

REPORT ON MACHINERY.

2930

No. 2930

(Received at London Office 3rd MAR. 1883.)

No. in Reg. Book Survey held at Belfast Date, first Survey 5/7/82 Last Survey 9th July 1883.
 on the S.S. "Dungonnell" Tons 128.92
 Master Bryan Built at Belfast When built 1883
 Engines made at Belfast By whom made M. Swain & Lewis when made 1883
 Boilers made at Belfast By whom made M. Swain & Lewis when made 1883
 Registered Horse Power 50 Owners Antrim Iron Ore Co. Port belonging to Belfast

ENGINES, &c.—

Description 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 stroke Low Pressure 1/2 stroke
 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 3/8"
 Diameter of screw 9-0" Pitch of screw 12-6" No. of blades 4 state whether moveable yes total surface 23 sq. ft.
 No. of Feed pumps one diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps one diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work ✓
 Where do they pump from all compartments
 No. of Donkey Engines one Size of Pumps 3 dia 6 1/2" (6" x 6") Where do they pump from all compartments, from sea also fore and aft peak 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 5 dia Are they connected to condenser, or to circulating pump on suction valve
 How 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
 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 stuffed box on and fitted with a sluice door yes worked from top platform

BOILERS, &c.—

Number of Boilers one Description Cylindrical, single ended (all steel plating)
 Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 9/1/83
 Description of superheating apparatus or steam chest ✓
 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 3.3 sq. ft. Description of safety valves direct spring
 No. to each boiler two area of each valve 9.6 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 or ~~woodwork~~ 5"
 Diameter of boilers 11-0" Length of boilers 9-0" description of riveting of shell long. seams double butt strap circum. seams single lap
 Thickness of shell plates 5/8" diameter of rivet holes 3/16" whether punched or drilled drilled pitch of rivets 3/4"
 Gap of plating 11" butts per centage of strength of longitudinal joint 75 lbs working pressure of shell by rules 89 lbs
 Size of manholes in shell 15" x 12" size of compensating rings 5" x 7 3/8"
 No. of Furnaces in each boiler two outside diameter 2-10 7/8" length, top 6'-0" bottom 8'-0"
 Thickness of plates 7/16" description of joint double butt if rings are fitted single iron at bottom 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 7/16"
 Thickness of stays to ditto sides 8 7/8" x 8 7/8" back 8 7/8" x 8 7/8" top 8 1/2" x 8 1/2"
 Are stays fitted with nuts or riveted heads nuts working pressure of plating by rules 77 lbs
 Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 88 lbs
 Thickness of plates in steam space, thickness 7/16" pitch of stays to ditto 15" how stays are secured nuts & washers
 Working pressure by rules 75 lbs diameter of stays at smallest part 2" working pressure by rules 83 lbs
 Thickness of plates at bottom, thickness 9/16" Back plates, thickness 9/16" greatest pitch of stays 11" working pressure by rules 80 lbs



Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{3}{8}$ " thickness of tube plates, front $\frac{3}{8}$ " back $\frac{3}{8}$ "
 How stayed *Stay tubes* pitch of stays $13\frac{1}{8} \times 13\frac{1}{8}$ " width of water spaces $1\frac{3}{8}$ "
 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 (Steel)*
 Made at *Belfast* By whom made *Mr. Shuman & Lewis* when made *1883*
 Where fixed *Storehold* working pressure *60 lbs* Tested by hydraulic pressure to *120 lbs* No. of Certificate *25*
 Fire grate area *9 sq ft.* Description of safety valves *Levinweight* No. of safety valves *one* area of each *9.6 sq"*
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler $4\frac{1}{2}$ " length $8\frac{1}{2}$ " description of riveting *double lap on vertical seams*
 thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled *punched & reamed*
 pitch of rivets $2\frac{1}{2}$ " lap of plating $4\frac{1}{2}$ " per centage of strength of joint *about 70*
 thickness of crown plates $\frac{7}{16}$ " stayed by *uptake & dished*
 Diameter of furnace, top $3\frac{1}{2}$ " bottom $4\frac{1}{2}$ " length of furnace $4\frac{1}{2}$ "
 thickness of plates $\frac{3}{8}$ " description of joint *lap*
 thickness of furnace crown plates $\frac{7}{16}$ " stayed by *uptake & dished*
 Working pressure of shell by rules *70 lbs* working pressure of furnace by rules *62 lb. mean dia of 4 ft*
 diameter of uptake 13 " thickness of plates *$\frac{3}{8}$ steel* thickness of water tubes *$\frac{3}{8}$ iron Lumber*

The foregoing is a correct description,
Mr. Shuman Lewis & Co. Ltd. Manufacturer.

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

The Engines and Boilers have been especially surveyed during construction the workmanship and materials are good, A. F. O. They are now in good order and safe working condition & eligible in my opinion to be noted in the Register Book

Hyd. M.C. - 2. 53.
Main Engines and Boilers satisfactorily tested under steam, safely & adjusted & admits of a load of 75 lbs per square inch. Completed Survey, Bureau Register.

This is submitted that this vessel is eligible to have the notification & shall be recorded
3/3/83

[Large blue scribble]

The amount of Entry Fee .. £ 2 : - : - received by me,
 Special .. £ 7 : 10 : -
 Certificate (if required) .. £ - : - : - 1.3. 1883
 To be sent as per margin.
 (Travelling Expenses, if any, £ 4-4-0) *to be permitted to Bureau.*

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

Committee's Minute *Tuesday, 6th March, 1883.*

