

Rpt. 4.

NEWCASTLE-ON-TYNE Rept. No. 75363

Sld. No. 28280

REPORT ON MACHINERY

Nwe. No.

Last visit Newcastle 17 March 1922

Received at London Office

Inu. Feb 23 1922

Date of writing Report

19

When handed in at Local Office

22 FEB 1922

Port of

SUNDERLAND.

No. in Survey held at
Reg. Book.

SUNDERLAND.

Date, First Survey

30th July 1920

Last Survey

17th February 1922.

(Number of Visits

4th + 12

Gross 3181.66

on the S.S. "PRADO"

"KAULDI"

Master

Built at Blyth

By whom built Messrs Blyth S.B. Co. (221)

Tons } Gross 3181.66

Net 1895.81

Engines made at Sunderland

By whom made Messrs G. Clark & Co. (1118)

When made 1922

Boilers made at Sunderland

By whom made Messrs G. Clark & Co. (1118)

when made 1922

Registered Horse Power

Owners Compania Naviera Basca

Port belonging to Bilbao.

Nom. Horse Power as per Section 28 365

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 25", 41", 68"

Length of Stroke 45"

Revs. per minute 76

Dia. of Screw shaft

as per rule 13.65

Material of screw shaft Iron

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

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

If two

Dia. of Tunnel shaft

as per rule 12.39

Dia. of Crank shaft journals

as per rule 13.01

Dia. of Crank pin 13 1/4"

Size of Crank webs 8 3/4" x 21"

Dia. of thrust shaft under

collars 13 1/4"

Dia. of screw 16-3"

Pitch of Screw 17-0"

No. of Blades 4

State whether moveable No

Total surface 83 1/2"

No. of Feed pumps 2

Diameter of ditto 3 1/2"

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

Sizes of Pumps 1 1/2" x 12 1/2" x 21", 9 1/2" x 7 x 18"

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

In Engine Room 4 @ 3" Direct.

In Holds, &c. Chain Locker 1 @ 1 1/4" (Hand), 907 Hold

2 @ 3", 2 @ 3", After Hold 1 @ 3 1/2" and 2 @ 3", Tunnel lock 1 @ 2 1/2"

No. of Bilge Injections 1

sizes 7"

Connected to condenser or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes 3 1/2"

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

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Upper Platform

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel Spencer & Sons

Total Heating Surface of Boilers 6030 1/2

Is Forced Draft fitted

No

No. and Description of Boilers

Three single End

—

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 15.2.21

No. of Certificate 3754

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

55.7 1/2

No. and Description of Safety Valves to

each boiler Two spring Valves

Area of each valve 7.07 1/2

Pressure to which they are adjusted 185 lbs

Smallest distance between boilers or uptakes and bunkers or woodwork

Way Between Main dia. of boilers 14-0"

Length 11-6"

Material of shell plates

S

Thickness 1 1/8"

Range of tensile strength 28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

lap & dk

long. seams dk

Diameter of rivet holes in long. seams 1 3/16"

Pitch of rivets 8 1/2"

Top of plates or width of butt straps 18"

Per centages of strength of longitudinal joint

rivets 86

Working pressure of shell by rules 182

Size of manhole in

16 x 12

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 Dighton

Material S

Outside diameter 3'-7"

Length of plain part

top 17"

Thickenss of plates

bottom 32"

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules 189

Combustion chamber plates: Material S

Thickness: Sides 13/16"

Back 11/16"

Top 13/16"

Bottom 13/16"

Pitch of stays to ditto: Sides 12 x 9 1/2"

Back 9 3/4 x 8 1/2"

Top 12 x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules 194

Material of stays S

Area at smallest part 2.36 1/2

Area supported by each stay 114 1/2

Working pressure by rules 186

End plates in steam space:

Material S

Thickness 1 1/32"

Pitch of stays 22 x 17 1/4"

How are stays secured dk, dk, dk

Working pressure by rules 184

Material of stays S

Area at smallest part 6.49 1/2

Area supported by each stay 370 1/2

Working pressure by rules 182

Material of Front plates at bottom S

Thickness 13/16"

