

REPORT ON MACHINERY.

No. 6314

Received at London Office 9 NOV 1893

No. in Survey held at *Glasgow* Date, first Survey *1st May* Last Survey *Nov^r 13th 1883*
 Reg. Book. *—* on the *Screw Steamer "Enterpe"* (Number of Visits *13*) *1446.48*
 Master *J. S. Tonkin* Built at *Glasgow* By whom built *A. Stephen & Sons* When built *1883*
 Engines made at *Glasgow* By whom made *A. Stephen & Sons* when made *1883*
 Boilers made at *Do* By whom made *Do* when made *1883*
 Registered Horse Power *180* Owners *The Enterpe Steam Ship Co^{ys} Ltd.* Port belonging to *Cardiff*

ENGINES, &c.—

Description of Engines *Inverted Direct acting Compound Surface Condensing.*
 Diameter of Cylinders *32 + 60* Length of Stroke *39* No. of Rev. per minute *55* Point of Cut off, High Pressure *20* Low Pressure *20*
 Diameter of Screw shaft *10 1/2* Diam. of Tunnel shaft *10* Diam. of Crank shaft journals *10 1/2* Diam. of Crank pin *11* size of Crank webs *12 1/2 x 7*
 Diameter of screw *14-6* Pitch of screw *17-11* No. of blades *Four* state whether moveable *Yes* total surface *44 1/2 sq ft*
 No. of Feed pumps *Two* diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *Two* diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *Yes*
 Where do they pump from *Bilges, Holds & Tanks*
 No. of Donkey Engines *Two* hand Size of Pumps *Ballast 10 cwt 8 lb x 10 cwt 8 lb* Where do they pump from *Bilges, Holds & Tanks*
 Are all the bilge suction pipes fitted with roses *Yes* Are the roses always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*
 No. of bilge injections *One* and sizes *3 1/2* Are they connected to condenser, or to circulating pump *Circulating*
 How are the pumps worked *By levers from crosshead of both engines*
 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 accessible at all times *Yes*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *Yes*
 When were stern tube, propeller, screw shaft, and all connections examined *in dry dock* *Before launching*
 Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Engine room at deck*

BOILERS, &c.—

No. of Boilers *Two* Description *Cylindrical. Mult^r* Whether Steel or Iron *Iron Shell*
 Working Pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* Date of test *October 20th 1883*
 Position of superheating apparatus or steam chest *Horizontal*
 Can the boiler be worked separately *Yes* Can the superheater be shut off and the boiler worked separately *—*
 Square feet of fire grate surface in each boiler *36 sq ft* Description of safety valves *Direct spring* No. to each boiler *Two*
 Area of each valve *15.9 sq in* Are they fitted with easing gear *Yes* No. of safety valves to superheater *—* area of each valve *—*
 Are they fitted with easing gear *—* Smallest distance between boilers and bunkers *9* Diameter of boilers *12-6*
 Description of riveting of shell long. seams *Double riveted butt* circum. seams *Lap double* Thickness of shell plates *1*
 Diameter of rivet holes *1 3/16* whether punched or drilled *Drilled* pitch of rivets *4 7/8* Lap of plating *1 1/2 butt*
 Tensile strength of longitudinal joint *Weld 70* working pressure of shell by rules *90 lbs* size of manholes in shell *15 x 11 1/2*
 Diameter of compensating rings *4 1/2 x 5 7/8* No. of Furnaces in each boiler *Two*
 Diameter *4-0* length, top *7-6* bottom *10-3* thickness of plates *7/16* description of joint *Weld* if rings are fitted *Yes*
 Length between rings *Compensating* working pressure of furnace by the rules *104 lbs* combustion chamber plating, thickness, sides *7/16* back *7/16* top *7/16*
 Stays to ditto, sides *8* back *7 3/4* top *—* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *84 lbs*
 Diameter of stays at smallest part *1 3/8* working pressure of ditto by rules *118 lbs* end plates in steam space, thickness *7/8*
 Stays to ditto *1-5 x 1-4 1/2* how stays are secured *Nuts* working pressure by rules *95 lbs* diameter of stays at smallest part *2 1/2*
 Working pressure by rules *105 lbs* Front plates at bottom, thickness *7/8* Back plates, thickness *7/8*
 Pitch of stays *15 in* working pressure by rules *80 lbs* Diameter of tubes *3 1/2* pitch of tubes *4 3/4 x 4 7/8* thickness of tube *5*
 Front *7/8* back *7/16* how stayed *Tubes* pitch of stays *15 x 9 1/4* width of water spaces *5*
 Superheater or Steam chest *3-0* length *11-0* thickness of plates *7/16* description of longitudinal joint *Lap* diam. of rivet holes *1 3/16*
 Working pressure of shell by rules *115 lbs* diameter of flue *—* thickness of plates *—* If stiffened with rings *—*
 Working pressure by rules *—* end plates of superheater, or steam chest; thickness *1/2* how stayed *One stay 1 1/2 dia*
 Superheater or steam chest; how connected to boiler *Two necks 15 dia 5/8 thick*

GLS148-0320

DONKEY BOILER— Description *Vertical - with three cross tubes*
Made at *Glasgow* by whom made *Alex^r Stephen & Sons* when made *1883* where fixed *In chetehold*
Working pressure *150lb* tested by hydraulic pressure to *100lb* No. of Certificate *1198* fire grate area *23 1/2 sq ft* description of safety
valves *Direct springs* No. of safety valves *Two* area of each *7 sq ins* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *6-6* length *10-6* description of riveting *Lap - double*
Thickness of shell plates *7/16* diameter of rivet holes *13/16* whether punched or drilled *Punch* pitch of rivets *2 1/2* lap of plating *4*
per centage of strength of joint *67-2* thickness of crown plates *1/2* stayed by *Eight stays 1 1/2 dia*
Diameter of furnace, top *5-5* bottom *5-10* length of furnace *5-0* thickness of plates *7/16* description of joint *Lap - single*
Thickness of furnace crown plates *7/16* stayed by *As above + uptake* working pressure of shell by rules *60lb*
Working pressure of furnace by rules *50lb* diameter of uptake *15* thickness of plates *7/16* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *Top & bottom end connecting rod bolts & nuts*
Two main bearing bolts - Set of coupling bolts - Speed & bilge pump
valves - Bolts & nuts assorted - Iron of various sizes

The foregoing is a correct description,
Alex^r Stephen & Sons Manufacturer.

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

These Engines & boilers have been constructed
under special survey - They are of good material & workmanship
they have been well fitted on board - satisfactorily tested under
steam and I am of opinion they are eligible to be classed
"LLOYD'S M.C." 11-83 in the Register Book.
The approved plan of boiler, also reports on steel tests & forging
are herewith enclosed

No submitted that this
vessel is eligible to have
the notification & M.C.
received M 19/11/83

The amount of Entry Fee .. £ *2: 0: 0* received by me, *(initials)*
Special £ *24: 0: 0*
Donkey Boiler Fee £ *0: 0: 0*
Certificate (if required) .. £ *0: 0: 0* *16/11/83*
To be sent as per margin.
(Travelling Expenses, if any, £ — *8/-*)

Committee's Minute

TUESDAY 20 NOV 1883

Walter E Robson
Engineer Surveyor to Lloyd's Register of British & Foreign
Glasgow