

REPORT ON MACHINERY.

No. 65684

Received at London Office

MON. MAR. - 9. 1914

Date of writing Report 28th Feb. 1914 When handed in at Local Office

MAR 7 1914

Port of NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle

Date, First Survey 4th Apr. 1913 Last Survey 25th July 1914

329 on the

Steel screw steamer "El Zorro"

(Number of Visits 65

Tons { Gross 5989
Net 332

Master

Built at

Newcastle

By whom built

Swan Hunter & Wigham Richardson Ltd

When built

1914

Engines made at

Newcastle

By whom made

Swan Hunter & Wigham Richardson Ltd

when made

1914

Boilers made at

No

By whom made

No

when made

Registered Horse Power

Owners

Lobitos Oilfields Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

513

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Inverted Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24" 45" 45"

Length of Stroke

48"

Revs. per minute

67

Dia. of Screw shaft

as per rule 14.05

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 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

Yes

If two

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

Yes

Length of stern bush

62"

Dia. of Tunnel shaft

as per rule 13.38

Dia. of Crank shaft journals

as per rule 14.05

Dia. of Crank pin

14 1/4"

Size of Crank webs

22" x 9 1/4"

Dia. of thrust shaft under

collars

14 1/2"

Dia. of screw

18" - 6"

Pitch of Screw

18" - 0"

No. of Blades

4

State whether moveable

Yes

Total surface

100 sq ft

No. of Feed pumps

2

Diameter of ditto

8"

Stroke

21"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2"

Stroke

46"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

Ballcock 10" x 10" x 12"

4" x 5" x 6"

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

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

In Engine Room

3 of 3 1/2"

In Holds, &c.

Forward hold 2 of 2 1/2" x 1 of 2" in fore peak

connected to separate pumps

1-2" suction in oil bilge well

No. of Bilge Injections

1

sizes

8"

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

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

Oil Suction Pipes

How are they protected

Yes

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

23. 1. 14

of Stern Tube

23. 1. 14

Screw shaft and Propeller

23. 1. 14

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

OILERS, &c.—(Letter for record

Yes)

Manufacturers of Steel

J. Spencer & Son

Total Heating Surface of Boilers

9153 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

3

Cyl. built S. E.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

Y. 1. 14

No. of Certificate

8603

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

43 sq ft

No. and Description of Safety Valves to

each boiler

Two Spring loaded

Area of each valve

4.06 sq in

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

2-3 1/2"

Mean dia. of boilers

16"

Length

12'-0"

Material of shell plates

Steel

Thickness

1 1/4"

Range of tensile strength

29 3/4/33

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

d. t. lap

long. seams

L. d. b. s.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

10 1/4"

Top of plates or width of butt straps

22 1/4"

Per centages of strength of longitudinal joint

rivets 80.8

plate 85.3

Working pressure of shell by rules

215 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

9" x 1 1/4"

No. and Description of Furnaces in each boiler

3

Reighton

Material

Steel

Outside diameter

82 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 2 1/32

bottom 2 1/32

Description of longitudinal joint

Weld

No. of strengthening rings

Yes

Working pressure of furnace by the rules

204 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4" x 1 1/4"

Back

1"

Top

3/4" x 1 1/4"

Bottom

1"

Pitch of stays to ditto: Sides

Y 1/2" x Y 1/2"

Back

Y 1/2" x Y 1/2"

Top

Y 1/2" x Y 1/2"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

218 lbs

End plates in steam space:

Material

Steel

Thickness

1 1/8"

Pitch of stays

16" x 18"

How are stays secured

d. x washers

Working pressure by rules

206 lbs

Material of stays

Steel

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

14 1/4" x Y 1/2"

Working pressure of plate by rules

200 lbs

Diameter of tubes

3"

Pitch of tubes

4 1/4" x 4 1/4"

Material of tube plates

Steel

Thickness: Front

1 1/8" x 1"

Back

3/4"

Mean pitch of stays

12 1/4" x 8 1/2"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

239 lbs

Girders to Chamber tops: Material

Steel

Depth and

Thickness of girder at centre

9 1/2" x 1 1/8"

Length as per rule

35 3/4"

Distance apart

Y 1/2"

Number and pitch of stays in each

3 - Y 1/2"

Working pressure by rules

181 lbs

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

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

Yes

Lloyd's Register

Foundation

W 10-0008

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two main bearing bolts & nuts. Two top and bottom bolts & nuts. One set of coupling bolts & nuts. One set of feed pump valves & seats. One set of bilge pump valves & seats. 5 Propeller blades. One screw shaft. One slide valve spindle. One pair of bottom end brasses. One eccentric. One air pump rod. One set of piston springs for each piston. Rod & chest iron. Bolts & nuts (assorted).

The foregoing is a correct description,

SWAN, HUNTER & WIGHAM RICHARDSON LTD.

G. J. Twenty

Manufacturer.

1913
Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits
Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 23.12.13 Slides 12.1.14 Covers 28.1.13 Pistons 23.12.13 Rods 23.12.13
Connecting rods 9.1.14 Crank shaft 23.12.13 Thrust shaft 23.12.13 Tunnel shafts Screw shaft 23.12.13 Propeller 12.1.14
Stern tube 14.12.13 Steam pipes tested 13.2.14 Engine and boiler seatings 23.1.14 Engines holding down bolts 16.2.14
Completion of pumping arrangements 20.2.14 Boilers fixed 16.2.14 Engines tried under steam 20.2.14
Main boiler safety valves adjusted 20.2.14 Thickness of adjusting washers 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14 14.1.14
Material of Crank shaft Steel Identification Mark on Do. C.A.H. 3261 Material of Thrust shaft Steel Identification Mark on Do. 23.12.13 RMC
Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 23.12.13 RMC
Material of Steam Pipes Solid drawn steel Test pressure 540 lbs
Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

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

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

The engines & boilers of this vessel, have been built under special survey, the material & workmanship is good they have been efficiently fitted on board, tried under steam & found satisfactory. An oil burning installation on the Walland system has been fitted and complying with all the requirements of section 49 of the Rules.

In our opinion the vessel is eligible to have the notations of L.M.C 2.14 Fitted for oil fuel 2.14 F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD, + LMC 2.14.

Fitted for oil fuel 2.14. F.P. above 150°F.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 45 : 13 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, MAR 2 1914
When received, MAR 3 1914

Committee's Minute

Assigned

TUE. MAR. 10. 1914

MACHINERY CERTIFICATE
WRITTEN.

Wm. Coombe & R. W. Coombe.
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.



© 2020

Lloyd's Register
Foundation