

Rpt. 4.

REPORT ON MACHINERY.

No. 12036
FRI. 4 NOV. 1921

Received at London Office

Date of writing Report 27-10-1921. When handed in at Local Office

Port of

No. in Survey held at Rotterdam.
Reg. Book.

Date, First Survey 29-9-21. Last Survey 27-10-1921

(Number of Visits 10.)

on the Steel Screw Steamer "Almkusk" ex. Waltham Abbey.

Gross 7062.

Net 4309.

When built 1913.

when made 1913

when made 1913.

Master

Built at Gesteinunde

By whom built

Tecklenburg A.G.

Engines made at Gesteinunde

By whom made

Tecklenburg A.G.

Boilers made at

By whom made

Registered Horse Power

Owners

Port belonging to Rotterdam.

Nom. Horse Power as per Section 28

673.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Yes.

ENGINES, &c.—Description of Engines

Vertical Triple expansion.

No. of Cylinders 3.

No. of Cranks 3.

Dia. of Cylinders 29 1/8" x 40 1/4" x 30 1/4" Length of Stroke 55"

Revs. per minute

Dia. of Screw shaft

as per rule 17 1/2"

Material of

as fitted 17 1/2" 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

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

No.

If two

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

No.

Length of stern bush 4'-2"

Dia. of Tunnel shaft

as per rule 15.3

Dia. of Crank shaft journals

as per rule 16.05

Dia. of Crank pin 16 3/4"

Size of Crank webs 10 1/2" x 8 1/2"

Dia. of thrust shaft under

collars 16 3/8"

Dia. of screw 20'-4"

Pitch of Screw 18'-4"

No. of Blades 4

State whether moveable

Yes

Total surface

2.

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

Independent.

No. of Bilge pumps 2.

Diameter of ditto 4 1/4"

Stroke 27 1/2"

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines 2 Duplex.

Sizes of Pumps

12 3/8" x 24" x 9 1/2"

7 1/2" x 6" x 9 1/4"

7 1/2" x 6" x 5"

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

In Engine Room 4" x 4" and 1 independent.

In Holds, &c. Hold No. I. 2" x 4".

Hold No. II. 2" x 4".

Hold No. III. 2" x 4".

Hold No. IV. 2" x 4".

Hold No. V. 4" x 2 1/2".

Hold No. VI. 2" x 4".

Hold No. VII. 2" x 4".

Hold No. VIII. 2" x 4".

Hold No. IX. 2" x 4".

No. of Bilge Injections 1.

sizes 1 1/2".

Connected

to circulating pump

Yes.

Is a separate Donkey Suction fitted in Engine room

of size

Yes 2" x 4".

Are all the bilge suction pipes fitted with roses

Yes.

Are the roses in Engine room always accessible

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

both.

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.

Is the Screw Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from

Top platform.

Boilers, &c.—(Letter for record

Manufacturers of Steel

Total Heating Surface of Boilers

9460 sq. ft.

Is Forced Draft fitted

Yes.

No. and Description of Boilers

4 single ended boilers.

Working Pressure

212 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test 11-10-21.

No. of Certificate

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

50 sq. ft.

No. and Description of Safety Valves to

each boiler

2 spring loaded.

Area of each valve

3 1/2" x 1/2"

Pressure to which they are adjusted

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Mean dia. of boilers

14'-3"

Length

11'-9 3/4"

Material of shell plates

Sm. steel.

Thickness

1 1/2"

Range of tensile strength

20/32 tons

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

lap 2 x riv.

long. seams

double butt.

4 x riv.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

19 1/2"

Lap of plates or width of butt straps

29 1/2"

Per centages of strength of longitudinal joint

rivets 112%

plate 92.2%

Working pressure of shell by rules

225 lbs.

Size of manhole in shell

16" x 19 3/4"

Size of compensating ring

1 1/2" x 13"

No. and Description of Furnaces in each boiler

3 Morrison's

Material

Sm. steel.

Outside diameter

45 1/8"

Length of plain part

top

bottom

Thickness of plates

crown 1 1/2"

Description of longitudinal joint

welded.

No. of strengthening rings

2 1/2"

Top 1 1/2"

Bottom 1 1/2"

Working pressure of furnace by the rules

251 lbs.

