

REPORT ON MACHINERY.

No. 65145
MON. NOV. 24. 1913Date of writing Report 17th Nov 1913 When handed in at Local Office 21st Nov 1913 Port of NEWCASTLE-ON-TYNENo. in Survey held at Newcastle Date, First Survey 28th Jan 1913 Last Survey 15th Nov 1913
Reg. Book. on the Machinery of the S.S. Eburna (Number of Visits 45)

Master Built at Newcastle By whom built Swan Hunter & Co. Tons Gross 4735 Net 2957 When built 1913

Engines made at Newcastle By whom made Wallsend Shipway & Eng. Co. When made 1913

Boilers made at " By whom made " when made 1913

Registered Horse Power Owners Anglo-Saxon Petroleum Port belonging to London

Nom. Horse Power as per Section 28 466 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

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

Dia. of Cylinders 26, 43 & 72 Length of Stroke 48 Revs. per minute 68 Dia. of Screw shaft as per rule 14.69 Material of screw shaft as fitted 15.34

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

Is the 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

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 5'-7"

Dia. of Tunnel shaft as per rule 13.04 Dia. of Crank shaft journals as per rule 13.7 Dia. of Crank pin 14 Size of Crank webs 22 x 9 1/4 Dia. of thrust shaft under

collars 14 Dia. of screw 18-0 Pitch of Screw 18-0 No. of Blades 4 State whether moveable Yes Total surface 102 sq

No. of Feed pumps 2 Weirs Diameter of ditto 8 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 8 x 6 x 12 & 7 x 9 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 3 1/2 In Holds, &c. Oil cargo pumps

No. of Bilge Injections 1 sizes 7 1/2 Connected to condenser, or to circulating pump pumps a separate Donkey Suction fitted in Engine room & size Yes 3 1/2

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 14/10/13 of Stern Tube 14/10/13 Screw shaft and Propeller 14/10/13

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

MILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Son

Total Heating Surface of Boilers 6600 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single-ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14/7/13 No. of Certificate 8531

Can each boiler be worked separately Yes Area of fire grate in each boiler 58.6 No. and Description of Safety Valves to

each boiler 2 direct spring Area of each valve 9.62 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 14'-3 3/4 Length 11'-9 Material of shell plates Steel

Thickness 1/8 Range of tensile strength 29-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. lap

Long. seams 2 r. d. butt Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 1/4 Lap of plates or width of butt straps 17 3/4

Per centages of strength of longitudinal joint rivets 88.7 Working pressure of shell by rules 181.6 lbs Size of manhole in shell 16 x 12

Size of compensating ring flanges No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 46

Length of plain part top Thickness of plates crown 9/16 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 191.5 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 3/32

Pitch of stays to ditto: Sides 8 x 7 1/2 Back 7 1/4 x 8 1/2 Top 7 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads riveted Working pressure by rules 190.4 lbs

Material of stays Steel Diameter at smallest part 1 1/4 Area supported by each stay 63.5 Working pressure by rules 183.5 lbs End plates in steam space:

Material Steel Thickness 1/32 Pitch of stays 17 x 20 How are stays secured d. nuts Working pressure by rules 196.0 lbs Material of stays Steel

Diameter at smallest part 7/24 Area supported by each stay 36.5 Working pressure by rules 206 lbs Material of Front plates at bottom Steel

Thickness 1 Material of Lower back plate Steel Thickness 7/8 Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 200 lbs

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

Pitch across wide water spaces 13 1/4 Working pressures by rules 204 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 7/8 x 1 1/2 Length as per rule 33 1/4 Distance apart 8 1/8 Number and pitch of stays in each 3 of 7 1/2

Working pressure by rules 183 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

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

W636-0263

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IS A DONKEY BOILER FITTED?

none

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:—

Two top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling, 1 set of fuel & bilge pump valves, a quantity of assorted bolts nuts & iron, one set of crank pin brasses, H.P. & I.P. piston rings, 1 set of top end bearings, eccentric sheave & strap, valve spindle, 2 pump rods 2 spare propeller blades &c.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

Andrew Laming

Manufacturer.

DIRECTOR.

Dates of Survey while building { During progress of work in shops - - Jan 28. Apr. 9. 23. 30 May. 5. 9. 21. 23. 25 Jun. 2. 5. 6. 10. 19 Jul. 1. 4. 7. 11. 14. 15. 19. 25.
During erection on board vessel - - - Aug. 1. 13. 20. 22. 25. Sep. 2. 4. 5. 10. 18. Oct. 1. 10. 13. 14. 22. 27. 28. 29. Nov. 3. 7. 8. 12. 15.
Total No. of visits 45

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 7/7/13 Slides 4/9/13 Covers 15/7/13 Pistons 19/7/13 Rods 13/8/13
Connecting rods 10/6/13 Crank shaft 10/6/13 Thrust shaft 10/6/13 Tunnel shafts 10/6/13 Screw shaft 10/6/13 Propeller 4/9/13
Stern tube 1/10/13 Steam pipes tested 2/3-3/11/13 Engine and boiler seatings 14/10/13 Engines holding down bolts 28/10/13
Completion of pumping arrangements 8/11/13 Boilers fixed 28/10/13 Engines tried under steam 8/11/13

Main boiler safety valves adjusted 8/11/13 Thickness of adjusting washers P.P. 1/32" S. 3/8" S.P. 3/8" S. 3/8" Ford F 3/8" A 3/8"

Material of Crank shaft Steel Identification Mark on Do. 10/6/13 Material of Thrust shaft Steel Identification Mark on Do. 10/6/13

Material of Tunnel shafts Steel Identification Marks on Do. 10/6/13 Material of Screw shafts Steel Identification Marks on Do. 10/6/13

Material of Steam Pipes Lap welded iron Test pressure 540 lbs.

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150° F. Yes

Have the requirements of Section 49 of the Rules been complied with Yes

Is this machinery duplicate of a previous case No If so, state name of vessel

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

The machinery of this vessel has been built under special survey, the materials used are good, and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under full power. An oil fuel burning installation on the Wallsend System has been fitted in accordance with the requirements for oil fuel over 150°. In my opinion this vessel is eligible for the record of L.M.C. fitted for oil fuel over 150°.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 11.13. F.D.

Fitted for oil fuel 11.13. F.P. above 150° F.

The amount of Entry Fee ... £ 3 : :
Special ... £ 43 : 6 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, NOV 22 1913
When received, 12/12/13

Committee's Minute

Assigned

+ L.M.C. 11.13

MACHINERY CERTIFICATE
WRITTEN

Fitted for oil fuel 11.13 F.P. above 150° F.

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

FRI. JUN. 12. 1914



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