

## REPORT ON MACHINERY.

No. 67622

Date of writing Report 3<sup>rd</sup> June 1915 on board ship at Local Office 6<sup>th</sup> June 1915 Port of NEWCASTLE-ON-TYNE  
 No. in Survey held at Newcastle Date, First Survey Sept. 25 1914 Last Survey June 2 1915  
 Reg. Book. 9944 on the Machinery of the S.S. Boucan (Number of Visits 33)

Master By whom built Wood Skinner & Co. When built 1915  
 Engines made at Newcastle By whom made North Eastern Marine Eng. Co. when made 1915  
 Boilers made at " By whom made " when made 1915  
 Registered Horse Power 178 Owners Cie des Chargeurs Francais Port belonging to Bayonne  
 Nom. Horse Power as per Section 28 178 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

**ENGINES, &c.**—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 18 1/2", 30", 50" Length of Stroke 33" Revs. per minute 86 Dia. of Screw shaft 10 1/4" Material of 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 Yes 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 4'-5"  
 Dia. of Tunnel shaft 9 1/32" Dia. of Crank shaft journals 9 5/8" Dia. of Crank pin 10" Size of Crank webs 16" x 6" Dia. of thrust shaft under  
 collars 10" Dia. of screw 13-0" Pitch of Screw 13-0" No. of Blades 4 State whether moveable No Total surface 51 1/2"  
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2 Sizes of Pumps 7" x 8" x 8" 6 1/4" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 5 of 3" In Holds, &c. 2 of 3" in fore hold 3 of  
3" in after hold and 1 of 2 1/2" in tunnel well  
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 4"  
 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 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 17/3/15 of Stern Tube 17/3/15 Screw shaft and Propeller 12/5/15  
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

**BOILERS, &c.**—(Letter for record 8) Manufacturers of Steel J. Spencer & Sons  
 Total Heating Surface of Boilers 3052 Is Forced Draft fitted No No. and Description of Boilers 2 Single-ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 19/3/15 No. of Certificate 8769  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 40 1/2 No. and Description of Safety Valves to  
 each boiler 2 direct spring Area of each valve 9 6/2 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 21" Mean dia. of boilers 12'-9 1/8" Length 10'-6" Material of shell plates Steel  
 Thickness 1 1/4" Range of tensile strength 28 1/2-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams d.t. lap  
 long. seams E.T. & butt Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8" Lap of plates or width of butt straps 16 1/8"  
 Per centages of strength of longitudinal joint 86.9 Working pressure of shell by rules 184 1/2 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 2 Leighton Material Steel Outside diameter 47 1/2"  
 Length of plain part top Thickness of plates bottom 9 1/16" Description of longitudinal joint welded No. of strengthening rings Yes  
 Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 3 1/4" Back 3 1/4" Top 3 1/4" Bottom 1"  
 Pitch of stays to ditto: Sides 10 1/2" x 9 3/8" Back 10 1/2" x 9 3/8" Top 10 1/2" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 196 lbs  
 Material of stays Steel Diameter at smallest part 2 3/8" Area supported by each stay 98 1/4 Working pressure by rules 215 lbs End plates in steam space:  
 Material Steel Thickness 1 3/8" Pitch of stays 25 1/2" x 18 1/2" How are stays secured on nut Working pressure by rules 183 lbs Material of stays Steel  
 Diameter at smallest part 8 2/4" Area supported by each stay 465 Working pressure by rules 186 lbs Material of Front plates at bottom Steel  
 Thickness 1" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 14 1/2" x 10 1/2" Working pressure of plate by rules 90 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 1" Back 1 3/16" Mean pitch of stays 9" x 8 3/4"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 183 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 9 5/8" x 1 3/4" Length as per rule 33" Distance apart 10 1/2" Number and pitch of stays in each 2 of 9 3/8"  
 Working pressure by rules 186 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked  
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of piston rings for each piston, 1 set of fuel & bilge pump valves, a quantity of assorted bolts nuts & iron, spare propeller & minor details.

The foregoing is a correct description,

per pro NORTH EASTERN MARINE ENGINEERING CO., LTD.

*J. Harrison*

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1914 Sept. 25, Oct. 23, 28, 30, Nov. 5, Dec. 3, 4, 9, 11, 22, 1915 Jan. 8, 12, 26, 27, 29, Feb. 4, 5, 22, 23, Mar. 5, 12, 16, 17. During erection on board vessel - 14, 31, Apr. 16, 26, 27, May 12, 26, 27, Jun. 1, 2. Total No. of visits 33.

Is the approved plan of main boiler forwarded herewith? Yes.

" " " donkey " " "

Dates of Examination of principal parts: Cylinders 8/1/15, Slides 16/4/15, Covers 3/12/14, Pistons 27/1/15, Rods 27/1/15, Connecting rods 27/1/15, Crank shaft 3/2/15, Thrust shaft 11/12/14, Tunnel shafts 28/10/14, Screw shaft 27/1/15, Propeller 12/3/15, Stern tube 31/3/15, Steam pipes tested 15/4, 26/5/15, Engine and boiler seatings 17/3/15, Engines holding down bolts 12/5/15, Completion of pumping arrangements 1/6/15, Boilers fixed 12/5/15, Engines tried under steam 1/6/15, Main boiler safety valves adjusted 1/6/15, Thickness of adjusting washers P.P. 3/8" S. 7/16" S.P. 1/2" S. 7/16" 11.

Material of Crank shaft: Steel Identification Mark on Do. 22/2/15, Material of Thrust shaft: Steel Identification Mark on Do. 11/12/14, Material of Tunnel shafts: Iron Identification Marks on Do. 5/11/14, Material of Screw shafts: Iron Identification Marks on Do. 29/1/15.

Material of Steam Pipes: Loop welded iron, Test pressure 540 lbs.

Is an installation fitted for burning oil fuel? no, 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? Yes.

Is this machinery duplicate of a previous case? no, If so, state name of vessel.

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

The machinery of this vessel has been built under special survey, the materials used are good and the workmanship is satisfactory, it has been properly fitted on board and secured and the engines have been tried under full power. In my opinion this vessel is eligible for the record of L.M.C. 6, 15.

It is submitted that this vessel is eligible for THE RECORD + LMC 6 15.

*J.R.S.*

*K.W.D.* 11/6/15

The amount of Entry Fee ... £ 2, Special ... £ 26.14, Donkey Boiler Fee ... £, Travelling Expenses (if any) £.

When applied for, JUN 10 1915.

When received, 12/6/15, 15/6/15, 14/6/15.

*Charles Cooper*

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

Committee's Minute TUE JUN 15 1915.

Assigned + LMC 6 15.

MACHINERY CERTIFICATE WRITTEN 11-6-15



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