Combustion chamber plates: Material

Sm. steel

Thickness: Sides

1 1/2"

Back 2 1/2"

Top 1 1/2"

Bottom 1 1/2"

Pitch of stays to ditto: Sides

6 3/4" x 8 1/2"

Back

7 1/4" x 6 1/2"

Top

7 1/2" x 6 1/2"

If stays are fitted with nuts or riveted heads

nutted

Working pressure by rules

251 lbs.

Material of stays

Sm. steel

Area at smallest part

1.770"

Area supported by each stay

5660"

Working pressure by rules

250 lbs.

End plates in steam space:

Material

Sm. steel.

Material

Sm. steel

Thickness

1 1/2"

Pitch of stays

7 x 13 1/2"

How are stays secured

nutted

Working pressure by rules

260 lbs.

Material of stays

Area at smallest part

6.490"

Area supported by each stay

2350"

Working pressure by rules

240 lbs.

Material of Front plates at bottom

Sm. steel

Thickness

1 3/32"

Material of Lower back plate

Sm. steel.

Thickness

1"

Greatest pitch of stays

13"

Working pressure of plate by rules

240 lbs.

Diameter of tubes

3"

Pitch of tubes

4 3/16" x 4 3/16"

Material of tube plates

Sm. steel

Thickness: Front

1 3/32"

Back 1 1/2"

Mean pitch of stays

8 1/2"

Pitch across wide water spaces

14"

Working pressures by rules

249 lbs.

Girders to Chamber tops: Material

Sm. steel

Depth and

thickness of girder at centre

2 x 7 1/2" x 10 1/4"

Length as per rule

34 1/4"

Distance apart

6 1/2"

Number and pitch of stays in each

3 x 7 1/2"

Working pressure by rules

Steam dome: description of joint to shell

%

of strength of joint

%

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Schmidt.

Date of Approval of Plan

Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes.

Is Easing Gear fitted

Yes.

Date of Test

Diameter of Safety Valve

25 1/2".

Pressure to which each is adjusted

225 lbs.

Lloyd's Register

Foundation

W 636-0190

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts, one set of coupling bolts, one set of bilge pump valves, one set of valves for independent feed pumps, a screw shaft, and crankshaft, a quantity assorted bolts and nuts and iron of various sizes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
Total No. of visits 10.

Is the approved plan of main boiler forwarded herewith Yes

„ „ „ donkey „ „ „

Dates of Examination of principal parts—Cylinders 29-9-21. Slides 29-9-21. Covers 29-9-21. Pistons 29-9-21. Rods 29-9-21. Connecting rods 29-9-21. Crank shaft 29-9-21. Thrust shaft 29-9-21. Tunnel shafts 29-9-21. Screw shaft 14-10-21. Propeller 14-10-21. Stern tube 14-10-21. Steam pipes tested 13-10-21. Engine and boiler seatings 14-10-21. Engines holding down bolts 14-10-21. Completion of pumping arrangements 21-10-21. Boilers fixed ✓ Engines tried under steam 21-10-21. Completion of fitting sea connections 14-10-21 ✓ Stern tube ✓ Screw shaft and propeller ✓ Main boiler safety valves adjusted 21-10-21. Thickness of adjusting washers 1-10 1/2 in. 3-4 in. 5-10 1/2 in. 7-11 in. 2-8 1/2 in. 4-17 in. 6-13 in. 8-12 in. Material of Crank shaft S.M. Steel Identification Mark on Do. G.L. Material of Thrust shaft S.M. Steel Identification Mark on Do. G.L. Material of Tunnel shafts S.M. Steel Identification Marks on Do. G.L. Material of Screw shafts S.M. Steel Identification Marks on Do. G.L. Material of Steam Pipes steel Test pressure 640 lbs.

Is an installation fitted for burning oil fuel No

Is the flash point of the oil to be used over 150°F. No

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case — If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. This vessel's machinery has been examined as required by the Rules, scantlings found as per report. Boilers tested as required, and all found in order, the whole found in a good working condition when tried under steam and I am of opinion that this vessel is eligible to be recorded in the Society's Register Book with L.M.C. 10-21.

The amount of Entry Fee ... £ :

Special ... £ 50 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ 5.00 :

When applied for.

When received,

Committee's Minute

Assigned

TUE. 10 DEC. 1921

FRI. DEC. 9 1921

TUE. 10 JAN. 1922

no action

Engineer Surveyor to Lloyd's Register of Shipping.



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