

REPORT ON MACHINERY.

No. 2337

Received at London Office

Date of writing Report

19

When handed in at Local Office

12/6/1912 Port of Hull

FRI. JUN. 13. 1913

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

Nov. 6th

Last Survey

12/6/1913

No. 181 on the steel screw steamer

Lagoland

(Number of Visits 51)

Gross 5259

Tons Net 3336

When built 1913-6

Master

Built at

Hull

By whom built

Barlis & Co Ltd

Engines made at

Hull

By whom made

Barlis & Co Ltd

when made 1913-6

Boilers made at

Hull

By whom made

Barlis & Co Ltd

when made 1913-6

Registered Horse Power

Owners A. Berstrom & Son (Ager)

Port belonging to Gothenburg

Nom. Horse Power as per Section 28

534

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders Three

No. of Cranks 3

Dia. of Cylinders

28" 45 1/2" 76"

Length of Stroke

34"

Revs. per minute

62

Dia. of Screw shaft

as per rule 15 7/8"

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 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

Length of stern bush

5'-11"

Dia. of Tunnel shaft

as per rule 14 23/32"

Dia. of Crank shaft journals

as per rule 14 93/32"

Dia. of Crank pin

15 5/8"

Size of Crank webs

23" x 10"

Dia. of thrust shaft under

collars

15 1/4"

Dia. of screw

18'-9"

Pitch of Screw

18'-9"

No. of Blades

4

State whether moveable

yes

Total surface

108 ft²

No. of Feed pumps

2 indep

Diameter of ditto

8"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

Diameter of ditto

4 1/2"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

two Duplex

Sizes of Pumps

8 1/2 x 6

Fed 12 1/2 x 15

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

9 Ballast

In Engine Room

Four 3 1/2"

One 3 1/2" to Ballast

One 2 1/2" to Ballast

In Holds, &c.

Two 3 1/2"

in each compartment

Deep

tank

Filling & suction fitted with blank flanges as per rule.

No. of Bilge Injections

one

size 7 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room

size 3 1/2"

yes

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

no

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

Toward suction

How are they protected

strong wooden casings

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

8-5-13

of Stern Tube

5-5-13

Screw shaft and Propeller

26-5-13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

Lift Platform in P.R.

Hörde

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Phoenix A. G.

Abt Hinder Verein

Hörde

Total Heating Surface of Boilers

7395 ft²

Is Forced Draft fitted

yes

No. and Description of Boilers

Three single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

5-5-13

No. of Certificate

64/1880

Can each boiler be worked separately

yes

Area of fire grate in each boiler

63 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

8 29"

Smallest distance between boilers or uptakes and bunkers

on woodwork

abt 3'-0"

Mean dia. of boilers

18 1/4"

Length

11'-6"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

Y.P.D.B.

Diameter of rivet holes in long. seams

1 9/16"

Pitch of rivets

9 3/16"

Lap of plates or width of butt straps

19 3/4"

Per centages of strength of longitudinal joint

rivets 87.8

plate 85.7

Working pressure of shell by rules

183

Size of manhole in shell

12" x 16"

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 daylight

Material

steel

Outside diameter

50"

Length of plain part

top 19 1/32"

Thickness of plates

crown 19 1/32"

Description of longitudinal joint

welded

No. of strengthening rings

1

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

3/4"

Back

23/32"

Top

1 1/6"

Pitch of stays to ditto: Sides

11 3/4" x 8 1/2"

Back

10" x 9 1/2"

Top

10" x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

steel

Diameter at smallest part

2 07"

Area supported by each stay

100"

Working pressure by rules

186

End plates in steam space:

Material of stays

Material

steel

Thickness

1 7/32"

Pitch of stays

21 1/4" x 16 1/16"

How are stays secured

9 ft

Working pressure by rules

181

Diameter at smallest part

6 23/32"

Area supported by each stay

35 8"

Working pressure by rules

181

Material of Front plates at bottom

steel

Thickness

1"

Thickness

1"

Material of Lower back plate

steel

Thickness

15/16"

Greatest pitch of stays

14 1/2" x 9 1/2"

Working pressure of plate by rules

206

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4" x 3 3/4"

Material of tube plates

S

Thickness: Front

1"

Back

13/16"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

181 1/4"

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9 1/2" x 1 3/4"

Length as per rule

Working pressure by rules

191

Superheater or Steam chest; how connected to boiler

yes

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

yes

Length

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

yes

Diameter of flue

yes

Material of flue plates

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 casing 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:—Two top end bolts & nuts, Two bottom end bolts & nuts, Two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of air, circulating & donkey pump valves, one main & donkey check valve, one third crank shaft mark 5349AB, one screw shaft, mark 5154PA. 1P1JD, one propeller, a quantity of bolts & nuts & iron of sizes.

The foregoing is a correct description, *[Signature]*

F. J. Palethorpe Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1912: Nov. 14, 25, Dec. 3, 10, 17, 19, 20, 23, 24, 31. 1913: Jan. 7, 10, 14, 16
 During erection on board vessel -- Jan. 22, 23, 25, 30, Feb. 8, 15, 17, 19, 24, 26, Mar. 1, 6, 11, 18, 27, Apr. 2, 8, 11, 15, 17, 21, 24, 25, May 5, 7, 8, 16
 Total No. of visits 51
 Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders 6-3-13 Slides 17-2-13 Covers 17-2-13 Pistons 6-3-13 Rods 6-3-13
 Connecting rods 11-3-13 Crank shaft 11-3-13 Thrust shaft 8-4-13 Tunnel shafts 20-5-13 Screw shaft 26-5-13 Propeller 26-5-13
 Stern tube 2-4-13 Steam pipes tested 30-5-13 Engine and boiler seatings 25-4-13 Engines holding down bolts 29-5-13
 Completion of pumping arrangements 10-6-13 Boilers fixed 5-6-13 Engines tried under steam 12-6-13
 Main boiler safety valves adjusted 11-6-13 Thickness of adjusting washers 1st Boiler $P \frac{1}{2} S \frac{1}{32}$, 6th $P \frac{1}{2} S \frac{1}{2}$, 15th $P \frac{1}{2} S \frac{3}{4}$
 Material of Crank shaft *steel* Identification Mark on Do. 5349AB Material of Thrust shaft *steel* Identification Mark on Do. 8116 K.H.
 Material of Tunnel shafts *steel* Identification Marks on Do. *see below* Material of Screw shafts *steel* Identification Marks on Do. PA 5154 J.H.
 Material of Steam Pipes *solid drawn steel* Test pressure 340 lbs. 2nd shafts P17PKH, 7450JM.

General Remarks (State quality of workmanship, opinions as to class, &c. P179KH, 1P2JB, 2210MB, 2209MB P115KH.

The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society, the materials & workmanship are good. The boilers have been tested by hydraulic pressure to 340 lbs found sound & tight. The machinery has been properly fitted & secured on board & on completion was tested under full working conditions & found to work satisfactorily. The safety valves have been adjusted under steam & tested for accumulation & found in order. The pumps have been tested. In my opinion the vessel is eligible for the Record & L.A.B. 6, 13. F.D. Plus Light.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 6.13.

F.D.

T.J.S.
13.6.13.

A.P.R.

The amount of Entry Fee .. £ 3 : 0 :
 Special £ 46. 14 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 11/6/13.
 When received, 13/6/13.

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

Committee's Minute

FRI. JUN. 13. 1913

Assigned

thine 6.13

MINISTRY CERTIFICATE
 WRITTEN



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