Rpt. 4.

REPORT ON MACHINERY.

No. 40992.

Received at London Office WED 13 APR 1921

Date of writing Report 9. 4. 1921. When handed in at Local Office 9. 4. 1921. Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey 23. 3. 1920 Last Survey 6 - 4. 1921 (Number of Visits 44.)

on the S/S "Macedonier". Tons Gross 5116 Net 3176

Master Built at Glasgow. By whom built Lloyds Royal Belge L^td (125) When built 1921

Engines made at Glasgow By whom made Dunsmuir & Jackson L^td (534) when made 1921

Boilers made at do By whom made do (534) when made 1921

Registered Horse Power Owners Lloyds Royal Belge Port belonging to Antwerp

Nom. Horse Power as per Section 28 567 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 26½ - 44 - 73 Length of Stroke 51 Revs. per minute 72 Dia. of Screw shaft as per rule 15.28 as fitted 15 7/8" Material of screw shaft 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 — Length of stern bush 63"

Dia. of Tunnel shaft as per rule 13.97 as fitted 14 1/2" Dia. of Crank shaft journals as per rule 14.66 as fitted 15 1/4" Dia. of Crank pin 15 1/4" Size of Crank webs 22 x 10" Dia. of thrust shaft under thrust 15 1/4" Dia. of screw 18' 0" Pitch of Screw 18' 0" No. of Blades 4 State whether moveable Yes Total surface 107 ft

No. of Feed pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps Bilge 9 x 10 x 10" FEED WEIRS (2) 8 x 5 1/2 x 8" (3) 8 x 10 1/2 x 21" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 - 3½" Spiral 1 - 3½ Stokehold 2 - 3½" In Holds, &c. 2 - 3½ in each hold Tunnel Well 1 - 3½" 3½ Fore Peak 1 - 4" Aft Peak 1 - 3½ No 4 Hold Well

No. of Bilge Injections 1 sizes 8" Connected to ~~condenser~~, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes 3½"

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 both

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 Bilge 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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper E R Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Steel Co. of Scotland

Total Heating Surface of Boilers 8958 ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended

Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 6.12.20 13.12.20 13.12.20 No. of Certificate 15615 15624 15625

Can each boiler be worked separately Yes Area of fire grate in each boiler 59.87 No. and Description of Safety Valves to each boiler Double Spring Area of each valve 829 □" Pressure to which they are adjusted 205 lb □" Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 15'.3" Length 12'-6" Material of shell plates S

Thickness 1 11/32" Range of tensile strength 28-32. Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap

long. seams DBS.TR Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 9/16" ~~Lap of plates or~~ width of butt straps 20 1/2"

Percentages of strength of longitudinal joint rivets 85.74 plate 85.5 % Working pressure of shell by rules 204 Size of manhole in shell 20 1/4 x 16 1/4"

Size of compensating ring 34 x 3 1/4 x 1 11/32" No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 47 1/2"

Length of plain part top — bottom — Thickness of plates crown 7.39/64" bottom — Description of longitudinal joint weld No. of strengthening rings —

Working pressure of furnace by the rules 200 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 7/8"

Pitch of stays to ditto: Sides 9½ x 9 3/8" Back 9 7/16 x 9 7/16" Top 8 7/8 x 9 15/16" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201

Material of stays S Area at smallest part 199.266 □" Area supported by each stay 89 □" Working pressure by rules 202 End plates in steam space:

Material S Thickness 15/16" Pitch of stays 18 1/4 x 20½ How are stays secured DN Working pressure by rules 206 Material of stays S

Area at smallest part 7.24 □" Area supported by each stay 375 □" Working pressure by rules 202 Material of Front plates at bottom S

Thickness 1 1/16" Material of Lower back plate S Thickness 31/32" Greatest pitch of stays 17" 15" WWS Working pressure of plate by rules 210

Diameter of tubes 3" Pitch of tubes 4 3/16 x 4 3/16" Material of tube plates S Thickness: Front 1 1/16" Back 7/8" Mean pitch of stays 10 5/8"

Pitch across wide water spaces 14" Working pressures by rules 205 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 12 x 1" (2) Length as per rule 38 7/8" Distance apart 9 15/16" Number and pitch of stays in each 3 at 8 7/8"

Working pressure by rules 223 Steam dome: description of joint to shell — % of strength of joint —

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

Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type Schmidt Date of Approval of Plan all Copy of Rpt. attached Tested by Hydraulic Pressure to —

Date of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 210 Is Easing Gear fitted Yes

Visits 51.

