

REPORT ON MACHINERY.

No. 56019

Port of Newcastle

Received at London Office WED. 20 JAN. 1909

No. in Survey held at Newcastle

Date, first Survey Aug 1908 Last Survey 15 Jan 1909

Reg. Book. 45 Roi Leopold

(Number of Visits 22)

Master Built at Newcastle. By whom built H. Dobson & Sons Ltd

Tons { Gross 2081
Net 868
When built 1908-9

Engines made at Newcastle. By whom made W. M. Engel

when made 1908-9

Boilers made at - By whom made -

when made

Registered Horse Power Owners L. Dene & Co.

Port belonging to Antwerp

Nom. Horse Power as per Section 28 278

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

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

Dia. of Cylinders 22 1/4 34 61 Length of Stroke 42 Revs. per minute 64 Dia. of Screw shaft 13 Material of screw shaft S.S.

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 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 ✓ 11-76 Length of stern bush 4-8

Dia. of Tunnel shaft 11-2 Dia. of Crank shaft journals 12 Dia. of Crank pin 12 Size of Crank webs 23-7 1/2 Dia. of thrust shaft under collars 12 Dia. of screw 15-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable f Total surface 42-4

No. of Feed pumps 2 Diameter of ditto 3-4 Stroke 21 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3-2 Stroke 21 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 6-4 1/2, 4-2 1/2, 4-4 1/2, 4-4 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 2 3/4. one 3 In Holds, &c. 1 hold. 2 of 2 3/4 ahead. 2 of 2 3/4

No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump CP As a separate Donkey Suction fitted in Engine room & size yes 3

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 ✓

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 2.12.08 of Stern Tube 2.12.08 Screw shaft and Propeller 2.12.08

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 & Son Ltd.

Total Heating Surface of Boilers 4530 Is Forced Draft fitted no No. and Description of Boilers 3 S.E.

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 3.12.08 No. of Certificate 7782

Can each boiler be worked separately yes Area of fire grate in each boiler 43 f No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 4-9 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2 feet Mean dia. of boilers 12-6 Length 10-11 1/2 Material of shell plates S

Thickness 13/32 Range of tensile strength 28 3/4-32 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams d. lap long. seams d. butts Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7-8 Lap of plates or width of butt straps 13 1/2

Per centages of strength of longitudinal joint rivets 80-3 Working pressure of shell by rules 181 Size of manhole in shell end 16 x 12 plate 81-5

Size of compensating ring flanged No. and Description of Furnaces in each boiler 2 Key Material S Outside diameter 46

Length of plain part top Thickness of plates bottom 7-90 Description of longitudinal joint weld No. of strengthening rings ✓

Working pressure of furnace by the rules 190 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 13/32

Pitch of stays to ditto: Sides 10-9 1/4 Back 10-9 1/4 Top 10-9 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays S Diameter at smallest part 2-06 Area supported by each stay 94-5 Working pressure by rules 184 End plates in steam space: Material S Thickness 13/32 Pitch of stays 26 x 18 1/4 How are stays secured d nuts Working pressure by rules 183 Material of stays S

Diameter at smallest part 8-48 Area supported by each stay 485 Working pressure by rules 181 Material of Front plates at bottom S

Thickness 5 Material of Lower back plate S Thickness 3/32 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 186

Diameter of tubes 3-4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 5 Back 3/4 Mean pitch of stays 9-8 3/4

Pitch across wide water spaces 14 1/2 Working pressures by rules 266 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2 x 1 1/4 Length as per rule 31 Distance apart 10 Number and pitch of stays in each 20-9 1/4

Working pressure by rules 184 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 rivets

Pitch of rivets Working pressure of shell by rules 181 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



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

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 _____ Plates _____

Working pressure of shell by rules _____ 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 _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *1 Set connecting rod bolts & nuts, 1 set main beam bolts & nuts, 1 set coupling bolts & nuts, 1 set feed & belze pump bolts & propeller & shaft, nuts bolts & assorted iron.*

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING Co., LTD.
 Manufacturer.

S. T. Harrison

Dates of Survey while building } During progress of work in shops - - } Secretary *[Signature]* 1908
 } During erection on board vessel - - } 21.22.29 Aug 7. Sep 10. Oct 13. 14. 19. Nov. 16. 17. Dec 12. 3. 4. 7. 14. 17.
 Total No. of visits _____ 1909
 21.22.29 Jan 5 7 8 11 15

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " "

Dates of Examination of principal parts—Cylinders *7.8.08* Slides *7.8.08* Covers *7.8.08* Pistons *1.9.08* Rods *30.10.08*
 Connecting rods *30.10.08* Crank shaft *19.10.08* Thrust shaft *19.10.08* Tunnel shafts *19.10.08* Screw shaft *19.10.08* Propeller *17.11.08*
 Stern tube *17.11.08* Steam pipes tested *21.12.08* Engine and boiler seatings *2.12.08* Engines holding down bolts *14.12.08*
 Completion of pumping arrangements *7.1.09* Boilers fixed *14.12.08* Engines tried under steam *5.1.09*
 Main boiler safety valves adjusted *5.1.09* Thickness of adjusting washers *1/16 5/16 5/16 5/16 5/16 5/16 5/16 5/16*
 Material of Crank shaft *S* Identification Mark on Do. *R.T.F.* Material of Thrust shaft *S* Identification Mark on Do. *R.T.F.*
 Material of Tunnel shafts *S* Identification Marks on Do. *R.T.F.* Material of Screw shafts *S* Identification Marks on Do. *R.T.F.*
 Material of Steam Pipes *Copper* Test pressure *360*

General Remarks (State quality of workmanship, opinions as to class, &c. *Materials & workmanship good. Built under Special Survey. Engines & boilers examined under full steam & found satisfactory.*)
It is submitted that this vessel is eligible for the Record of L.M.C. 1.09.

It is submitted that this vessel is eligible for THE RECORD. + LMC 1.09.

J.R.R.
 20.1.09

[Signature]
 20/1/09

The amount of Entry Fee... £ *2* : :
 Special... £ *33* : *18* : :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, **19 JAN 1909**
 When received, *29/1/09*

J. J. Findlay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **FRI. 22 JAN 1909**

Assigned

+ Lmb 1.09



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MACHINERY CERTIFICATE WRITTEN.

Certificate (if required) to be sent to Newcastle

The Surveyors are requested not to write on or below the space for Committee's Minute.