

# REPORT ON MACHINERY.

1478

Port of *Sunderland*

Received at London Office **10 SEP. 88**

14734

Survey held at *Sunderland*

Date, first Survey *14<sup>th</sup> June*

Last Survey *29<sup>th</sup> August 88*

Book.

(Number of Visits *14*)

Tons *385*  
*633*

on the *S.S. "Portshade"*

*W Kelsey* Built at *Sunderland* By whom built *R Thompson & Sons* When built *1888*

Machinery made at *Sunderland* By whom made *North Eastern Marine Eng Coy* when made *1888*

Machinery made at *Sunderland* By whom made *North Eastern Marine Eng Coy* when made *1888*

rated Horse Power *90*

Owners *Stephenson Clarke & Co* Port belonging to *London*

ENGINES, &c.—

Kind of Engines *C.I.D.A.S.C. Ordinary compound*

No. of Cylinders *24* Length of Stroke *30"* No. of Rev. per minute *60* Point of Cut off, High Pressure *1/2 stroke* Low Pressure *1/2 stroke*

Diam. of Crank pin *9"* size of Crank webs *10 1/2" x 6 1/2"*

Pitch of screw *14-10 1/2* No. of blades *4* state whether moveable *not* total surface *3 1/4*

Feed pumps *2* diameter of ditto *3 1/2"* Stroke *18"* Can one be overhauled while the other is at work *yes*

Bilge pumps *2* diameter of ditto *4"* Stroke *18"* Can one be overhauled while the other is at work *yes*

Where do they pump from *Tank and engine room bilges*

Donkey Engines *2* Size of Pumps *4 1/2" x 6" feed pump* Where do they pump from *Tank, engine room*

Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*

Are they connected to condenser or to circulating pump *Circulating pump*

Are the pumps worked *direct from crossheads by levers*

Are they Valves or Cocks *Both*

Are the discharge pipes above or below the deep water line *above*

Are the blow off cocks fitted with a spigot and brass covering plate *yes*

How are they protected *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

Are the stern tube, propeller, screw shaft, and all connections examined in dry dock *new vessel*

Are the crew shaft tunnel watertight *no shaft-tunnel* and fitted with a sluice door *worked from*

Boilers, &c.—

No. of Boilers *One* Description *Ordinary type* Whether Steel or Iron *Steel*

Pressure *90 lbs* Tested by hydraulic pressure to *180 lbs* Date of test *31-7-88*

Kind of superheating apparatus or steam chest *none*

Can the boiler be worked separately *only one* Can the superheater be shut off and the boiler worked separately *no superheater*

Area of fire grate surface in each boiler *45 sq ft* Description of safety valves *direct spring* No. to each boiler *2*

Are they fitted with easing gear *yes* No. of safety valves to superheater *2* area of each valve *12.56 sq in*

Smallest distance between boilers and bunkers or woodwork *14"* Diameter of boilers *13'-6"*

Description of riveting of shell long. seams *lap treble riv* circum. seams *dbl riveted* Thickness of shell plates *13/16"*

Whether punched or drilled *drilled* pitch of rivets *5"* Lap of plating *8"*

Working pressure of shell by rules *90 lbs* size of manholes in shell *16" x 12"*

No. of Furnaces in each boiler *3*

Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *102* end plates in steam space, thickness *3/4"*

How stays are secured *nuts* working pressure by rules *124 lbs* diameter of stays at

Front plates at bottom, thickness *3/4"* Back plates, thickness *3/4"*

Diameter of tubes *3 1/2"* pitch of tubes *4 1/2" x 4 1/2"* thickness of tube

How stayed *stay tubes* pitch of stays *8 1/2" x 9"* width of water spaces *1 1/4" 1 1/2" 6"*

Superheater or steam chest *none* length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

Working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with 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 *Vertical with cross tubes. Shell & fire box of steel*  
 Made at *Sunderland* by whom made *Welford Brothers* when made *18-88* where fixed *stoke hole*  
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *934* fire grate area *12 1/2* description of safety  
 valves *direct spring* No. of safety valves *1* area of each *4.04 sq ft* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *4'-6"* length *10'-0"* description of riveting *double riveted lap*  
 Thickness of shell plates *3/8" steel* diameter of rivet holes *3/4"* whether punched or drilled *punched* pitch of rivets *2 1/4"* lap of plating *4"*  
 per centage of strength of joint *42%* thickness of crown plates *1/16"* stayed by *5 stays 1 1/2" diam & uptake*  
 Diameter of furnace, top *3'-6"* bottom *4'-0"* length of furnace *3'-10"* thickness of plates *9/16"* description of joint *lap single riveted*  
 Thickness of furnace crown plates *9/16"* stayed by *5 stays, uptake & dished* working pressure of shell by rules *100 lbs*  
 Working pressure of furnace by rules *93 lbs* diameter of uptake *12"* thickness of plates *3/8" steel* thickness of water tubes *3/8"*

**SPARE GEAR.** State the articles supplied:— *Top & bottom end connecting rod bolts & nuts*  
*two main bearing bolts & nuts. one set of coupling bolts. feed and*  
*bidge pump valves. bolts. nuts & iron assorted.*

For and The foregoing is a correct description,  
*Marine Engineering Company* Manufacturers of main engine & boiler  
*Limited. H. H. H. H.*

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

*The main steam pipes have been tested by hydraulic pressure*  
*to 180 lbs per square inch. The machinery has been constructed under*  
*special survey, the material and workmanship are good and efficient*  
*and the engine when tried under steam worked satisfactorily.*  
*In my opinion the machinery of this vessel is in good order and*  
*safe working condition and eligible for the notification in the Register*  
*Part of LMC 9-88*

The amount of Entry Fee .. £

Special .. £

Donkey Boiler Fee .. £

Certificate (if required) .. £

(Travelling Expenses, if any, £)

Committee's Minute

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



Lloyd's Register  
Foundation