© 2021 Lloyds Register Foundation

V5-0235

IS A DONKEY BOILER FITTED? No / If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting Rod bolts & nuts for top end ditto for bottom end. 2 Main Bearing bolts. 1 Set of Coupling bolts 1 Set of Feed & Bilge Pump valves. one Propeller Shaft. a quantity of assorted bolts & nuts. & iron of various sizes

The foregoing is a correct description,

DUNSMUIR & JACKSON, Limited.

James Stitcher Director

Manufacturer.

Dates of Survey while building — During progress of work in shops: 1920. Mar 28 Apr 29 May 24 July 14 Aug 11 Sep 16. 17. 21. 28 Oct 1. 5. 18. 21. 25 Nov 3. 14. 16. 18. 22. 29. 30 Dec 6

During erection on board vessel: 9. 10 13. 17 20. 27 28. 30 (1921) Jan 13. 19. 24 25 Feb 2. 4. 9 22 Mar 10. 17. 18 Apr 4. 5. 6.

Total No. of visits 44. Is the approved plan of main boiler forwarded herewith Yes Returned Yes 19/4/21

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 30. 11. 20 Slides 6. 12. 20 Covers 29. 11. 20 Pistons 29. 11. 20 Rods 6. 12. 20

Connecting rods 6. 12. 20 Crank shaft 18. 11. 20 Thrust shaft 21. 10. 20 Tunnel shafts 28. 11. 20 Screw shaft 13. 12. 20 Propeller 12. 11. 20

Stern tube 12. 11. 20 Steam pipes tested 2. 2. 21 Engine and boiler seatings 16. 12. 20 Engines holding down bolts 25. 1. 21

Completion of pumping arrangements 4/2/21 Boilers fixed 19. 1. 21 Engines tried under steam 6. 4. 21

Completion of fitting sea connections 16. 12. 20 Stern tube 16. 12. 20 Screw shaft and propeller 16. 12. 20

Main boiler safety valves adjusted 4. 2. 21 Thickness of adjusting washers C Boiler P 23/64 S 23/64 Stern Boiler P 3/8 S 11/32 Port Boiler P 13/32 S 13/32

Material of Crank shaft S Identification Mark on Do. LLOYDS 5'34 WGM Material of Thrust shaft S Identification Mark on Do. LLOYDS 5'34

Material of Tunnel shafts S Identification Marks on Do. LLOYDS 5'34 WGM Material of Screw shafts S Identification Marks on Do. LLOYDS 5'34 WGM

Material of Steam Pipes Iron Test pressure 600 lbs □"

Is an installation fitted for burning oil fuel No 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.) These Engines & Boilers have been built under Special Survey in accordance with the approved plans. The workmanship & material are of good quality. They have been securely fitted on board & tried under Steam & found satisfactory. The following damages happened before the vessel was completed. Propeller & taking the Quay at Princes Dk River Clyde. March 4th 1921 one Propeller blade broken. Vessel placed in Dry Dock New Propeller Blade fitted. Propeller Shaft taken to Shop & tested for bending true (see Damage Rept) Damage caused by the P Piston Rod striking in the chamber while proceeding down the River Clyde on April 6th 1921 for the purpose of Official Trial. New P Piston Rod Spindle fitted & lower Ring filed up &c (Damage Rept)

The Machinery of this vessel is eligible in our opinion to be in the record of ✠ LMC 4.21

The amount of Entry Fee ...	£ 6 : - :	When applied for,	
Special	£ 103 : 7 :	18. 2. 1921	
~~Donkey Boiler~~ Damage Fee ...	£ 2 : 2 :	22. 3. 21 → 5 5/- → 2/-	Pd 12/4/21
Travelling Expenses (if any)	£ : :	When received, 31. 3. 1921	

Wm. Gordon Mullen P. G. Sellar

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 APR 1921

Assigned + LMC 4.21

MACHINERY CERT. WRITTEN 3/6/21 Date 13/4/21

GLASGOW.

Certificate (if required) to be sent to

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

Rpt. 13.

RE

Port of

No. in Reg. Book 80558 S. on t Bui

Owners Sla

Yard No. 26

DESCRIPTION High spee ship lig

Capacity of Dyn

Where is Dynam

Position of Main

Positions of aux

If fuses are fitt circuits

If vessel is wire

Are the fuses of

Are all fuses fit are permane

Are all switches

Total number of

A 44

B 58

C 16

D 5

1st Strik

Leads to lamps car

Cargo light cables c

DESCRIPTION O Cables and wraded

Joints in cables, ho

Are all the joints o positions, non

Are there any joint

How are the cables w ion

© 2021 Lloyd's Register Foundation