

REPORT ON MACHINERY.

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*

on the *S. S. Lake Superior.*

Tons *2965.46*

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, hot water*

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

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 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 mark* working pressure by rules *110 lbs.* diameter of stays at smallest part *2 3/4"*

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 *—*



6905 gls

DONKEY BOILER—

Description

Horizontal Multitubular Stret.

Made at Glasgow

by whom made

J & G. Thomson

when made 1884-5 where fixed Stoker's.

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

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 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 lb.

diameter of uptake —

thickness of plates 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 & frames. Tapered main bearing & coupling bolts. Feed & bilge pump valves etc. Bolts & nuts assorted from various sizes.

The foregoing is a correct description,

J. & G. Thomson
Manufacturers.

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: **T.L.M.C. 4. 85.**

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

It is submitted that this vessel is eligible to have the indication + 4.85 recorded.

4
11 x 185

The amount of Entry Fee .. £ 3 : - : - received by me,

Special £ 41 : 10 : -

Donkey Boiler Fee £ - : - : -

Certificate (if required) .. £ - : - : -

To be sent as per margin.

(Travelling Expenses, if any, £ - 8/-)

Committee's Minute

TUESDAY 7 APRIL 1885

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

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