

REPORT ON MACHINERY.

No. 21606

Port of Sunderland

Received at London Office **MON. 22 FEB 1904**

Survey held at Sunderland
Book.

Date, first Survey 20 Jan 03 Last Survey 11 Nov 03

on the Steel SS "Rosina" (Built 1861 No 33) (Number of Visits 22 $\frac{4}{5} = 37$)

Tons { Gross 2412
Net 2010

Built at Hoboken By whom built Loc. Union Shipyards When built 1903

Made at Sunderland By whom made North Eastern Mar. Engineering Co. when made 1903

Refrigerating Machinery fitted no Is Electric Light fitted yes when made 1903

Horse Power 287 Owners A. Embiricos Port belonging to Andros

Horse Power as per Section 28 287 Is Refrigerating Machinery fitted no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Vertical Tri. Compound Surface No. of Cylinders 3 No. of Cranks 3

of Cylinders 23 38 64 Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft 12 1/2 as per rule 12 1/2 as fitted 13 1/4 Material of screw shaft W.S.

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

propeller boss yes If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part

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

are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4'-5 1/2"

Tunnel shaft 11 1/2 as per rule 11 1/2 Dia. of Crank shaft journals 12 1/2 as per rule 12 1/2 as fitted 12 1/2 Dia. of Crank pin 12 1/8 Size of Crank webs 10 1/2 x 7 1/2 Dia. of thrust shaft under

12 1/2 Dia. of screw 16'-6" Pitch of screw 16'-6" No. of blades 4 State whether moveable No Total surface 84 sq ft

Feed pumps 2 Diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work yes

Bilge pumps 2 Diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work yes

Donkey Engines 2 Sizes of Pumps 7 1/2 x 9 1/2 x 10 1/2 x 6 x 4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

ine Room 3 of 3 1/2 & 2 of 3 in Boiler room In Holds, &c. 2 of 3 in each hold

1 of 3 1/2 in hold & tunnel well

ilge injections 1 size 4 Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size yes 3 1/2"

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 —

connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

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

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

pipes are carried through the bunkers none How are they protected —

pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

ere stern tube, propeller, screw shaft, and all connections examined in dry dock New Vessel Is the screw shaft tunnel watertight yes

ed with a watertight door yes worked from upper deck

RS, &c.— (Letter for record S) Total Heating Surface of Boilers 4417 sq ft Is forced draft fitted No

Description of Boilers 2 Cylindrical Multitubular Working Pressure 180 Tested by hydraulic pressure to 360

est 10-11-03 Can each boiler be worked separately yes Area of fire grate in each boiler 63 sq ft No. and Description of safety valves to

2 direct spring Area of each valve 7.068 sq in Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes

distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15'-4 1/2" Length 10'-6" Material of shell plates S

1 1/2 Range of tensile strength 29-32 Are they welded or flanged No Descrip. of riveting: cir. seams D.R.L. long. seams T.R.D.B.

of rivet holes in long. seams 1 3/8 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 2 1/2

of strength of longitudinal joint rivets 85-33 Working pressure of shell by rules 180-19 Size of manhole in shell 16 x 12

compensating ring flanged No. and Description of Furnaces in each boiler 3 Depth 11 3/4 Material S Outside diameter 3'-11 3/4

plain part top Thickness of plates 9 1/16 Description of longitudinal joint Welded No. of strengthening rings —

pressure of furnace by the rules 184.5 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 3/4 Top 23/32 Bottom 7/8

stays to ditto: Sides 9 3/8 x 10 Back 10 x 10 1/2 Top 9 3/8 x 9 1/4 If stays are fitted with nuts or riveted heads Plates Working pressure by rules 180.7

of stays S Diameter at smallest part 2-10 Area supported by each stay 104.37 Working pressure by rules 180.5 End plates in steam space:

S Thickness 1 5/16 Pitch of stays 22 x 20 1/4 How are stays secured DN. 1 W Working pressure by rules 182.5 Material of stays S

at smallest part 8-48 Area supported by each stay 445.5 Working pressure by rules 190.1 Material of Front plates at bottom S

13/16 Material of Lower back plate S Thickness 29/32 Greatest pitch of stays 14 x 10 1/16 Working pressure of plate by rules 186.2

of tubes 3 1/2 Pitch of tubes 4 3/4 x 4 1/4 Material of tube plates S Thickness: Front 13/16 Back 13/16 Mean pitch of stays 9 1/2 x 9 1/2

ross wide water spaces 14 1/2 Working pressures by rules 215.7 Girders to Chamber tops: Material S Depth and

of girder at centre 8 1/2 x 1 1/8 Length as per rule 2-5 1/2 Distance apart 9 3/4 Number and pitch of Stays in each 2 of 9 1/4

pressure by rules 199 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

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

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

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

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

Lloyd's Register Foundation
W468-0226

Report & plan attached - H.P.C.
DONKEY BOILER— No. Description

Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler
Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength
Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets
Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.
Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
Thickness of furnace crown plates Stayed by Working pressure of shell by rules
Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— Spare propeller, one set of coupling bolts
2 main bearing bolts - 2 Bottom end bolts - 2 top end bolts - 2 feed & bilge pump valves - 2 feed check valves - 6 Boiler tubes - 6 Condenser tubes - 6 tube stoppers - 100 ferrules - 2 safety valve springs - 2 Escape valve springs - assorted bolts nuts etc.

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO. LTD.

Manufacturer.

Dates During progress of work in shops - 1903- Jan 20 Apr 9. 20 May 11. 13. 15. 20 June 16. 27 Aug 1. 10. 19.
of Survey During erection on board vessel - 20. 23. Sep 30 Oct 6. 13. 27 Nov 6. 7. 10. 11
while building Total No. of 22 + 15 = 37
1903 Nov. 20, 24, 26. Dec 1, 10, 11, 17, 29, 31.
1904 Jan. 9-15-19-26 Feb 5-13.

Is the approved plan of main boiler forwarded herewith

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been specially surveyed during construction; the material and workmanship being good & efficient.
The machinery has been forwarded to Antwerp to be fitted on board there.

In my opinion when the machinery has been fitted on board, & found to work satisfactorily, the vessel will be eligible for the notification in the Register Book + L.M.C.

The machinery has been fitted on board in accordance with the Society's Rules. The Boilers & Engines were examined and tested under steam and the safety valves adjusted as above.

The vessel is now eligible in my opinion for the notification of + L.M.C 2-04 as recommended by the Sunderland Surveyor -

It is submitted that this vessel is eligible for THE RECORD. - L.M.C. 2. 04 ELEC LIGHT

B.B.

22. 2. 04

H.S.
22. 2. 04

The amount of Entry Fee. £ 2
Special £ 0.4
Donkey Boiler Fee £
Travelling Expenses (if any) £
When applied for, 7. 12. 1903
When received, 12/12/03

Committee's Minute

TUES. 23 FEB 1904

Assigned

+ L.M.C 2. 04

MACHINERY CERTIFICATE
WRITTEN.

P. R. Salmon & H. P. Cornish
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation