

REPORT ON MACHINERY

No. 10971.
WED. 9 MAR. 1921

Received at London Office

Date of writing Report

When handed in at Local Office 7. 3. 21 10

Port of

MIDDLESBRO

No. in Survey held at
Reg. Book.

Stockton-on-Tees

Date, First Survey 27th Sept/20 Last Survey 3rd March 1921.

on the

Steel Screw Steamer ATXERI-MENDI

(Number of Visits
(S.S. N^o 536)

Tons Gross 3276.

Master

Gabriel de Lebas

Built at

Stockton

By whom built

Ropner S. B. & Rly Co Ltd

When built 1921

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd (N^o 1918)

when made 1921

Boilers made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made 1921

Registered Horse Power

Owners

Sota y Agnar

Port belonging to

Bilbao

Nom. Horse Power as per Section 28

358

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24-40-66

Length of Stroke

45

Revs. per minute

Dia. of Screw shaft

as per rule 13.76

Material of

iron

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

propeller boss

yes

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

yes

If the liner does not fit tightly at the part

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

tight fit

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

Length of stern bush

5'-2"

of Tunnel shaft

as per rule 12.128

Dia. of Crank shaft journals

as per rule 12.79

Dia. of Crank pin

13 3/4"

Size of Crank webs

26 1/2 x 9

rs 13 3/4"

Dia. of screw

17'-8"

Pitch of Screw

17'-6"

No. of Blades

4

State whether moveable

no

Total surface

81 1/2 sq ft

of Feed pumps

2

Diameter of ditto

3"

Stroke

33"

Can one be overhauled while the other is at work

yes

of Bilge pumps

2

Diameter of ditto

4 1/2"

Stroke

33"

Can one be overhauled while the other is at work

yes

of Donkey Engines

4

Sizes of Pumps

2 @ 9 x 9

Ballast

5 x 6

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

Engine Room

3 @ 3" + one 3 1/2" in dry tank

In Holds, &c.

2 @ 3" in each hold: Tunnel well

of Bilge Injections

1

size

6 3/4"

Connected to

centrifugal

circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes-4"

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

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

yes

Are they

Valves or Cocks

both

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

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

at pipes are carried through the bunkers

suctions to forward holds

How are they protected

wood ceiling

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

yes

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

19.11.20

of Stern Tube

19.11.20

Screw shaft and Propeller

23.12.20

the Screw Shaft Tunnel watertight

see hull Rpt

Is it fitted with a watertight door

yes

worked from

top platform

MILERS, &c.—(Letter for record (S))

Manufacturers of Steel

Messrs John Spencer & Sons Ltd

total Heating Surface of Boilers

6078

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended

working Pressure

180

Tested by hydraulic pressure to

360

Date of test

22.12.20

No. of Certificate

6190

in each boiler be worked separately

yes

Area of fire grate in each boiler

68.5 sq ft

No. and Description of Safety Valves to

each boiler

ch boiler

2 direct spring

Area of each valve

8.29 sq in

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

yes

smallest distance between boilers or uptakes and bunkers on woodwork

2'-0"

Mean dia. of boilers

16'-9"

Length

11'-6"

Material of shell plates

steel

thickness

1 1/2"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 R. lap

ag. seams

2 B-3 Riv

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 1/4"

Lap of plates or width of butt straps

20 5/8 + 1 1/4

er centages of strength of longitudinal joint

rivets

88.8

plate

83.25

Working pressure of shell by rules

184

Size of manhole in shell

16" x 12"

No. and Description of Furnaces in each boiler

3 Morrison

ise of compensating ring

7 3/4" x 1 1/2"

No. and Description of Furnaces in each boiler

3 Morrison

Material

steel

Outside diameter

49 7/8"

length of plain part

top

bottom

Thickness of plates

crown

19

Description of longitudinal joint

Weld

No. of strengthening rings

-

Working pressure of furnace by the rules

191

Combustion chamber plates: Material

steel

Thickness: Sides

1/2"

Back

1/2"

Top

Bottom

Pitch of stays to ditto: Sides

8 1/2" x 10 1/2"

Back

9 3/8" x 9 3/8"

Top

9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

186

Material of stays

steel

Diameter at smallest part

1.99

Area supported by each stay

87.89

Working pressure by rules

204

End plates in steam space:

washed

Material

steel

Thickness

1 1/2"

Pitch of stays

19 3/4" x 22 1/2"

