

REPORT ON MACHINERY.

No. 6063

(Received at London Office Rec'd 9th April 1883)

No. in Survey held at Glasgow Date, first Survey 14th Oct-82 Last Survey 5th April 1883
 Reg. Book. 785 on the Genl Steam Vessel "South Western" (Number of Visits 16) Tons 460
 Master Port. Glasgow Built at Port. Glasgow When built 1870
 Engines made at Port. Glasgow By whom made Blackwood & Gordon when made " "
 Boilers made at Glasgow By whom made Rees & Anderson & Co when made 1883
 Registered Horse Power 120 Owners Anderson & Co Shipping Co Port belonging to Anderson

ENGINES, &c.—

Description of Engines Compound Inverted Surface Condensing
 Diameter of Cylinders 28³/₈ & 50¹/₂" Length of Stroke 30" No. of Rev. per minute 40 Point of Cut off, High Pressure 22" Low Pressure 22"
 Diameter of Screw shaft 8³/₄" Diameter of Tunnel shaft 8" Diameter of Crank shaft journals 8³/₄" Diameter of Crank pin 8³/₄" size of Crank webs 10¹/₂ & 6³/₄"
 Diameter of screw 10" & 10" Pitch of screw 18" & 6" No. of blades 4 state whether moveable no total surface 43 sq ft
 No. of Feed pumps Two diameter of ditto 3¹/₄" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 3¹/₄" Stroke 15" Can one be overhauled while the other is at work Yes
 Where do they pump from Engine Room. Storehold and all Compartments
 No. of Donkey Engines One Size of Pumps 6" x 10" Where do they pump from Sea. Fore Peak.
Engine Room. Storehold and all Compartments
 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 Circulating
 How are the pumps worked By Revers Attached to Crossheads
 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 February 12th 1883
 Is the screw shaft tunnel watertight --- and fitted with a sluice door Yes worked from the top platform

BOILERS, &c.—

Number of Boilers Two Description Cylindrical & Multitubular. (Steel)
 Working Pressure 90 lb Tested by hydraulic pressure to 140 lb Date of test Decr. 14th 1882
 Description of superheating apparatus or steam chest Horizontal Steam Receiver
 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 35 sq ft Description of safety valves Spiral 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 10" inches
 Diameter of boilers 10' & 8" Length of boilers 10' & 0" description of riveting of shell long. seams Double Butt circum. seams Double Lap
 Thickness of shell plates 5/8" diameter of rivet holes 15/16" whether punched or drilled drilled pitch of rivets 4"
 Lap of plating 10 1/2 strips per centage of strength of longitudinal joint 46% working pressure of shell by rules 92 lb
 Size of manholes in shell 13" x 18" size of compensating rings Flat Ring 4 1/2" x 3/4"
 No. of Furnaces in each boiler Two outside diameter 3' & 4' length, top 16' & 0" bottom 8' & 9"
 Thickness of plates 1/2" description of joint Double Butt if rings are fitted as above greatest length between rings ---
 Working pressure of furnace by the rules 93 lb
 Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto, sides 9 1/2" x 9 1/4" back 9 1/2" x 9 1/4" top 9 1/2" x 9"
 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 85 lb
 Diameter of stays at smallest part 1 1/4" steel working pressure of ditto by rules 110 "
 End plates in steam space, thickness 5/8" pitch of stays to ditto 14 3/4" x 10 3/4" how stays are secured Nuts and Washers
 Working pressure by rules 72 lb diameter of stays at smallest part 2 3/8" working pressure by rules 120 lb
 Front plates at bottom, thickness 5/8" Back plates, thickness 5/8" greatest pitch of stays 12" working pressure by rules 83 lb

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Diameter of tubes 3" ext pitch of tubes 4 1/4" x 4 1/4" thickness of tube plates, front 5/8" back 5/8"
How stayed Sube stays pitch of stays 12 3/4" x 8 1/2" width of water spaces 6"
Diameter of Superheater or Steam chest 4' 0" length 6' 0"
Thickness of plates 1/2" description of longitudinal joint Seal lap diameter of rivet holes 7/8" pitch of rivets 3 1/4"
Working pressure of shell by rules 118 lb 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 9/16" How stayed Five round stays 1 1/4" effective dia
Superheater or steam chest; how connected to boiler By Stop Valves and Copper Pipes
DONKEY BOILER— Description Circular Vertical. Two water tubes in shell
Made at Port Glasgow By whom made Blackwood & Co Glasgow when made 1880
Where fixed Stonehold working pressure 50 lb Tested by hydraulic pressure to 100 lb No. of Certificate 16
Fire grate area 9 Sq Ft Description of safety valves Direct loaded No. of safety valves one area of each 7 sq in
If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No
Diameter of donkey boiler 4' 3" length 9' 0" description of riveting Roll. doubl. Cir single
thickness of shell plates 3/8" diameter of rivet holes 3/4" whether punched or drilled punched
pitch of rivets 2 3/4" lap of plating 4" per centage of strength of joint 72%
thickness of crown plates 7/16" stayed by Four bar stays 1 1/2" dia effective
Diameter of furnace, top 3' 7" bottom 3' 9" length of furnace 4' 0"
thickness of plates 3/8" description of joint Roll. single riveted
thickness of furnace crown plates 7/16" stayed by Four bar stays 1 1/2" dia effective
Working pressure of shell by rules 81 lb working pressure of furnace by rules 64 lb
diameter of uptake 12" thickness of plates 7/16" thickness of water tubes 3/8"

The foregoing is a correct description,
Lees Anderson & Co Manufacturer. of Marine Boilers

*Disputed matter
that this vessel is eligible
to have the register
JMC 4.83 & 201380
JMC 9/4/83*

General Remarks (State quality of workmanship, opinions as to class, &c. New Main and Donkey Boilers
supplied and fitted on board. - Vessel placed in Graving Dock
all sea-cocks removed from flat of ship's bottom and fitted in
conformity with the rules. - Propeller and shaft examined, outer
bush lined up and propeller refixed in place satisfactorily.
High and Low pressure Cylinders bored out and new pistons fitted
found two porous parts in Low pressure Cylinder barrel about 3" and
and 1 1/4" inches dia respectively. these have been drilled out and two cast-
iron screwed plugs efficiently fitted. Piston Rods turned up
and glands rebushed. Crank and Tunnel shafting examined
and found satisfactory. Surface Condenser examined. Tubes
drawn and cleaned and replaced with new packing.
Slide Valves. Air. Circulating Feed and Bilge Pumps with
their rods. Valves and Connections overhauled and put
in good working order.

The above Engines and Boilers are now in good order
and safe working condition and eligible in my opinion to be
noted in the Society Register-Book Lloyds M.C. 10.13.4.83.

The amount of Entry Fee £ 1: 0: 0 received by me, [Signature]
Special £ 4: 4: 0
To be sent as per margin.
Certificate (£ required) £ 0: 5: 0 6/4/1883
(Travelling Expenses, if any, £)

Committee's Minute

126 31 83 - 11303

J.M. Gregor
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Clyde District