No. 9827

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL.

Received at London Office MON. 25 NOV 1895 18

No. in Reg. Book. Survey held at WEST HARTLEPOOL Date, first Survey 4th May Last Survey 21 Nov 1895 (Number of Visits 53)

on the S.S. "Ras Elba" Tons Gross 2735 Net 1768.5

Master E. S. Moore Built at Hartlepool By whom built Furness Withy & Co When built 1895

Engines made at Hartlepool By whom made T. Richardson & Son. Ld. when made 1895

Boilers made at Do By whom made Do Do when made 1895

Registered Horse Power Owners The Ras Steam Shipping Co. Ltd. Port belonging to London

Nom. Horse Power as per Section 28 240

ENGINES, &c.— Description of Engines Triple expansion No. of Cylinders Three

Diameter of Cylinders 23. 37½. 61½ Length of Stroke 39 Revolutions per minute 58 Diameter of Screw shaft as per rule 10.75 as fitted 11¼

Diameter of Tunnel shaft as per rule 10.21 as fitted 10¾ Diameter of Crank shaft journals 11¼" Diameter of Crank pin 11¾ Size of Crank webs 7½ × 17⅞

Diameter of screw 15'. 6" Pitch of screw 16.0" No. of blades 4 State whether moveable No Total surface 69 ft

No. of Feed pumps 2 Diameter of ditto 2¾ Stroke 26" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3¾ Stroke 26" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 3½ × 7 & 8½ × 7 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Four. two 3"s two 3½" diam^rs In Holds, &c. Fore hold well one 3½". Main hold well one 3½". After hold well one 3½". Tunnel well one 2½".

No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump Pump Is a separate donkey suction fitted in Engine room & size Yes 3½

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None

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 Below

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 and all boiler mountings accessible at all times Yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Newbuild Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c.— (Letter for record (S.)) Total Heating Surface of Boilers 3664

No. and Description of Boilers Two Single ended Working Pressure 160 Tested by hydraulic pressure to 320

Date of test 19.8.95 Can each boiler be worked separately Yes Area of fire grate in each boiler 43.5 No. and Description of safety valves to each boiler Two Spring Area of each valve 7.06 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean diameter of boilers 14'. 3"

Length 9'. 9" Material of shell plates Steel Thickness 1 5/32 Description of riveting: circum. seams Lap double long. seams D.B. treble

Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 7 7/8" Lap of plates or width of butt straps 19½"

Per centages of strength of longitudinal joint rivets 85.76 plate 85.3 Working pressure of shell by rules 164.5 Size of manhole in ends 16" × 12"

Size of compensating ring — No. and Description of Furnaces in each boiler 3 Morison Material Steel Outside diameter 3'. 6 3/4"

Length of Furnaces plain part top 6'. 0" bottom 6'. 6" Thickness of plates crown 1/2" bottom Description of longitudinal joint welded No. of strengthening rings —

Working pressure of furnace by the rules 176 Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 5/8" Top 19/32 Bottom 13/16"

Pitch of stays to ditto: Sides 8 5/8" Back 8¾ Top 8½ If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 164

Material of stays Steel Diameter at smallest part 1⅜" Area supported by each stay 72 □ Working pressure by rules 164 End plates in steam space:

Material Steel Thickness 1 1/16 Pitch of stays 18¼ × 16¼ How are stays secured Nuts Working pressure by rules 160 Material of stays Steel

Diameter at smallest part 2 5/8" Area supported by each stay 296 Working pressure by rules 164 Material of Front plates at bottom Steel

Thickness 13/16" Material of Lower back plate Steel Thickness 24/32 Greatest pitch of stays 12" Working pressure of plate by rules 170

Diameter of tubes 3¼" Pitch of tubes 4½" Material of tube plates Steel Thickness: Front 31/32" Back ¾" Mean pitch of stays 9"

Pitch across wide water spaces 14¼" Working pressures by rules 166.5 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 7½ × 1¾ Length as per rule 2'. 4" Distance apart 8½" Number and pitch of Stays in each Two 8¼"

Working pressure by rules 206 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

separately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet

holes — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

If stiffened with rings — Distance between rings — Working pressure by rules — End plates: Thickness — How stayed —

Working pressure of end plates — Area of safety valves to superheater — Are they fitted with easing gear —

DONKEY BOILER— Description Vertical with Lin clop tubes

Made at Stockton By whom made T. Richardson & Co When made 1895 Where fixed Stokehold

Working pressure 80 tested by hydraulic pressure to 160 No. of Certificate 1894 Fire grate area 28 sq Description of safety valves Spring

No. of safety valves 2 Area of each 5.94 Pressure to which they are adjusted 81 lbs If fitted with easing gear Yes If steam from main boilers ca

enter the donkey boiler No Diameter of donkey boiler 7'. 0" Length 14'. 0" Material of shell plates Steel Thickness 13/32

Description of riveting long. seams Lap double Diameter of rivet holes 13/16" Whether punched or drilled Punched Pitch of rivets 2 3/4

Lap of plating 4 1/4 Per centage of strength of joint Rivets 68.6 Plates 70.4 Thickness of shell crown plates 9/16 Radius of do. 5'. 9" No. of Stays to do. 7

Dia. of stays 1 3/4" Diameter of furnace Top 5'. 3 Bottom 6.4 1/2 Length of furnace 6'. 0" Thickness of furnace plates 21/32 Description

joint Lap Single Thickness of furnace crown plates 3/8" Stayed by Same as Shell Working pressure of shell by rules 82

Working pressure of furnace by rules 82 lbs Diameter of uptake 16" Thickness of uptake plates 7/16 Thickness of water tubes 3/8"

SPARE GEAR. State the articles supplied :— Propeller, 2 Main bearing bolts & nuts, 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 Set of Shaft coupling bolts & nuts, Piston Springs, 1 Set of feed valves, 1 Set of filter valves, nuts, bolts, & iron assorted.

The foregoing is a correct description,

For THOMAS RICHARDSON & SONS, LIMITED

Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been specially surveyed during construction the material & workmanship good and renders the vessel eligible in our opinion to have the Record ✠ L.M.C. 11.95 in the Register Book of the Society.

It is submitted that this vessel is eligible for THE RECORD + L. M. C. 11.95

J.C.S.

25.11.95.

Certificate (if required) to be sent to [illegible]

			When applied for,
The amount of Entry Fee..	£ 2	: :	22 11 1895
Special	£ 32	: :	When received,
Donkey Boiler Fee	£	: :	23 11 1895
Travelling Expenses (if any)	£	: :	

TUES. 26 NOV 1895

Committee's Minute + L M C 11.95

Assigned

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Richard Hirst *J Morris*

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

MACHINERY CERTIFICATE WRITTEN

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*** Thes particul

Signal Letters (if

Official Number.
105760
No., Date, and Port
Whether British or Foreign Built.
British
Number of Decks
Number of Masts
Rigged ... ...
Stern ... ...
Build ... ...
Galleries ...
Head ... ...
Framework and desc vessel ... ...
Number of Bulkheads
Number of water ball and their capacity
Total to quarter the d at side amidships t

No. of Engines	Descripti
one	Engines Inverted Triple Exp
	Boilers. Number ..... Iron or Steel..... Pressure when loa

GROSS

Under Tonnage Deck

Closed-in spaces above

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Forecle ...

last Round house

Other closed-in spac

Exce

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No. of ers one

Name, dence, and

John Morris

Dated 12 d

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