REPORT ON MACHINERY.

47

Port of West Hartlepool

HOURS 1 MAY 1890

Received at London Office 18

No. 47

No. in Reg. Book.

Survey held at Stockton Date, first Survey 29th Oct'r 89 Last Survey 28th April 1890

(Number of Visits 35)

on the Screw Steamer "Newby." 2167 Tons 1466.

Master J. A. Musquest Built at Stockton By whom built Messrs Ropner & Sons When built 1890

Engines made at Stockton By whom made Messrs Blair & Co. Ltd when made 1890

Boilers made at Stockton By whom made Messrs Blair & Co. Ltd when made 1890

Registered Horse Power 290 Owners R. Ropner & Co. Port belonging to West Hartlepool

Manufacturers " " 160

" " 201 By Rule.

ENGINES, &c.—

"Triple expansion"

Description of Engines Inverted, Triple Expansion, 3 Cylinders & 3 Cranks.

Diameter of Cylinders 21", 35", 57" Length of Stroke 39" No. of Rev. per minute 60 Point of Cut off, High Pressure ½ stroke Low Pressure ½ stroke

Diameter of Screw shaft 11¾" Diam. of Tunnel shaft 11" Diam. of Crank shaft journals 11½" Diam. of Crank pin 12" size of Crank webs 19" x 7⅜"

Diameter of screw 15.0 Pitch of screw 15.0" No. of blades 4 state whether moveable no total surface 61 sq. ft

No. of Feed pumps 2 diameter of ditto 2¾" Stroke 28" Can one be overhauled while the other is at work yes.

No. of Bilge pumps 3 diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work yes.

Where do they pump from Fore & main Holds, E.R. Bilges, Ballast tanks, Sea & after well.

No. of Donkey Engines 2 Size of Pumps (7½" x 9") (4" x 8) Where do they pump from Feed – Sea, Hotwell, Tanks and Boilers, Ballast – all Tanks, E.R. Bilges, Fore main Holds, open well, Sea thro' Condenser.

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 6" dia Are they connected to condenser, or to circulating pump Circulating pump.

How are the pumps worked By levers from the low pressure piston rod crosshead.

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 New vessel, before launching.

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top platform of Eng. Room.

BOILERS, &c.—

Number of Boilers Two Description Cyl. Mult. Single Ended Whether Steel or Iron Steel

Working Pressure 160 lb. Tested by hydraulic pressure to 320 lb. Date of test 10th March 1890.

Description of superheating apparatus or steam chest None. Heating Surface 2990 Sq. feet.

Can each boiler be worked separately Yes. Can the superheater be shut off and the boiler worked separately No superheater

No. of square feet of fire grate surface in each boiler 37 Description of safety valves Spring No. to each boiler 2

Area of each valve 4.9 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 16" Diameter of boilers 12'.9¾"

Length of boilers 10'.0" description of riveting of shell long. seams double butt straps circum. seams double rivetted Thickness of shell plates 1 3/16"

Diameter of rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 1 row 7¼", 2 rows 3⅝" Lap of plating 8 7/16"

Per centage of strength of longitudinal joint 83.6 working pressure of shell by rules 167 lb. size of manholes in shell 16" x 12"

Size of compensating rings 28" x 24" x 1 3/16" No. of Furnaces in each boiler 2

Outside diameter 3'.7" length, top 6'.3" bottom 6'.3" thickness of plates (ribbed) 19/32" description of joint welded if rings are fitted no

Greatest length between rings — working pressure of furnace by the rules 174 lb. combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"

Pitch of stays to ditto, sides 7½" x 7¼" back 7½" x 7" top 7½" x 7¼" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 172 lb. Diameter of stays at smallest part 1 7/16" working pressure of ditto by rules 172 lb. end plates in steam space, thickness 1 5/32"

Pitch of stays to ditto 17¼" x 17" how stays are secured double nuts & washers working pressure by rules 161 lb. diameter of stays at smallest part 2 5/8" working pressure by rules 166 lb. Front plates at bottom, thickness 1" Back plates, thickness 1"

Greatest pitch of stays 12½" working pressure by rules 163 lb. Diameter of tubes 3¼" Set pitch of tubes 4 5/8" x 4 5/8" thickness of tube plates, front 1" back ⅞" how stayed stay tubes pitch of stays 9¼" x 9¼" width of water spaces 1⅜"

Diameter of Superheater or Steam chest — 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 —

Steel

DONKEY BOILER— Description Meredith patent.

Made at Stockton by whom made Riley Bros. when made 22·3·90 where fixed In Stokehold

Working pressure 80 lbs; tested by hydraulic pressure to 160 lbs No. of Certificate 1008 fire grate area 17·7 Sq: ft: description of safety valves Spring No. of safety valves One area of each 9·62 Sq: ins if fitted with easing gear Yes if steam from main boilers enter the donkey boiler No diameter of donkey boiler 5'. 6". length 13'. 0". description of riveting Long: Lap Double

Thickness of shell plates 3/8" diameter of rivet holes 13/16". whether punched or drilled Punch: pitch of rivets 2 7/16" lap of plating 4 1/2" per centage of strength of joint 41 thickness of crown plates 3/8" stayed by Hemispherical.

Diameter of furnace, top 4'. 1 1/4". bottom 4'. 1 1/4" length of furnace 2'. 0". thickness of plates 1/2". description of joint Lap Single

Thickness of furnace crown plates 1/2". stayed by Hemispherical working pressure of shell by rules 80 lbs

Working pressure of furnace by rules 81 lbs: diameter of uptake — thickness of plates — thickness of water tubes —

SPARE GEAR. State the articles supplied:— 2 Main Bearing Bolts nuts, 1 set Coupling Bolts, 2 Each Top & Bottom End Bolts nuts. 1 Propellor. 1 set Feed and Bilge pump valves. 1 set Piston Springs. Bolt nuts asst: Iron asst' Sizes.

The foregoing is a correct description,

Tho Blair Ho. Ld
E W Blair Manufacturer. of Engines & Main boilers

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

The Materials and Workmanship are of the best description.

The Engines & Boilers have been constructed under Special Survey; when fitted on board the vessel the Engines were tried and worked satisfactorily, while with full steam up the Main Boilers were found tight and their Safety Valves are now set to carry a working press: of 160 lbs per Sq: in:

The whole Machinery is now in good and efficient condition and eligible in my opinion to have the notation ✠ L. M. C. 4, 90, marked in the Society's Register Book.

It is submitted that this Vessel is eligible to have ✠LMC 4-90 recorded. W.H.
1.5.90

The amount of Entry Fee .. £ 2 : — : — received by me,
Special .. .. .. £ 30 : 1 : —
Donkey Boiler Fee .. .. £ : :
Certificate (if required) .. £ : : 29·4 1890
To be sent as per margin.
(Travelling Expenses, if any, £)

RHD

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

Committee's Minute FRIDAY 2 MAY 1890

+ LMC 4/90

R. E. TAYLOR & SON, STEAM PRINTERS, 19 OLD STREET, GOSWELL ROAD, LONDON, E.C.