REPORT ON MACHINERY.

No. 18532

No. in Reg. Book. Survey held at Huddersfield, Newcastle & Blyth. Date, first Survey Lpool 1 April Nwc. 10th Feby Received at London Office THURS 9 JULY 1885 Last Survey Lpool May 29th Nwc. 27th June 1885

on the S. S. "Edendale" (Number of Visits 20)

Master J. H Lawson Built at Blyth By whom built Blyth Shipbg Co Tons 533 337

Engines made at Huddersfield By whom made Middleton Pratt. When built 1885

Boilers made at St Shields By whom made J. T. Eltringham. when made 1885

Registered Horse Power 80 Owners C Irving & Co when made 1885

Port belonging to Newcastle

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing

Diameter of Cylinders 23" & 42" Length of Stroke 27 No. of Rev. per minute 70 Point of Cut off, High Pressure 5/8 Low Pressure 1/2

Diameter of Screw shaft 7 3/4" Diam. of Tunnel shaft 7 1/2" Diam. of Crank shaft journals 7 1/2" Diam. of Crank pin 7 3/4 size of Crank webs 8 3/4 × 4 5/8

Diameter of screw 10-0 Pitch of screw 16-9 No. of blades 4 state whether moveable no total surface 30 □

No. of Feed pumps 2 diameter of ditto 3 1/8 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 3 3/8 Stroke 13 1/2 Can one be overhauled while the other is at work yes

Where do they pump from Engine room & after well

No. of Donkey Engines One Size of Pumps 4 1/2" D. × 9" (double acting) Where do they pump from Sea, tanks, Engine room & after well.

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 1 and sizes 4" Are they connected to condenser, or to circulating pump Circg pump

How are the pumps worked lever over condenser

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 while building

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

BOILERS, &c.—

Number of Boilers One Description Cylindrical Whether Steel or Iron Steel

Working Pressure 85 Tested by hydraulic pressure to 170 Date of test 13-5-85

Description of superheating apparatus or steam chest Vertical Cylinder

Can each boiler be worked separately ✓ Can the superheater be shut off and the boiler worked separately ✓

No. of square feet of fire grate surface in each boiler 52 □ Description of safety valves Spring No. to each boiler 2

Area of each valve 12.56 □ 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 12-6

Length of boilers 10-0 description of riveting of shell long. seams treble lap circum. seams double lap Thickness of shell plates 3/4

Diameter of rivet holes 1 1/8 whether punched or drilled drilled pitch of rivets 4 1/2" Lap of plating 8"

Per centage of strength of longitudinal joint 75 working pressure of shell by rules 86 size of manholes in shell 16 × 12

Outside diameter 39 1/2 length, top 6-9 bottom 9-6 thickness of plates 1/2 & 19/32 No. of Furnaces in each boiler 3

Greatest length between rings description of joint lap single if rings are fitted no

working pressure of furnace by the rules 85 combustion chamber plating, thickness, sides 1/2 back 19/32 top 1/2

Pitch of stays to ditto, sides 9 1/2 back 11 1/4 top Cir If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 85 Diameter of stays at smallest part 1 5/16 & 1 1/2 working pressure of ditto by rules 89 end plates in steam space, thickness 3/4

Pitch of stays to ditto 15 1/2 how stays are secured D N & washers working pressure by rules 85 diameter of stays at smallest part 1 3/4 working pressure by rules 92

Greatest pitch of stays as per plan working pressure by rules 116 85 Front plates at bottom, thickness 3/4 Back plates, thickness 11/16

Diameter of tubes 3 1/2 thickness of tube plates, front 3/4 back 11/16 how stayed tubes pitch of tubes 4 3/4 pitch of stays 14 1/2 width of water spaces 5

Diameter of ~~Superheater or~~ Steam chest 3-9 length 5-0 thickness of plates 3/8 description of longitudinal joint lap double diam. of rivet holes 3/4

Pitch of rivets 2 1/2 working pressure of shell by rules 105 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 9/16 how stayed dished

Superheater or steam chest; how connected to boiler Contracted neck.

Report recd 1/7/85 sent to Cm 8/7/85

Boiler Tracing & scroll of Shaft Crank Shaft report now forwarded

NWC793-0215

DONKEY BOILER— Description Vertical X tubes (Steel)

Made at Gateshead by whom made Clarke Chapman & Co when made 18-5-85 where fixed stokehole

Working pressure 50 tested by hydraulic pressure to 100 No. of Certificate 1852 fire grate area 10.0 description of safety valves spring No. of safety valves 1 area of each 5.940 if fitted with easing gear yes if steam from main boilers can enter the donkey boiler no diameter of donkey boiler 4-6 length 10-6 description of riveting double lap

Thickness of shell plates 5/16 diameter of rivet holes 11/16 whether punched or drilled pd annealed pitch of rivets 2 9/16 lap of plates 3 3/4

per centage of strength of joint 72 thickness of crown plates 7/16 stayed by 3 Stays 1 1/4 Diar

Diameter of furnace, top 3-2 bottom 3-10 length of furnace 5-0 thickness of plates 3/8 description of joint single

Thickness of furnace crown plates 3/8 stayed by as above working pressure of shell by rules [illegible]

Working pressure of furnace by rules 65 diameter of uptake 12 thickness of plates 3/8 thickness of water tubes 3/8

SPARE GEAR. State the articles supplied :— Two top end, two bottom end, two main bearing & one set coupling bolts, one set feed & bilge pump valves, set of piston springs, assorted bolts & nuts & a few bars of iron.

The foregoing is a correct description,

Wigham Richardson [illegible] DW Fitzgerald Manufacturer of Main Boiler

Midd Eln Pratt Manufacturer of Engines

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

The machinery of this vessel has been constructed under special survey. the material & workmanship is good.

This vessel is eligible in our opinion to have + L.M.C. 6.85 recorded

Copy of letter forwarded to Leith Surveyors appended herewith.
Letter from Leith Surveyors appended herewith

It is submitted that this vessel is eligible to have the notation + LMC 6.85 recorded DE 10/7/85

WER (R) Jhm

The amount of Entry Fee Nwc. £ 1 : – : – received by me.
Special Liv. 4 ; Nwc. £ 8 : – : –
Donkey Boiler Fee .. .. £ – : – : –
Certificate (if required) gratis : – : – 7th July 1885 WL&G
To be sent as per margin.
(Travelling Expenses, if any, £ Nwc. 1.19.6 ; Sfords 4.10.0 (pd. in Liv.)

John H Heck. & Wm. McGregor
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUESDAY 14 JULY 1885
+ LMC

Robert Edmund Taylor & Son Printers, 19, Old Street, Goswell Road, London, E.C.