How are stays secured

nuts-9 x 1

Working pressure by rules

193

Diameter at smallest part

7.87

Area supported by each stay

439

Working pressure by rules

186

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

1 1/2"

Greatest pitch of stays

14 5/8" x 9 3/8"

Working pressure of plate by rules

236

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4" x 4 3/4"

Material of tube plates

steel

Thickness: Front

1 1/2"

Back

1 1/2"

Mean pitch of stays

10 3/32"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

192

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8" x 2"

Length as per rule

32"

Distance apart

9 1/2"

Working pressure by rules

197

Superheater or Steam chest; how connected to boiler

none

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

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes Indt Rpt No. 10711*

SPARE GEAR. State the articles supplied:—

Two each of con. rod top end & bottom end bolts & nuts: 2 main bearing bolts and nuts, one set (7) of coupling bolts & nuts: One set of feed and bilge pump valves: One set each of Ramsbottom piston rings for H.P. & M.P. piston; assorted bolts & nuts; iron of various sizes; one cast iron propeller: one tail end shaft; 2 safety valve springs; 6 Boiler tubes and minor gear

The foregoing is a correct description,

For BLAIR & Co. LIMITED
Geo. A. Attship
MANAGING DIRECTOR

Manufacturer.

Dates of Survey while building: During progress of work in shops - - - *1920 Sep 27 Oct 1. 4. 7. 11. 12. 14. 18. 20. 22. 25. 27. Nov 3. 5. 8. 10. 12. 15. 19. 22. 24. 26. 29. 30. Dec 1. 4. 10*
During erection on board vessel - - - *2. 3. 6. 7. 8. 10. 11. 13. 15. 17. 20. 21. 22. 23. 24. 29. 31. 1921 Jan 5. 6. 7. 10. 14. 17. 20. 21. 25. 28. Feb 1. 4. 10*
Total No. of visits *60*

Is the approved plan of main boiler forwarded herewith *yes*
Return for Duplicate Boiler
" " " donkey " " " " *no*

Dates of Examination of principal parts—Cylinders *26. 11. 20* Slides *26. 11. 20* Covers *26. 11. 20* Pistons *22. 11. 20* Rods *22. 11. 20*
Connecting rods *15. 12. 20* Crank shaft *8. 12. 20* Thrust shaft *22. 10. 20* Tunnel shafts *19. 11. 20* Screw shaft *8. 12. 20* Propeller *11. 12. 20*

Stern tube *10. 11. 20* Steam pipes tested *14. 1. 21* Engine and boiler seatings *19. 11. 20* Engines holding down bolts *20. 1. 21*
Completion of pumping arrangements *22. 2. 21* Boilers fixed *1. 2. 21* Engines tried under steam *22. 2. 21*
Main boiler safety valves adjusted *22. 2. 21* Thickness of adjusting washers *P. Boiler 5-13/32 Star Boiler 5-7/16*

Material of Crank shaft *Ing Steel* Identification Mark on Do. *7293* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *5513-N*
Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *5513-N* Material of Screw shafts *W. iron* Identification Marks on Do. *7293*

Material of Steam Pipes *solid drawn copper (4 1/2 x 1/2)* Test pressure *400 lbs*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. *✓*

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

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *S. S. Alu-Mendi - Indt Rpt No. 10901*

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

The machinery of this vessel has been built under Special Survey. The materials and workmanship are sound and good. The boilers were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory.

The machinery is now in a good and safe working condition and renders the vessel eligible in my opinion to have the notation of S. L. M. C. 3. 21 in the Register Book subject to the completion of the Electric Light

Note:— During to a strike of the joiners the vessel has sailed for Bilbao with the cabin fitting and electric light in the cabins incomplete. It is stated that this work will be completed at Bilbao. In view of this it is recommended that on completion the whole of the Electric Light Installation be examined under full working conditions. See copy of a letter addressed to the Builders attached hereto, a copy of which has been sent to the Owner.

The vessel is fitted with "Wireless" It is submitted that this vessel is eligible for THE RECORD + LMC 3. 21. CL

The amount of Entry Fee ... £ *5-0-0* When applied for, *8/3/1921*
Special ... £ *78-14-0*
Donkey Boiler Fee ... £ *✓*
Travelling Expenses (if any) £ *10-3-19*

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

Committee's Minute *TUE. 1 MAR. 1921*
Assigned *+ L.M.C. 3. 21*
C. L.