Material of Lower back plate S

Thickness 15/16"

Greatest pitch of stays 14 3/4 x 9 3/4"

Working pressure of plate by rules 194

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2 x 4 3/8"

Material of tube plates S

Thickness: Front 13/16"

Back 3/4"

Mean pitch of stays 8 3/4 x 11 1/4"

Pitch across wide water spaces 14 1/4"

Working pressures by rules 262

Girders to Chamber tops: Material S

Depth and

thickness of girder at centre 8 5/8 x 1 3/4"

Length as per rule 35 1/2"

Distance apart 9"

Number and pitch of stays in each 2, 12"

Working pressure by rules 184

Steam dome: description of joint to shell

None

% of strength of joint

—

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

How stayed

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

—

—

—

—

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

—

—

—

—

—

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:— Two lap end & two bottom end connecting rod bolts and nuts, two main bearing bolts, one at coupling bolts, one at feed and bilge pump valves, assorted bolts and nuts, Iron of various sizes

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED

W. S. Spence

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 July 30 Aug. 17 Sep. 14. 17 Oct 6. 14 20 Nov 3. 5. 9. 15. 17. 22. 26 Dec 17. 29. 1921 Jan. 6. 12. 14. 18
During erection on board vessel --- 25 Feb. 1. 14. 15. 24 Mar. 9. Dec 1. 8. 14. 19. 21. 1922 Jan. 4. 6. 10. 18. 24. 27 Feb. 7. 13. 14. 16. 17
Total No. of visits 44 + 12

Is the approved plan of main boiler forwarded herewith YES. ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 19.12.21 Slides 4.1.22 Covers 4.1.22 Pistons 24.1.22 Rods 19.12.21

Connecting rods 14.12.21 Crank shaft 29.12.21 Thrust shaft 12.1.21 Tunnel shafts 12.1.21 Screw shaft 8.12.21 Propeller 8.12.21

Stern tube 18.1.22 Steam pipes tested 4.12.21 15.1.22 Engine and boiler seatings 7.2.22 Engines holding down bolts 13.2.22

Completion of pumping arrangements 13.2.22 Boilers fixed 13.2.22 Engines tried under steam 17.2.22

Completion of fitting sea connections 28 Jan. 1922. Stern tube 7.2.22 Screw shaft and propeller 7.2.22

Main boiler safety valves adjusted 17.2.22 Thickness of adjusting washers PTBL P $\frac{3}{8}$ S $\frac{3}{8}$ CENBL P $\frac{7}{8}$ S $\frac{7}{8}$ STABL P $\frac{3}{4}$ S $\frac{5}{8}$

Material of Crank shaft Steel Identification Mark on Do. 1118 GAH Material of Thrust shaft Steel Identification Mark on Do. 1118 GAH

Material of Tunnel shafts Steel Identification Marks on Do. 1118 GAH Material of Screw shafts Iron Identification Marks on Do. 1118 GAH

Material of Steam Pipes Iron Test pressure 540 lb. $\frac{1}{2}$ "

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 SS DELFINA ✓

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

The machinery of this vessel has been built under special survey. The materials & workmanship are sound and good and on completion of survey will render the vessel eligible in my opinion to have record of + L.M.C. with date 3.22.

The vessel has returned to the Builders yard and to complete survey.

The bilge suction in holds remain to be examined and the spare gear checked. Newcastle Surveyors advised.

The Bilge Piping arrangement has been completed in accordance with the approved plan.

The machinery spare gear has been checked and found in order.

Alex. Lawson & Co.
Newcastle.
March 17, 1922

To avoid confusion, the owners request that the name "Perseo" be not shown in any documents.

The amount of Entry Fee ... £ 5 : : When applied for,
Special ... £ 79 : 15 : : 20 FEB 1922
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : : 15/3/22

G. A. H. H. K.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

MACHINERY CERT.
WRITTEN.



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Foundation