

REPORT ON MACHINERY.

161

5593 *Intro 161*
 in Survey held at Sunderland
 on the S.S. "Alfalpa"
 Port of Sunderland
 Date, first Survey 26 Nov 1890 Last Survey 14 July 1890
 Received at London Office 23 AUGUST 1890
 (Number of Visits 22)
 Built at Middlesboro By whom built Raylton Dixon & Co
 Made at Sunderland By whom made North Eastern Marine & Coal When made 1890
 Made at Sunderland By whom made North Eastern Marine & Coal When made 1890
 Indicated Horse Power 200 Owners A. Holland & Co Port belonging to London

VES, &c.—
 Kind of Engines Triple compound, three cranks
 Cylinders 21.35.54 Length of Stroke 39" Rev. per minute 60 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke
 of Screw shaft 10 3/4" Diam. of Tunnel shaft 10 1/4" Diam. of Crank shaft journals 10 3/4" Diam. of Crank pin 10 3/4" size of Crank webs 16" x 4"
 of screw 14-6 Pitch of screw 15-3 No. of blades 4 state whether moveable not total surface 55 ft
 Feed pumps 2 diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 Bilge pumps 2 diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes
 they pump from fore hold, engine room, after well, sea & tanks
 Donkey Engines 2 Size of Pumps 8" x 9" & 3 1/2" x 5" Where do they pump from Tanks, sea, hot well
well, engine room & fore hold
 Are the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 Are the injections one and sizes 4" Are they connected to condenser, or to circulating pump circulating pumps
 the pumps worked by levers on intermediate engine
 connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 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
 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
 pipes are carried through the bunkers none How are they protected —
 pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel
 screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform in Sup Room

ES, &c.—
 Description Ordinary marine type Material Steel excepting tubes Letter (for record) S
 Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 3-4-90
 of superheating apparatus or steam chest none
 boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no superheater
 are feet of fire grate surface in each boiler 45 ft Description of safety valves direct spring No. to each boiler 2
 Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —
 Smallest distance between boilers and bunkers or woodwork 15" Diameter of boilers 13-4"
 description of riveting of shell long. seams double butt straps circum. seams double rivet lap Thickness of shell plates 1 1/16"
 whether punched or drilled drilled pitch of rivets 4" & 3 1/2" Lap of plating 16" straps
 of strength of longitudinal joint 83-9% working pressure of shell by rules 162 lbs size of manholes in shell 16" x 12"
 compensating rings 8" x 1 3/16" No. of Furnaces in each boiler 3 Description of Furnaces plain
 meter 3-0" length 6 feet thickness of plates 3/4" description of joint welded if rings are fitted no
 working pressure of furnace by the rules 183 lbs combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"
 stays are fitted with nuts or riveted heads nuts working pressure of plating by
 Diameter of stays at smallest part 1-33 working pressure of ditto by rules 144 lbs plates in steam space, thickness 1 1/16"
 how stays are secured nuts working pressure by rules 160 lbs diameter of stays at
 working pressure by rules 161 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 9/8"
 of stays 11 1/2" working pressure by rules 144 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2" thickness of tube
 back 3/4" how stayed stay tubes pitch of stays 9 x 9" width of water spaces 1 1/4"
 Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
 working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —
 end plates of superheater, or steam chest; thickness — how stayed —
 heating surface 3060 ft Superheater or steam chest; how connected to boiler —



MD 3740/86

Steel
DONKEY BOILER— Description *Single End? Cyclo Multitubular with 2 furnaces.*
 Made at *Stockton* by whom made *Riley Bros.* when made *19.6.90* where fixed *on Main Deck*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *1059* fire grate area *22.8 sq. ft.* description of
 valves *sweet Spring* No. of safety valves *2* area of each *40 sq. in.* filled with easing gear *Yes* if steam from main boiler
 enter the donkey boiler *No* diameter of donkey boiler *9' 0"* length *8' 0"* description of riveting *Long Lap 2.00*
 Thickness of shell plates *3/32"* diameter of rivet holes *13/16"* whether punched or drilled *punched* pitch of rivets *3 1/4"* lap of plating *6"*
 percentage of strength of joint *7/8"* thickness of *top end* plates *5/8"* stayed by *1 1/2" sq. iron stay* Pitch *13 1/2" x 13"*
 Diameter of furnace, top *30"* bottom *24"* length of furnace *5' 2"* thickness of plates *5/16" & 7/16"* description of joint *Lap Single*
 Thickness of *C. end & back* plates *5/16"* stayed by *1 1/2" sq. iron stay* Pitch *4 1/2" x 4"* working pressure of shell by rules *79*
 Working pressure of furnace by rules *80 lbs* diameter of *tube* uptake *3 1/2"* thickness of *front back* plates *9/16"* thickness of *back* water tube plate

SPARE GEAR. State the articles supplied:—*Top and bottom end connecting rod bolts & nuts*
two main bearing bolts & nuts, one set of coupling bolts & nuts, feed and
bidge pump valves, piston springs, bolts, nuts & iron assorted.

The foregoing is a correct description,
North Eastern Marine Engineering Co. Ltd. 670
 Manufacturers of main engines and boilers.

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

The main steam pipes have been tested by hydraulic pressure
to 320 lbs. The machinery of the above mentioned vessel has
constructed under special survey, the material and workman
are good and efficient and the engines when tried under
steam worked satisfactorily. In my opinion the machinery
the above mentioned vessel is in good order and safe working
condition and eligible for the notification in the Register
of LMC 7-90 when the following work is done to the satisfac
of a surveyor to this Society viz. "Sluices to fit on bulkheads,
sections to connect to fore hold and after well and engine ro
donkey boiler to be fitted with mountings and tried under ste

The above mentioned work has been satisfactorily
Completed.

Wm. A. Austin 1st August 1890

It is submitted that this vessel is
eligible to have + L.M.C. 7-90 recorded

W.A.
23.8.90

The amount of Entry Fee .. £ *2* : : received by me,
 Special .. £ *29 14* : :
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : *22.8 1890*
 To be sent as per margin.
 (Travelling Expenses, if any, £)

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

Committee's Minute *1UES 26 AUGUST 1890*

+ L.M.C. 7.90