

REPORT ON MACHINERY. 6954

No. 6954 Port of Glasgow Received at London Office 1890
 No. in Survey held at Glasgow Date, first Survey 14th March Last Survey 2nd July 1890.
 Reg. Book. on the S. S. "Mayfield" (Number of Visits 500)
 Master J. Fleming Built at Cardiff By whom built Bate S. B. & Eng. Coy Tons } Gross 638.09
 Engines made at Glasgow By whom made William Kemp when made 1890 Net 118.88
 Boilers made at Glasgow By whom made Anderson & Lyall when made 1890
 Registered Horse Power 220 Owners J. Woods Port belonging to London

ENGINES, &c.—
 Description of Engines Triple Expansion No. of Cylinders Three
 Diam. of Cylinders 29", 36 1/2", + 62" Length of Stroke 39" Rev. per minute 70 Point of Cut off, High Pressure var Low Pressure var
 Diam. of Screw shaft 12" Diam. of Tunnel shaft 11 1/4" Diam. of Crank shaft journals 12" Diam. of Crank pin 12" size of Crank webs built
 Diam. of screw 15'-6" Pitch of screw 16'-6" No. of blades 4. state whether moveable sol total surface 60 sq ft
 No. of Feed pumps Two diameter of ditto 3" Stroke 19 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two diameter of ditto 3 1/2" Stroke 19 1/2" Can one be overhauled while the other is at work yes
 Where do they pump from both from bilge and one from sea
 No. of Donkey Engines Two Size of Pumps 5" x 3 1/2" x 8" Dup. Where do they pump from Sea, tank, hot water
bilges both 8" x 8" x 10"
 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" Are they connected to condenser or to circulating pump yes
 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 about
 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 above
 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 yes Bate Dry Docks 5th May 1890 Cooper
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper platform

BOILERS, &c.—
 No. of Boilers Two Description Multitubular Material Steel Letter (for record) S.
 Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 13th February 1890
 Description of superheating apparatus or steam chest none
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately —
 No. of square feet of fire grate surface in each boiler 50 Description of safety valves d. Spring No. to each boiler two
 Area of each valve heating — both 5300 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 9" Diameter of boilers 12' 11"
 Length of boilers 11' 0" description of riveting of shell long. seams d. butt strap circum. seams Lap joint Thickness of shell plates 1 1/8"
 Diameter of rivet holes 1 1/4" whether punched or drilled drilled pitch of rivets 7 3/4" & 5 7/8" Lap of plating 1' 9 3/4" butt.
 Percentage of strength of longitudinal joint 83.7 working pressure of shell by rules 160 lbs. size of manholes in shell 12" x 16"
 No. of compensating rings McNeill's patent of Furnaces in each boiler Three Description of Furnaces Pibbed (Purvis)
 Outside diameter 38" length 7' 0" thickness of plates 17/32 description of joint welded if rings are fitted —
 Greatest length between rings — working pressure of furnace by the rules 171 combustion chamber plating, thickness, sides 1/2" back 1/2" top 17/32
 Pitch of stays to ditto, sides 7x7" back 7x7" top 7 1/4 x 7" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 160 lbs.
 Diameter of stays at smallest part 1 1/2" & 1 1/4" working pressure of ditto by rules 161 lbs. plates in steam space, thickness 7/8" + 5/8"
 Pitch of stays to ditto 17" x 17" how stays are secured d. nuts & double working pressure by rules 208 lbs. diameter of stays at smallest part 2 1/2"
 Greatest pitch of stays — working pressure by rules 160 lbs. Front plates at bottom, thickness 3/4" Back plates, thickness 3/4"
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. 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 *Blakes Patent vertical multitubular*
 Made at *Manchester* by whom made *J. Blake* when made *1889* where fixed *Stokehole*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *844* fire grate area *144 sq ft* description of safety
 valves *Spring loaded* No. of safety valves *one* area of each *7.07* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6'-0"* length *13'-6"* description of riveting *longitudinal double*
 Thickness of shell plates *13/32* diameter of rivet holes *13/32* whether punched or drilled *drilled* pitch of rivets *2 3/4"* lap of plating *4 1/4"*
 per centage of strength of joint *40* thickness of crown plates *13/32* stayed by *Spheroidal crown*
 Diameter of furnace, top *2'-2 1/2"* bottom *4'-1 1/2"* length of furnace *3'-0"* thickness of plates *7/16* description of joint *lap, single rivet*
 Thickness of furnace crown plates *1/2"* stayed by *Gusset stays* working pressure of shell by rules *83 lbs*
 Working pressure of furnace by rules *80 lbs* diameter of uptake *1'-9"* thickness of plates *3/16* thickness of water tubes

SPARE GEAR. State the articles supplied:— *Top and bottom end bolts, main bearing & coupling bolts. Feed and bilge pump valves. One propeller - Bolts nuts & assorted*

The foregoing is a correct description,
pro William Kemp Manufacturer.
Robert G. Kemp

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above mentioned engines and boilers have been built under special survey and are now completed onboard in a satisfactory manner. When the main and donkey boiler safety valves have been adjusted under steam we are of opinion that the vessel is eligible for the notation of: F. L. M. C. 7. 90.*

Forwarded to Cardiff for completion
A. Glasgow 4/7/90.

July 18th Examined Main and Donkey Boilers under steam and adjusted safety valves to working pressures.
Cardiff. C. Rydet

It is submitted that this vessel is eligible to be classed as F. L. M. C. 7. 90. recorded
A. G.
21.7.90

Large blue handwritten signature or initials.

The amount of Entry Fee .. £ *2* : .. received by me, *at Glasgow*
 Special .. £ *31* : ..
 Donkey Boiler Fee .. £ .. : ..
 Certificate (if required) .. £ .. : .. *10.4.1890*
 To be sent as per margin.
 (Travelling Expenses, if any, £ ..)

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

Committee's Minute *TUES 22 JULY 1890*
+ Lmb 7/90

