pressure by rules

F. 216

Material of stays

Steel

Area

at smallest part

6.23

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

15 x 12 3/4"

Working pressure of plate by rules

37 1/2

Diameter of tubes

22"

Pitch of tubes

3 1/4 x 3 1/8"

Material of tube plates

Steel

Thickness: Front

7/8"

Back

3/4"

Mean pitch of stays

72 x 78"

Pitch across wide water spaces

13"

Working pressures by rules

331

Girders to Chamber tops: Material

Steel

Depth and

Date of writing
No. in Reg. Book.
Tonnage { Gr No
Registered Horse Power {
No. of Main
No. of Donkey Steam Pressure in Main Boiler
in Donkey
Last Report Particulars
(Periodical Report of Repairs)

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description
Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams
Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets
Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied: Two each of top & bottom end & main bearing bolts, a set of coupling bolts, a set of feed & bilge pump valves, piston rings, propeller shaft, air pump rod, bolts & nuts, plain & screwed bars etc.

The foregoing is a correct description,

A. & J. INGLIS LIMITED.

William Booth, Secy. Manufacturers. Makers.

Dates of Survey while building
During progress of work in shops -- 1914 1915 Dec 18-1914 Jan 7-8-14-16-19-20-21-28 Feb 6-17-18-23-25-26 Mar 3-9-11-24-25-27 Apr 2-8-9
During erection on board vessel --- 15-22-24-30 May 1-4-5-21-25 June 1-23-25 July 3-9 Aug 5-28 Sept 3-17-23 Oct 5-15-16-19-22-26 Nov 5-27
Total No. of visits 51
Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 25-5-14 Slides 25-5-14 Covers 25-5-14 Pistons 25-5-14 Rods 25-5-14
Connecting rods 25-5-14 Crank shaft 24-4-14 Thrust shaft 25-3-14 Tunnel shafts 9-4-14 Screw shaft 9-4-14 Propeller 3-9-14
Stern tubes 24-4-14 Steam pipes tested 16-10-14 Engine and boiler seatings 26-10-14 Engines holding down bolts 26-10-14
Completion of pumping arrangements 22-10-14 Boilers fixed 26-10-14 Engines tried under steam 24-11-14.
Main boiler safety valves adjusted 5-11-14 Thickness of adjusting washers 2 1/16 - 3/8 Psi 1/16 - 1/32
Material of Crank shaft Steel Identification Mark on Do. P.T.B Material of Thrust shaft Steel Identification Mark on Do. P.T.B
Material of Tunnel shafts Steel Identification Marks on Do. P.T.B Material of Screw shafts Steel Identification Marks on Do. F.A.F.
Material of Steam Pipes Copper Test pressure 430 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery has been built under special survey in accordance with the approved plans, securely fitted on board and tried under steam with satisfactory results. The Workmanship and materials are of good quality throughout, and the case is eligible in our opinion for the notation + class 11/14.

It is submitted that this vessel is eligible for THE RECORD + LMC 11.14. F.D.

J.W.D. 10/12/14
J.W.R.

The amount of Entry Fee .. £ 7 : 0 : 0 When applied for, 7/12/14
Special .. £ 23 : 5 : 0
Donkey Boiler Fee .. £ : : :
Travelling Expenses (if any) £ : : :
When received, 11/12/14

Thos. A. Ferguson & Co. Ritchie.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW 8-DEC-1914

Assigned + L.M.C. 11.14

MAINTENANCE CERTIFICATE