

REPORT ON MACHINERY.

6703

No. 6905

Received at London Office TUESDAY 7, APRIL 1885

No. in Survey held at *Glasgow.*

Date, first Survey *25th March 1884* Last Survey *6th April 1885*

Reg. Book.

(Number of Tons *29*) *4561.56*
2965.46

on the *S. S. Lake Superior.*

Master *M^r Stewart* Built at *Glasgow*

By whom built *J & G. Thomson*

When built *1884-5*

Engines made at *Glasgow*

By whom made *do.*

when made *do.*

Boilers made at *do.*

By whom made *do.*

when made *do.*

Registered Horse Power *430.*

Owners *Canada Shipping Co.*

Port belonging to *Liverpool*

ENGINES, &c.—

Description of Engines *Compound Inverted Direct Acting.*

Diameter of Cylinders *48" & 90"* Length of Stroke *60"* No. of Rev. per minute *65* Point of Cut off, High Pressure *Var* Low Pressure *—*

Diameter of Screw shaft *17"* Diam. of Tunnel shaft *15 3/4"* Diam. of Crank shaft journals *17"* Diam. of Crank pin *17"* size of Crank webs *12" x 20"*

Diameter of screw *20'-0"* Pitch of screw *22'-6"* No. of blades *4* state whether moveable *yes* total surface *102 sq ft*

No. of Feed pumps *2* diameter of ditto *5 3/4"* Stroke *33"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *5 3/4"* Stroke *33"* Can one be overhauled while the other is at work *yes*

Where do they pump from *All compartments*

No. of Donkey Engines *One* Size of Pumps *9 1/2" x 10" x 4 3/4"* Where do they pump from *Sea, bilges hotwells and tanks*
also the 3" fire engine

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 *2* and sizes *8"* Are they connected to condenser, or to circulating pump *Circulating pumps.*

How are the pumps worked *by levers except circulating pump worked by separate engine*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*

Are they 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 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*

Are the pipes 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 *on stocks before launching*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *upper platform*

BOILERS, &c.—

Number of Boilers *Two* Description *Multitubular Round* Whether Steel or Iron *Steel*

Working Pressure *90 lbs.* Tested by hydraulic pressure to *180 lbs.* Date of test *19th November*

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 *184.* Description of safety valves *direct spring* No. to each boiler *Three*

Area of each valve *23.7"* 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"* Diameter of boilers *18'-0"*

Length of boilers *17'-6"* description of riveting of shell long. seams *treble riv d. butt* circum. seams *d. lap* Thickness of shell plates *1"*

Diameter of rivet holes *1 1/8"* whether punched or drilled *drilled* pitch of rivets *3 3/8" & 6 3/4"* Lap of plating *Butts 18"*

Percentage of strength of longitudinal joint *83 1/2* working pressure of shell by rules *90 lbs.* size of manholes in shell *12" x 16"*

Compensating rings *double riv angle 6" x 5" x 7/8"* No. of Furnaces in each boiler *8*

Outside diameter *46"* length, top *7'-0"* bottom *through* thickness of plates *1/2"* description of joint *welded* if rings are fitted *corrug^d*

Greatest length between rings *—* working pressure of furnace by the rules *130 lbs.* combustion chamber plating, thickness, sides *1/2"* back *—* top *1/2"*

Pitch of stays to ditto, sides *9" x 9"* back *—* top *8" x 9"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *95 lbs.* Diameter of stays at smallest part *1.3"* working pressure of ditto by rules *128 lbs.* end plates in steam space, thickness *15/16"*

Pitch of stays to ditto *15" x 21"* how stays are secured *put riv wash^r* working pressure by rules *110 lbs.* diameter of stays at smallest part *2 3/4"* steel bars. working pressure by rules *128 lbs.* Front plates at bottom, thickness *1/16"* Back plates, thickness *1/16"*

Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 1/2"* pitch of tubes *5" x 4 3/4"* thickness of tube plates, front *1/16"* back *1/16"* how stayed *stubs* pitch of stays *9 1/2" x 15"* width of water spaces *6"*

Diameter of Superheater or Steam chest *None.* 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 *—*

Ship
Form No. 3-70-2784-Transfer Ink.



6905 98

DONKEY BOILER— Description *Horizontal Multitubular Stret.*
 Made at *Glasgow* by whom made *J & G. Thomson* when made *18845* where fixed *Stokehold.*
 Working pressure *90 lb.* tested by hydraulic pressure to *180 lb.* No. of Certificate *1432* fire grate area *34 sq ft* description of safety valves *d. Spring* No. of safety valves *two* area of each *6.5"* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *No.* diameter of donkey boiler *10'-0"* length *8'-10"* description of riveting *d. butt.*
 Thickness of shell plates *9/16* diameter of rivet holes *3/4"* whether punched or drilled *drilled* pitch of rivets *3 1/2"* ^{Bulls} lap of plating *10 1/2"*
 per centage of strength of joint *7/8* thickness of ^{tube} crown plates *5/8* stayed by *stay tubes*
 Diameter of furnace, top *36"* bottom *—* length of furnace *6'-8"* thickness of plates *1/2"* description of joint *d. butt.*
 Thickness of furnace ^{End} crown plates *1/16* stayed by *rod stays 15" x 13" pitch* working pressure of shell by rules *90 lb.*
 Working pressure of furnace by rules *90 lbs.* diameter of uptake *—* thickness of plates ^{C.C.S.} *1/2"* ^{dia} thickness of water tubes *3 1/2"*

SPARE GEAR. State the articles supplied:— *One propeller shaft. One half crank shaft. Four propeller blades. Air recirculating pump rods. Exp and slide valve spindles. Bottom end bolts & branes. Tapered, main bearing & coupling bolts. Feed & bilge pump valves etc. Bolts & nuts assorted iron various sizes.*
 The foregoing is a correct description,
 J. Geo. Thomson *Manufacture.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The above mentioned Engines and boilers are now completed onboard in a satisfactory manner and the machinery is now in my opinion in a good & efficient working condition and eligible to be noted in the Register Book: F.L.M.C.4.85.*

The Shipping has been inspected while being rough turned and appears as far as seen to be good.

It is submitted that this vessel is eligible to have the inspection + Mr 6 4.85 recorded.

7/4/85

The amount of Entry Fee .. £ 3 : - : - received by me,
 Special £ 41 : 10 : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) .. £ - : - : - 1/4/1885
 To be sent as per margin.
 (Travelling Expenses, if any, £ - 8/-)

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

Committee's Minute TUESDAY 7 APRIL 1885

