

REPORT ON MACHINERY.

1478

Port of Sunderland

Received at London Office 10 SEP. 88

14737

Survey held at Sunderland

Date, first Survey 14th June

Last Survey 29th August 1888

Book. on the S.S. "Portshade"

(Number of Visits 14)

Tons 385
633

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 Co when made 1888

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

Indicated Horse Power 90 Owners Stephenson Clarke & Co Port belonging to London

ENGINES, &c.

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

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

Diameter of Screw shaft 9 1/4" Diam. of Tunnel shaft 8 3/4" Diam. of Crank shaft journals 9" Diam. of Crank pin 9" size of Crank webs 10 1/2" x 6 1/4"

Number of screws 11-9" 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 1/4" 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

Do they pump from Tank and engine room bilges

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

Do they well & sea 16" x 10" Clarke & Dawson

Are the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes

Bilge injections one and sizes 3 1/2" Are they connected to condenser, or to circulating pump Circulating pump

Are the pumps worked direct from crossheads by levers

Are there direct connections with the sea 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 stowhold 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

Are the pipes carried through the bunkers none How are they protected by covers

Are the 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

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

Is the screw shaft tunnel watertight no shaft-tunnel and fitted with a sluice door worked from

BOILERS, &c.

Number of Boilers one Description Ordinary type Whether Steel or Iron Steel

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

Is there any 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

Area of each valve 12.56 sq ft Are they fitted with easing gear yes No. of safety valves to superheater 2

Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 14" Diameter of boilers 13-6"

Diameter of boiler 9-4" description of riveting of shell long. seams lap treble riv circum. seams dbl riveted Thickness of shell plates 13/16"

Diameter of rivet holes 1 1/4" whether punched or drilled drilled pitch of rivets 5" Lap of plating 8"

Percentage of strength of longitudinal joint 45% working pressure of shell by rules 90 lbs size of manholes in shell 16" x 12"

Number of compensating rings 8 x 13/16" No. of Furnaces in each boiler 3

Diameter 3-5" length, top 6-0" bottom 6-0" thickness of plates 7/16" description of joint welded, Purves pt. if rings are fitted ribbed

Length between rings 9" working pressure of furnace by the rules 122 combustion chamber plating, thickness, sides 1/2" back 1/2" top 9/16"

Are stays fitted with nuts or riveted heads nuts working pressure of plating by

Rules 94 lbs 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

Smallest part 2 1/4" working pressure by rules 103 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 3/4"

Pitch of stays 13 1/4" working pressure by rules 98 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2" thickness of tube

Are they stayed stay tubes pitch of stays 8 3/4" x 9" width of water spaces 1 1/4, 1 1/8, 6"

Are there Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

Are they worked by rules — diameter of flue — thickness of plates — If stiffened with rings —

Are they worked 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 *Vertical with cross tubes. Shell & fire box of steel*
 Made at *Sunderland* by whom made *Welford Brothers* when made *1888* where fixed *stoke hole*
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *934* fire grate area *12 sq* description of safe
 valves *direct spring* No. of safety valves *1* area of each *4.04 sq* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *11-6"* length *10-0"* description of riveting *dbl 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 *14-0"* 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. Swin*

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

It is submitted that the vessel is eligible to have the record of LMC 9-88
10/9/88

Salmon

The amount of Entry Fee .. £ *7* : *0* : *0* *also*
 Special .. £ *13* : *10* : *0*
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : *13/9/88*
 (Travelling Expenses, if any, £)

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

Committee's Minute *11 SEPT 1888*
LMC 9, 88

