

Rpt. 4.

REPORT ON MACHINERY

No. 34689

Date of writing Report

28. 12. 14

When handed in at Local Office

28. 12. 14

Received at London Office

WED. DEC. 30. 1914

No. in Survey held at

Glasgow

Date, First Survey

Last Survey

26. 12. 19 14

Reg. Book.

Sup. on the

S.S. "KINABALU"

(Number of Visits)

Master

Carver

Built at

Ardrossan

By whom built

Ardrossan D.D. & S.B. Co. (No. 266)

Tons

Gross

Net

built

1914

Engines made at

Glasgow

By whom made

McKie & Baxter (No. 788)

when made

1914

Boilers made at

do.

By whom made

Dunsmeir & Jackson (No. B.33)

when made

1914

Registered Horse Power

Owners

Seboh S.S. Co. (Malay States)

Port belonging to

Ardrossan.

Nom. Horse Power as per Section 28

84.2

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple expansion. Surf. Condg.

No. of Cylinders

No. of Cranks

Dia. of Cylinders

13" 21" 34"

Length of Stroke

24"

Revs. per minute

135

Dia. of Screw shaft

Material of

screw shaft

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

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

Length of stern bush

2'-5"

Dia. of Tunnel shaft

as per rule

6.48

Dia. of Crank shaft journals

as per rule

6.8

Dia. of Crank pin

6.7

Size of Crank webs

12x4.7

Dia. of thrust shaft under

collars

6.8

Dia. of screw

8'-9"

Pitch of Screw

9'-3"

No. of Blades

4

State whether moveable

No.

Total surface

No. of Feed pumps

2

Diameter of ditto

2.7

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2.4

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

5x3.5x6"

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

In Engine Room

3-2"

1-2" special

5x3.5x6"

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

In Holds, &c.

No. of Bilge Injections

1

sizes

4"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

2"

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

none

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

none

How are they protected

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

3. 12. 14

of Stern Tube

3. 12. 14

Screw shaft and Propeller

3. 12. 14.

Is the Screw Shaft Tunnel watertight

No tunnel

Is it fitted with a watertight door

worked from

No.

BOILERS, &c.—(Letter for record

1.)

Manufacturers of Steel

Bolville & Glasgow I. & S. Co.

Total Heating Surface of Boilers

1699 sq. ft.

Is Forced Draft fitted

No.

No. and Description of Boilers

One single ended Marine

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

13. 10. 14.

No. of Certificate

12894

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

54.4 sq. ft.

No. and Description of Safety Valves to

each boiler

Pair spring loaded

Area of each valve

5.9 sq. in.

Pressure to which they are adjusted

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Mean dia. of boilers

13'-6"

Length

10'-6"

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates

Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

No.

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

No.

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

No.

W1108-0192

Lloyd's Register Foundation

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 _____ Plates _____

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:— 2 top end bolts & nuts; 2 bottom end bolts & nuts; 2 main bearing bolts & nuts; 1 set coupling bolts & nuts; 1 set for a ratchet pump valves; 1 propeller; quantity bolts & nuts; firebars, condenser & boiler tubes and iron of various sizes; 1 H.P. piston valve.

The foregoing is a correct description,

McKie & Baxter

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914 Mar 20. Apr. 1. 22 June 10. 25 July 1. 7. 29 Aug 5. 18. 25. 31 Sept 7. 14. 15. 21. 30 Oct 6. 7. 16. 19. 21. 22 97. 100
During erection on board vessel - - - Nov 6. 10. 12. 17. 20. 25 Dec 3. 16. 17. 18. 24. 26
Total No. of visits 35

Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Cylinders 16. 10. 14 Slides 4. 9. 14 Covers 21. 10. 14 Pistons 21. 10. 14 Rods 4. 9. 14
Connecting rods 4. 9. 14 Crank shaft 22. 10. 14 Thrust shaft 30. 9. 14 Tunnel shafts 22. 10. 14 Screw shaft 30. 9. 14 Propeller 30. 9. 14
Stern tube 30. 9. 14 Steam pipes tested 20. 11. 14 Engine and boiler seatings 20. 11. 14 Engines holding down bolts 20. 11. 14
Completion of pumping arrangements 20. 11. 14 Boilers fixed 20. 11. 14 Engines tried under steam 14. 12. 14 26. 12. 14
Main boiler safety valves adjusted 18. 12. 14 Thickness of adjusting washers 1/4" 2/32"
Material of Crank shaft Steel Identification Mark on Do. 27. 10. 14 Material of Thrust shaft Steel Identification Mark on Do. 27. 10. 14
Material of Tunnel shafts Steel Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 27. 10. 14
Material of Steam Pipes Copper Test pressure 360lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good. The machinery and boiler of this vessel have been built under special survey in accordance with the Rules and approved plans, securely fitted aboard and tried with satisfactory results under steam and are, in our opinion, suitable for classification with record + L.M.C. 12, 14.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 12. 14.

The amount of Entry Fee .. £ 1-0-0 When applied for, 29/12/14
Special .. £ 13-1-0
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ 1:15:0 When received, 7/1/15

Committee's Minute

Assigned + L.M.C. 12, 14.

MACHINERY CERTIFICATE WRITTEN 30.12.14

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



© 2020

Lloyd's Register Foundation