

REPORT ON MACHINERY.

Port of Dundee

Received at London Office 1900

No. in Survey held at Dundee Date, first Survey 14th June Last Survey 30th June 19
 Reg. Book. 639 on the Steel 4 Mt Bk "Sindia" (Number of Visits 6)
 Master A. Mackenzie Built at Belfast By whom built Harland & Wolff When built 1887-12
 Engines made at ✓ By whom made ✓ when made ✓
 Boilers made at Liverpool By whom made Messrs Dunlop Bell & Co when made 1887
 Registered Horse Power ✓ Owners Anglo American Oil Co Ltd Port belonging to London
 Nom. Horse Power as per Section 28 ✓ Is Refrigerating Machinery fitted ✓ Is Electric Light fitted ✓

ENGINES, &c.—Description of Engines

Description of Engines			No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	Lgth. of stern bush
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under
Collars	Dia. of screw	Pitch of screw	No. of blades	State whether moveable
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
In Engine Room	In Holds, &c.			

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
 Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
 What pipes are carried through the bunkers How are they protected
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight
 Is it fitted with a watertight door worked from

OILERS, &c.—

(Letter for record) Total Heating Surface of Boilers

No. and Description of Boilers		Working Pressure	Tested by hydraulic pressure to
Date of test	Can each boiler be worked separately	Area of fire grate in each boiler	No. and Description of safety valves to
each boiler	Area of each valve	Pressure to which they are adjusted	Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork	Mean dia. of boilers	Length	Material of shell plates
Thickness	Range of tensile strength	Are they welded or flanged	Descrip. of riveting: cir. seams long. seams
Diameter of rivet holes in long. seams	Pitch of rivets	Lap of plates or width of butt straps	
Per centages of strength of longitudinal joint	Working pressure of shell by rules	Size of manhole in shell	
Size of compensating ring	No. and Description of Furnaces in each boiler	Material	Outside diameter
Length of plain part	Thickness of plates	Description of longitudinal joint	No. of strengthening rings
Working pressure of furnace by the rules	Combustion chamber plates: Material	Thickness: Sides	Back Top Bottom
Pitch of stays to ditto: Sides	Back Top	If stays are fitted with nuts or riveted heads	Working pressure by rules
Material of stays	Diameter at smallest part	Area supported by each stay	Working pressure by rules
Material	Thickness	Pitch of stays	How are stays secured
Diameter at smallest part	Area supported by each stay	Working pressure by rules	Material of Front plates at bottom
Thickness	Material of Lower back plate	Thickness	Greatest pitch of stays
Diameter of tubes	Pitch of tubes	Material of tube plates	Thickness: Front Back
Pitch across wide water spaces	Working pressures by rules	Girders to Chamber tops: Material	Depth and
Thickness of girder at centre	Length as per rule	Distance apart	Number and pitch of Stays in each
Working pressure by rules	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
If stiffened with rings	Distance between rings	Working pressure by rules	End plates: Thickness
Working pressure of end plates	Area of safety valves to superheater	Are they fitted with easing gear	

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Lloyd's Register
Foundation

DUN130-0130

DONKEY BOILER— No. *one* Description *Vertical,*
 Made at *Liverpool* By whom made *Dunlop Bell & Co* When made *1887* Where fixed *in house on deck*
 Working pressure *40* tested by hydraulic pressure to *80* No. of Certificate *✓* Fire grate area *12.5* Description of safety valves *spring*
 No. of safety valves *one* Area of each *7.07* Pressure to which they are adjusted *40* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *✓*
 Dia. of donkey boiler *5'-0"* Length *8'-7"* Material of shell plates *steel* Thickness *5/16* Range of tensile strength *not known*
 Descrip. of riveting long. seams *Lap double riveted* Dia. of rivet holes *13/16* Whether punched or drilled *Drilled* Pitch of rivets *2 3/4*
 Lap of plating *4* Per centage of strength of joint *102.8* Rivets *70.5* Thickness of shell crown plates *3/8* Radius of do. *8 ft* No. of Stays to do. *6*
 Dia. of stays *1 1/2" off* Diameter of furnace Top *50"* Bottom *52"* Length of furnace *40'* Thickness of furnace plates *1/2* Description of joint *Lap single*
 Thickness of furnace crown plates *5/16* Stayed by *as shell crown* Working pressure of shell by rules *55 lbs*
 Working pressure of furnace by rules *40 lbs* Diameter of uptake *12 1/2"* Thickness of uptake plates *1/2"* Thickness of water tubes *none*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
 Manufacturer.

Dates of Survey while building { During progress of work in shops - - June 14. 21. 22. 25. 29-30th 1900
 { During erection on board vessel - -
 Total No. of visits *6* Is the approved plan of main boiler forwarded herewith *✓*
 " " " donkey " " " *yes*

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

At the request of the Owners, examined internally and externally. the donkey boiler now on board this vessel with a view to assigning a working pressure. On examination the boiler was found to be slightly wasted and the remaining cross-tube defective but otherwise sound: the defective cross-tube has now been removed and the holes for same patched, and manhole door renewed. The sizes and scantlings were ascertained and found to be as shown on the sketch attached hereto. The safety valve and mountings were overhauled and put in good condition. The boiler being considered satisfactory for a working pressure of 40 lbs per square inch was tested by hydraulic pressure to 80 lbs and found tight and sound and showed no signs of weakness at that pressure. The boiler was examined under steam, found satisfactory and the safety valve adjusted to a working pressure of 40 lbs per square inch.

As there is no evidence that the materials used in the construction of this boiler have been tested, the working pressure has been calculated as for an iron boiler.

In my opinion the boiler is in a good and safe condition for a working pressure of forty pounds (40 lbs) per square inch, subject to annual examination as required by the Rules of this Society.

It is submitted that as this is a donkey boiler fitted on a sailing vessel. no further action need be taken.

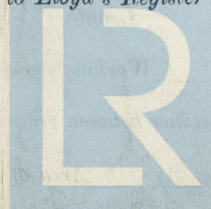
The amount of Entry Fee. £
 Special £
 Donkey Boiler Fee £ 2 : 2 : 0
 Travelling Expenses (if any) £ 1 : 18 : 0
 When received, 5.7.00

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

Committee's Minute

FRI. 6 JUL 1900

Assigned



Lloyd's Register Foundation

Certificate (if required) to be sent to Special Certificate to be returned to Surveyor's Office