

REPORT ON MACHINERY.

Port of *Glasgow*Received at London Office *THUR, 13 APR 1899*No. in Survey held at *Glasgow*
Reg. Book.Date, first Survey *16 March 1898* Last Survey *6 April 1899*(Number of Visits *81*)

on the

*S. S. EASTERN.*Tons *586.16*
Gross *586.16*
Net *2272.49*Master *W. Ellis*Built at *Glasgow*By whom built *R Napier & Son*When built *1899*Engines made at *Glasgow*By whom made *R Napier & Son*when made *1899*Boilers made at *Glasgow*By whom made *R Napier & Son*when made *1899*

Registered Horse Power

Owners *Eastern & Australian S.S. Co.*Port belonging to *London*Nom. Horse Power as per Section 28 *729*Is Refrigerating Machinery fitted *Ships use only*Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines

*Triple Expansion*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *27-45-73*Length of Stroke *48*Revs. per minute *75*Dia. of Screw shaft *14-175*as per rule *14-175*Lgth. of stern bush *5-1 1/2*Dia. of Tunnel shaft *13 3/4*Dia. of Crank shaft journals *13 3/4*as per rule *13 3/4*Dia. of Crank pin *14 1/2*Size of Crank webs *28x9 1/2*

Dia. of thrust shaft under

collars *14 1/2*Dia. of screw *17-0*Pitch of screw *19-0*No. of blades *4*State whether moveable *Yes*Total surface *74 8*No. of Feed pumps *2*

Wires

Diameter of ditto *10 1/2 x 8*Stroke *18*Can one be overhauled while the other is at work *Yes*No. of Bilge pumps *2*Diameter of ditto *4 1/2*Stroke *28*Can one be overhauled while the other is at work *Yes*No. of Donkey Engines *3*

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *2-3" bilge with connections to Ballast*In Holds, &c. *4-3" from fore hold. 2-3" from after hold*Sound pipe *1-3" direct to bilge*Is a separate donkey suction fitted in Engine room & size *3"*No. of bilge injections *1*sizes *5"*Connected to condenser, or to circulating pump *Yes*Are all the bilge suction pipes fitted with roses *Yes*Are the roses in Engine room always accessible *Yes*Are all connections with the sea direct on the skin of the ship *Yes*Are they Valves or Cocks *Both*Are the discharge pipes above or below the deep water-line *Above*Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Yes*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 *Yes*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 *19.1.99*Is the screw shaft tunnel watertight *Yes*Is it fitted with a watertight door *Yes*worked from *Upper deck*Is forced draft fitted *Naval*

BOILERS, &c.—

(Letter for record *S.*)Total Heating Surface of Boilers *6464 5*Working Pressure *185 lbs*Tested by hydraulic pressure to *370 lbs*No. and Description of Boilers *Two D.E. Multitubular*Date of test *20.9.99*Can each boiler be worked separately *Yes*Area of fire grate in each boiler *90.64*

No. and Description of safety valves to

each boiler *2 Spring loaded*Area of each valve *14.18"*Pressure to which they are adjusted *188 lbs*Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *12"*Mean dia. of boilers *13.3"*Length *18.0"*Material of shell plates *Steel*Thickness *1 3/8"*Range of tensile strength *295*Are they welded or flanged *No*Descrip. of riveting: cir. seams *Double Lap*long. seams *Trieb. D. Butt*Diameter of rivet holes in long. seams *1 1/8"*Pitch of rivets *8 3/8"*Lap of plates or width of butt straps *19 1/4"*

Per centages of strength of longitudinal joint

rivets *94.3*Working pressure of shell by rules *211 lbs*Size of manhole in shell *17 1/2 x 13 1/2*Material *Steel*Outside diameter *3-6"*Size of compensating ring *Two ribs*No. and Description of Furnaces in each boiler *3 Horizontal*Material *Steel*Length of plain part *top 17/32*Description of longitudinal joint *welded*

No. of strengthening rings

Working pressure of furnace by the rules *199.6*Combustion chamber plates: Material *Steel*Thickness: Sides *9/16*Back *9/16*Top *9/16*Bottom *27/32*Pitch of stays to ditto: Sides *7 1/2"*Back *7 1/2"*Top *7 1/2"*If stays are fitted with nuts or riveted heads *Nuts*Working pressure by rules *194 lbs*Material of stays *Steel*Diameter at smallest part *1.34"*Area supported by each stay *56"*Working pressure by rules *200 lbs*

End plates in steam space:

Material *Steel*Thickness *1 1/2"*Pitch of stays *14 1/2"*How are stays secured *Double nuts*Working pressure by rules *259 lbs*Material of stays *Steel*Diameter at smallest part *1.44"*Area supported by each stay *210"*Working pressure by rules *212*Material of Front plates at bottom *Steel*Thickness *1 3/16"*

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes *2 1/2"*Pitch of tubes *3 3/4 x 3 3/4"*Material of tube plates *Steel*Thickness: Front *1 3/16*Back *1 3/16*Mean pitch of stays *7 3/8"*Pitch across wide water spaces *14"*Working pressures by rules *258 lbs*Girders to Chamber tops: Material *Steel*

Depth and

thickness of girder at centre *11 x 7/8 x 2*Length as per rule *50.375*Distance apart *7 3/8"*Number and pitch of Stays in each *6 - 7 3/8"*Working pressure by rules *238*

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

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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GLS183-0306

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