

Rpt. 4.

REPORT ON MACHINERY.

Port of

Sunderland

Received at London Office

IUES. APR 23 1907

No. in Survey held at

Sunderland

Date, first Survey 14th DecemberLast Survey 27th March 1904

Reg. Book.

95

of the Steel Screw Steamer MARINA

(Number of Visits 28)

Master J. Radina

Built at Newcastle

By whom built R. Stephenson & Co. Ltd.

Gross 2853

Net 1816

When built 1904

Engines made at

Sunderland

By whom made

Richardsons, Westgarth & Co. Ltd.

when made 1904

Boilers made at

Sunderland

By whom made

Richardsons, Westgarth & Co. Ltd.

when made 1904

Registered Horse Power

Owners Nav Libera Triestina

Port belonging to Trieste

Nom. Horse Power as per Section 28

262

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines Triple Expansion (Inverted) No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 23-38-62 Length of Stroke 42 Revs. per minute 64 Dia. of Screw shaft as per rule 12.31 as fitted 13 Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight

in the propeller boss no If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two

liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4-6

Dia. of Tunnel shaft as per rule 11.02 as fitted 11.5 Dia. of Crank shaft journals as per rule 11.58 as fitted 12 Dia. of Crank pin 12 Size of Crank webs 7/8 x 1/2 Dia. of thrust shaft under

collars 13 Dia. of screw 16-0 Pitch of Screw 16-6 No. of Blades four State whether moveable no Total surface 82 ft

No. of Feed pumps two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work yes

No. of Bilge pumps two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work yes

No. of Donkey Engines two Duplex Sizes of Pumps 8 x 9 x 8 1/2 6 x 4 x 6 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two 3 1/2 in. mags, one 3 1/2 in. Centre In Holds, &c. In all holds two 3 in. Tunnel

Well one 2 1/4

No. of Bilge Injections one sizes 5 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 4

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 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 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

Dates of examination of completion of fitting of Sea Connections 28-2-07 of Stern Tube 23 1/2 Screw shaft and Propeller 20 1/2

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons Ltd.

Total Heating Surface of Boilers 4140 Is Forced Draft fitted no No. and Description of Boilers two, single ended, cyl. mult

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs. Date of test 25/2/04 No. of Certificate 2581

Can each boiler be worked separately yes Area of fire grate in each boiler 5 1/2 No. and Description of Safety Valves to

each boiler two, direct spring Area of each valve 4.04 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 21 Mean dia. of boilers 15-0 Length 10-6 Material of shell plates steel

Thickness 1 1/8 Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap & R.

long. seams 5 BS-TR Diameter of rivet holes in long. seams 1 9/32 Pitch of rivets 8 Lap of plates or width of butt straps 16 1/2

Per centages of strength of longitudinal joint rivets 85.3 plate 84 Working pressure of shell by rules 162.5 lbs. Size of manhole in shell end 18 x 12

Size of compensating ring flanged No. and Description of Furnaces in each boiler three, plain Material steel Outside diameter 43 1/2

Length of plain part top 4-0 bottom 3-4 Thickness of plates crown 3/4 bottom 3/4 Description of longitudinal joint weld No. of strengthening rings one

Working pressure of furnace by the rules 162 lbs. Combustion chamber plates: Material steel Thickness: Sides 1/8 Back 1/8 Top 1/8 Bottom 3/4

Pitch of stays to ditto: Sides 8 1/2 x 11 1/2 Back 11 x 14 1/2 Top 10 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads none Working pressure by rules 160 lbs

Material of stays steel Diameter at smallest part 1 1/8 Area supported by each stay 98.15 Working pressure by rules 164.18 End plates in steam space:

Material steel Thickness 1 3/16 Pitch of stays 4 x 22 How are stays secured 5/16 Working pressure by rules 163.4 lbs Material of stays steel

Diameter at smallest part 2-8 Area supported by each stay 3 3/4 Working pressure by rules 163.4 lbs Material of Front plates at bottom steel

Thickness 3/4 Material of Lower back plate steel Thickness 3/4 Greatest pitch of stays 13 x 8 5/8 Working pressure of plate by rules 160 lbs

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 11 1/4

Pitch across wide water spaces 14 Working pressures by rules 206.4 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 9 x 1 1/2 Length as per rule 30 Distance apart 10 1/2 Number and pitch of stays in each two 8 1/2

Working pressure by rules 162 lbs Superheater or Steam chest; how connected to boiler — 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 —

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