Rpt. 4.

REPORT ON MACHINERY. No. 10950.

Received at London Office TUE FEB 15 1921

Date of writing Report 3rd February 1921. When Handed in at Local Office 12/2/ 1921. Port of MIDDLESBRO'

No. in Reg. Book. Survey held at Middlesbrough. Date, First Survey 25th Sept/18 Last Survey 4th Feby 1921. (Number of Visits 86.)

on the Richardsons, Westgarth & Co Ld. No 2596. Tons Gross / Net

Master Built at By whom built When built

Engines made at Middlesbrough. By whom made Richardsons, Westgarth & Co Ld when made 1921

Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

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

Dia. of Cylinders 24" - 44" - 43" Length of Stroke 48" Revs. per minute Dia. of Screw shaft as per rule / as fitted Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube 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

Dia. of Tunnel shaft as per rule / as fitted Dia. of Crank shaft journals as per rule 14" / as fitted 14½" Dia. of Crank pin 14½" Size of Crank webs 28" × 9" Dia. of thrust shaft under collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

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

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

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is 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

Working Pressure 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 Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 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 / plate Working pressure of shell by rules 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 / bottom Thickness of plates crown / bottom Description of longitudinal joint 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

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

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

Report also sent to the Hull of the Ship.

IS A DONKEY BOILER FITTED? ____ *If so, is a report now forwarded?* ____

SPARE GEAR. *State the articles supplied :—* ____

The foregoing is a correct description,

For and on behalf of
RICHARDSONS, WESTGARTH & Co., Ltd.
GENERAL MANAGER
MIDDLESBROUGH WORKS.

Manufacturer.

Dates of Survey while building

During progress of work in shops — 1918. Sep 25: 1919. Jan 7. Feb 24. Mar 13. 18. 24. Apr 8. 15. 23. 30. May 14. June 3. 24. July 4. 24. 28. Aug 11. 27. Sep 9. 24. 29. Oct 7. 16. 22. Nov 14. 17. Dec 1. 4. 15: 17. 19. 24 1920. Jan 5. 8. 16. 19. Feb 3. 16. 20. 23. 27. Mar 1. 8: 17. 22. 29. April 1. 8.

During erection on board vessel — 12. 16. 20. 26. 30 May 5: 11. 13. 14. 18. 28. June 2. 8. 11. 16. 18. 22. 29. July 2. 6. 13. 19. 24. 29. Aug 4. 8. 9. 24. 30. Sep 15: 16. 22. 27. Oct 5: 12. 19. 26. 1921. Feb 24

Total No. of visits 86. *Is the approved plan of main boiler forwarded herewith* ____

" " " *donkey* " " " ____

Dates of Examination of principal parts—Cylinders 4.8.20 *Slides* 24.8.20 *Covers* 24.8.20 *Pistons* 24.8.20 *Rods* 16.9.20

Connecting rods 13.4.20 *Crank shaft* 31.7.19 *Thrust shaft* ____ *Tunnel shafts* ____ *Screw shaft* ____ *Propeller* ____

Stern tube ____ *Steam pipes tested* ____ *Engine and boiler seatings* ____ *Engines holding down bolts* ____

Completion of pumping arrangements ____ *Boilers fixed* ____ *Engines tried under steam* ____

Main boiler safety valves adjusted ____ *Thickness of adjusting washers* ____

Material of Crank shaft Ingot Steel *Identification Mark on Do.* 2925 D *Material of Thrust shaft* ____ *Identification Mark on Do.* ____

Material of Tunnel shafts ____ *Identification Marks on Do* ____ *Material of Screw shafts* ____ *Identification Marks on Do.* ____

Material of Steam Pipes ____ *Test pressure* ____

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

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

Is this machinery duplicate of a previous case ____ *If so, state name of vessel* ____

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

This machinery has been built under special survey: the materials and workmanship are good: The engines were ordered by the Ministry of Shipping and have now been purchased by Messrs John. C. Kincaid & Co. Ltd. and are to be shipped to Greenock.

Certificates to (if required) to be sent to ____

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

See Ltr to Mdlb 1/5/24

The amount of Entry Fee "A" Standard type	£	56 : 0 : 0	When applied for, 13/ 1921
Special	£	: :	
Donkey Boiler Fee	£	: :	When received, 16/3/1921
Travelling Expenses (if any)	£	: :	

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

GLASGOW 26 AUG 1924

Committee's Minute ____

Assigned See Grk Rpt No. 18276