

REPORT ON MACHINERY.

(Received in London Office)

21/3/81

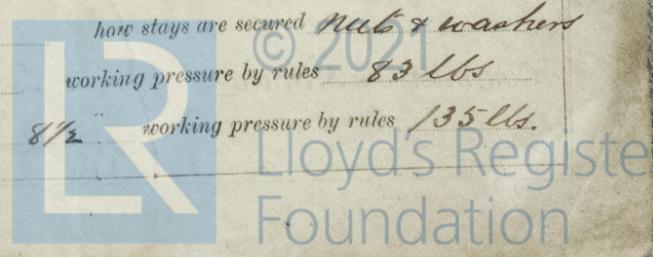
held at Belfast Date, first Survey Novr 1880 Last Survey 10th March 1881
S.S. "Topic" Tons 129.5
Belfast Built at Belfast When built 1880-1
Belfast By whom made Mr. Lucaine & Lewis when made 1880-1
 By whom made _____ when made 1880-1
 Indicated Power 50 Owners W.A. Grainger Port belonging to Belfast

MACHINERY, &c.—

Kind of Engines Compound, Inverted, Direct acting.
 Diameter of cylinders 19" x 32" Length of Stroke 24" No. of Rev. per minute 85 Point of Cut off, High Pressure 1/2 Low Pressure 1/2
 Diameter of screw shaft 6" Diameter of Tunnel shaft 6" Diameter of Crank shaft journals 6" Diameter of Crank pin 6" size of Crank webs 6 3/4" x 4 7/8"
 Diameter of screw 9'-0" Pitch of screw 12'-6" No. of blades 4 state whether moveable not total surface 22.6 sq. ft.
 Feed pumps one diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓
 Bilge pumps one diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓
 To they pump from Engine Room and Stokehold Bilges and holds
 Key Engines one Size of Pumps 3" dia x 6" Stroke Where do they pump from Engine Room and Stokehold Bilge, holds, & sea.
 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
 No. of bilge injections one and sizes 5" dia Are they connected to condenser, or to circulating pump to suction pipes
 Are the pumps worked by levers.
 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
 How are they protected 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 Stuffing box one and fitted with a sluice door yes worked from top platform.

BOILERS, &c.—

Number of Boilers one Description Cylindrical Single-ended.
 Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 8th February 1881.
 Description of superheating apparatus or steam chest None
 Can each boiler be worked separately ✓ Can the superheater be shut off and the boiler worked separately ✓
 No. of square feet of fire grate surface in each boiler 33 Description of safety valves Direct Spring (Cockburns)
 No. to each boiler two area of each valve 8.30" 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 woodwork 5"
 Diameter of boilers 11'-0" Length of boilers 8'-10" description of riveting of shell long. seams double butt drilled circum. seams lap, single
 Thickness of shell plates 3/4" diameter of rivet holes 7/8" whether punched or drilled punched pitch of rivets 3 1/4"
 Lap of plating 11" butt straps per centage of strength of longitudinal joint 70 working pressure of shell by rules 90 lbs
 Size of manholes in shell 15" x 12" size of compensating rings 5" x 1 riveted on,
 No. of Furnaces in each boiler two outside diameter 2'-10" length, top 6'-0" bottom 8'-6"
 Thickness of plates 7/16" description of joint double butt if rings are fitted Titanium greatest length between rings 6'-0"
 Working pressure of furnace by the rules 85 lbs
 Combustion chamber plating, thickness, sides 7/16" back 7/16" top 1/2"
 Pitch of stays to ditto sides 8 1/2" x 8 1/2" back 8 1/2" x 8 1/2" top 9" x 9 1/2"
 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 75 lbs lowest.
 Diameter of stays at smallest part 1 1/4" Screwed working pressure of ditto by rules 85 lbs.
 End plates in steam space, thickness 7/16" pitch of stays to ditto 15" x 15" how stays are secured Nuts & washers
 Working pressure by rules 75 lbs diameter of stays at smallest part 2" working pressure by rules 85 lbs
 Front plates at bottom, thickness 9/16" Back plates, thickness 9/16" greatest pitch of stays 8 1/2" working pressure by rules 135 lbs.



Diameter of tubes *3" ext.* pitch of tubes *4 1/4" X 4 1/2"* thickness of tube plates, front *3/8"* back
 How stayed *Stay tubes* pitch of stays *13 1/2" X 12 3/4"* width of water spaces *1 1/4" X 1 1/2"*
 Diameter of Superheater or Steam chest *✓* length *✓*
 Thickness of plates *✓* description of longitudinal joint *✓* diameter of rivet holes *✓* pitch of rivets *✓*
 Working pressure of shell by rules *✓* Diameter of flue *✓* thickness of plates *✓*
 If stiffened with rings *✓* distance between rings *✓* Working pressure by rules *✓*
 End plates of superheater, or steam chest; thickness *✓* How stayed *✓*
 Superheater or steam chest; how connected to boiler *✓*

DONKEY BOILER— Description *Upright, With two water tubes,*
 Made at *Belfast* By whom made *M. Swan & Lewis* when made *1880-1*
 Where fixed *Stokehold* working pressure *Loaded to 42 lbs* Tested by hydraulic pressure to *150 lbs* No. of Certificate
 Fire grate area *9 sq ft* Description of safety valves *Lever & weight* No. of safety valves *one* area of each *7*
 If fitted with easing gear *no* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler *4'-0"* length *8'-0"* description of riveting *Lap, single,*
 thickness of shell plates *3/8"* diameter of rivet holes *1 1/16"* whether punched or drilled *punched,*
 pitch of rivets *2"* lap of plating *2 1/2"* per centage of strength of joint *59*
 thickness of crown plates *7/16"* stayed by *Uptake & dished.*
 Diameter of furnace, top *3'-2"* bottom *3'-6"* length of furnace *4'-3"*
 thickness of plates *3/8"* description of joint *Lap, single,*
 thickness of furnace crown plates *7/16"* stayed by *Uptake & dished.*
 Working pressure of shell by rules *72 lbs* working pressure of furnace by rules *72 lbs*
 diameter of uptake *12 1/4"* thickness of plates *3/8"* thickness of water tubes *3/8"*

The foregoing is a correct description,
Mae Swan & Lewis Manufacturers

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engine and Boilers are now in good order and safe working condition and eligible in my opinion to be noted in the Register Book & Lloyd's M.C. (in red)*)

It is submitted that this vessel is eligible to have the registration & Lloyd's M.C. recorded in the Register Book
M/S 27/3/10

The amount of Entry Fee .. £ *2* : 0 : 0 received by me,
 Special .. £ *4* : 10 : 0
 Certificate (if required) .. £ *gratis* : *19/3* 1881.
 (Travelling Expenses, if any, £ *6-6-0*)

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

Committee's Minute *Tuesday March, 22nd, 1881*
Lloyd's

