

REPORT ON MACHINERY.

Port of Newcastle

Survey held at Newcastle Date, first Survey May 8th 1901 Last Survey Dec 14th 1901
Book. (Number of Visits 31)

33 on the SS Euphrates Tons { Gross 2809.36
Net 1793.17

Builder E. E. Smith Built at Newcastle By whom built Armstrong Whitworth & Co When built 12-1901

Machinery made at Newcastle By whom made The North Eastern Marine Eng^{rs} & C when made 12-1901

Engines made at Newcastle By whom made The North Eastern Marine Eng^{rs} & C when made 12-1901

Registered Horse Power 280 Owners Bucknall Bros Port belonging to London

Horse Power as per Section 28 280 Is Refrigerating Machinery fitted no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

of Cylinders 22 1/2, 36 1/2, 61 Length of Stroke 42" Revs. per minute 70 Dia. of Screw shaft as per rule 13" Lgth. of stern bush 4-9"

of Tunnel shaft as per rule 10 3/4" Dia. of Crank shaft journals as per rule 11 1/4" Dia. of Crank pin 12" Size of Crank webs 23 1/2, 7 1/2" Dia. of thrust shaft under

of screws 12" Dia. of screw 15-6" Pitch of screw 15-6" No. of blades 4 State whether moveable yes Total surface 74 sq ft

of Feed pumps 2 Diameter of ditto 4" Stroke 22" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 3 3/4" Stroke 22" Can one be overhauled while the other is at work yes

of Donkey Engines 3 dup Sizes of Pumps 6x4x6, 6x5 1/2x6, 9x10x9 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room four 3' x one 3 1/2' In Holds, &c. Fore, Main & After main holds two

each, Hold well one 3 1/2'

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 3 1/2"

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

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

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

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

all pipes are carried through the bunkers none How are they protected ✓

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

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

the stern tube, propeller, screw shaft, and all connections examined before launch Is the screw shaft tunnel watertight yes

fitted with a watertight door yes worked from upper deck

BOILERS, &c.— (Letter for record 7) Total Heating Surface of Boilers 3810 sq ft Is forced draft fitted yes

and Description of Boilers 3 Mult. Single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

of test 14.8.07 Can each boiler be worked separately yes Area of fire grate in each boiler 23 sq ft No. and Description of safety valves to

boiler 2 direct Spring Area of each valve 4.9" Pressure to which they are adjusted 160 lbs Are they fitted with easing gear yes

least distance between boilers or uptakes and bunkers 18" Mean dia. of boilers 11-4 1/4" Length 11-0" Material of shell plates Steel

thickness 7/8" Range of tensile strength 29.32 Are they welded or flanged no Descrip. of riveting: cir. seams lap. d. r long. seams D.B.S. D.R

center of rivet holes in long. seams 1 1/8" Pitch of rivets 6 1/4" Lap of plates or width of butt straps 11 1/8"

percentages of strength of longitudinal joint 81 Working pressure of shell by rules 163 lbs Size of manhole in end and 16x12

of compensating ring flanged in No. and Description of Furnaces in each boiler 2-plain Material Steel Outside diameter 41"

of plain part top 6.9" Thickness of plates crowd 2.3" Description of longitudinal joint welded No. of strengthening rings none

working pressure of furnace by the rules 164 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/16"

of stays to ditto: Sides 10x9 1/2" Back 10x9 1/2" Top 10x9 1/2" If stays are fitted with nuts or riveted heads nut Working pressure by rules 172 lbs

material of stays Iron Diameter at smallest part 1 5/8" Area supported by each stay 97.5 sq in Working pressure by rules 160 lbs End plates in steam space:

material Steel Thickness 1 3/32" Pitch of stays 24x18 1/4" How are stays secured D N W W Working pressure by rules 161 lbs Material of stays Steel

diameter at smallest part 3 1/16" Area supported by each stay 450 sq in Working pressure by rules 167 lbs Material of Front plates at bottom Steel

thickness 7/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14 1/2" dd Working pressure of plate by rules 164 lbs

diameter of tubes 2 1/2" Pitch of tubes 3 3/8" x 3 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 7 5/8"

ch across wide water spaces 14 1/2" dd Working pressures by rules 216 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 1/4" x 3/4" plate Length as per rule 30" Distance apart 10" Number and pitch of Stays in each 2-9 1/2"

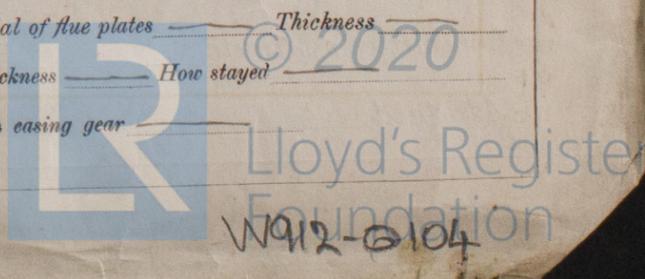
working pressure by rules 164 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

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

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

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— No. 0 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 casing gear If steam from main boiler
enter the donkey boiler None Dia. of donkey boiler Length Material of shell plates Thickness Range of t
strength Descrip. of riveting long. spms 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 Descripti
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:— Two top stwo bottom end bolts, two main beam bolts, one set coupling bolts, one set feed bilge pump valves, two sets of springs, one propeller shaft, two propeller blades, and a quantity of assorted bolts & rivets.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD. Manufacturer.

S. Hunter DIRECTOR.

Dates of Survey while building During progress of work in shops - - During erection on board vessel - - Total No. of visits 31
1901 / May 8. 16. 29. June 7. July 19. 23. 24. 29. 30. 31. July 2. 13. 14. 22. Sept 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 16. 17

Is the approved plan of main boiler forwarded herewith no, relate to donkey boiler

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

Material of screw shaft Iron (bar) Is the screw shaft fitted with a continuous liner the whole length of the stern tube no
Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned no
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 no If two liners are fitted, is the shaft lapped or protected between the liners yes.

The machinery of this vessel has been constructed & fitted on board under Special Survey the workmanship is sound & good. The machinery has been tried under steam as required by the Rules & found satisfactory & is in my opinion eligible for the record of +LMC, 12-01 in the Registered Book.

It is submitted that this vessel is eligible for THE BOARD. + LMC 12. 01. FD elec. light

The amount of Entry Fee £ 28 : 0 : 0 When applied for
Special £ 33 : 19 : 0 Dec. 24. 1901
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : : 31. 12. 01

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

Committee's Minute FRI. 27 DEC 1901

Assigned + LMC 12, 01, FD

Newcastle No. Type

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

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Signal Letters
Official Num
114.80
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Whether British
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