

REPORT ON MACHINERY.

No. 6796.

Hull Rpt. No. 23719

Port of MIDDLESBROUGH-ON-TYNES

Received at London Office 10 MAY 1911

No. in Survey held at Middlesbrough

Date, first Survey 10th Nov 1910 Last Survey 27th April 1911

Reg. Book.

(Number of Visits) 31 May 12/11 Hull

24 Saff on the

S.S. "Oran"

Master

Built at Goole

By whom built Goole S.B. & R.C. Ltd When built 1911

Engines made at Middlesbrough

By whom made Richardsons, Westgarth & Co. Ltd (when made 1911)

Boilers made at

By whom made J. J. Ellingham & Co. when made 1911

Registered Horse Power

Owners L. A. Oneta Port belonging to B. as

Nom. Horse Power as per Section 28 85

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 13 1/2", 21", 35" Length of Stroke 24" Revs. per minute

Dia. of Screw shaft 7.48" Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight in the propeller boss ✓ 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 3'-0"

Dia. of Tunnel shaft 6.6" Dia. of Crank shaft journals 6.9" Dia. of Crank pin 7" Size of Crank webs 11 1/2" x 4 3/4" Dia. of thrust shaft under collars 7" Dia. of screw 8.3" Pitch of Screw 9.6" No. of Blades 4 State whether moveable No Total surface 30 sq. ft.

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Donkey Engines Two Sizes of Pumps 5 1/4" x 3 1/2" x 5" 6" x 5 3/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2" In Holds, &c. Two 2 1/2"

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump ump Is a separate Donkey Suction fitted in Engine room & size yes 2 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 on line

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 Forward suction How are they protected wood casing

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 16.3.11 of Stern Tube 19.4.11 Screw shaft and Propeller 19.4.11

Is the Screw Shaft Tunnel watertight Engines aft it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers See Newcastle Report

Working Pressure 180 lbs Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler Two direct spring Area of each valve 5.9" Pressure to which they are adjusted 183 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-5" Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules plate Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint bottom No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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 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

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:— *Two top & two bottom-end connecting rod bolts & nuts. Two main bearing bolts & nuts. One set of coupling bolts & nuts. One set of feed & bilge pump valves. Screw shaft & propeller. Assorted bolts & nuts etc.*

The foregoing is a correct description,

For and on behalf of _____
RICHARDSONS, WESTGARTH & CO., LTD. Manufacturer.

A. Jackson MANAGER
 Dates of Survey while building: Drying progress of work in shops - 1910 Dec. 19, 20, 23, 27, 1911 Jan. 2, 7, 10, 17, 24, 26, Feb. 6, 14, 17, 21, 24, Mar. 3, 13, 16, 20, 27, 31
 During erection on board vessel - Apr. 5, 10, 19, 24, 25, 26, 27
 Total No. of visits 31
 Is the approved plan of main boiler forwarded herewith
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders 3, 3, 11 Slides 27, 3, 11 Covers 31, 3, 11 Pistons 13, 3, 11 Rods 13, 3, 11
 Crank shaft 13, 3, 11 Thrust shaft 27, 3, 11 Turret shaft 13, 3, 11 Screw shaft 31, 3, 11 Propeller 16, 3, 11
 Steam pipes tested 27, 3, 11 Engine and boiler coatings 16, 3, 11 Engines holding down bolts 27, 3, 11
 Completion of pumping arrangements 27, 3, 11 Boilers fixed 27, 3, 11 Engines tried under steam 27, 3, 11
 Main boiler safety valves adjusted 27, 3, 11 Thickness of adjusting washers 1/2 each
 Material of Crank shafts Steel Identification Mark on Do. 50467 Material of Thrust shafts Steel Identification Mark on Do. 65267
 Material of Turret shafts Steel Identification Mark on Do. 50467 Material of screw shafts Iron Identification Mark on Do. 65267
 Material of Steam Pipes Tiled drawn copper Pressure 160 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.)
*The Engines of this vessel have been constructed under Special Survey, and are of good material and workmanship.
 The Engines and Boiler of this vessel have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of +LMC 4. 11. in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. +LMC 5. 11.
 JWR 27/5/11

The amount of Entry Fee. . . £ 0 : 0 :
 Special . . . £ 7 : 8 :
 Donkey Boiler Fee . . . £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 8.5.11
 When received, 12/5/11

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

Committee's Minute TUE. 30 MAY 1911
 Assigned +Lmc 5. 11

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to the Surveyor and not to write on or below the space for Committee's Minute.

Rpt. 5a.
 Date of writing _____
 No. in Survey Reg. Book. 24
 Master _____
 Engines made _____
 Boilers made _____
 Registered Horsepower _____
MULTITUBULAR
 (Letter for record)
 Boilers One
 No. of Certificate _____
 safety valves to _____
 Are they fitted _____
 Smallest diameter _____
 Material of shell _____
 Descrip. of riveting _____
 Lap of plates _____
 rules 184
 boiler 3 plate
 Description of _____
 plates: Material _____
 Top 9 1/4 x 8 1/2
 smallest part _____
 Pitch of stays _____
 Area supported _____
 Lower back plate _____
 Pitch of tubes _____
 water spaces _____
 girder at center _____
 Working pressure _____
 separately _____
 holes _____
 If stiffened with _____
 Working pressure _____
 Dates of Survey while building _____
GENERAL
 The _____
 ma _____
 Survey Fee _____
 Travelling _____
 Committee _____
 Assigned _____