

REPORT ON MACHINERY.

No. 41131

Received at 7.11 Office WED. 1 JUN. 1921

Date of writing Report 25th May 1921 When handed in at Local Office 30.5.1921 Port of Glasgow

No. in Survey held at Paisley Date, First Survey 28th June 1920 Last Survey 23rd May 1921
 Reg. Book. on the S.S. "Maria Kyriakides" (Number of Visits 31)

Master P. B. Goulondris Built at Paisley By whom built Messrs. Bow, MacLellan & Co. Ltd. (N^o 389) Tons Gross 1556 Net 858
 Engines made at Paisley By whom made Messrs. Bow, MacLellan & Co. Ltd. (N^o 3791) When built 1921-5
 Boilers made at Glasgow By whom made do. (N^o 1099+1100) when made 1921
 Registered Horse Power 170 Owners Nicolas George Kyriakides Port belonging to Andros
 Nom. Horse Power as per Section 28 170 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 17, 27 & 45" Length of Stroke 33" Revs. per minute 118 Dia. of Screw shaft as per rule 9.25" Material of Steel
 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 yes If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-1 1/2"
 Dia. of Tunnel shaft as per rule 8.6" Dia. of Crank shaft journals as per rule 9" Dia. of Crank pin 9" Size of Crank webs 6"x1-4 1/2" Dia. of thrust shaft under
 collars 9" Dia. of screw 10'-6" Pitch of Screw 10'-9" No. of Blades 4 State whether moveable No Total surface 42 ft²
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps (Bore x Stroke) 6"x6" 9"x8" 6"x6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 @ 2 1/2 ins. diameter In Holds, &c. 2 in each hold @ 2 1/2 in.

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump pump Is 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
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Engine Room Top grating

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel The Glasgow Iron & Steel Coy. Ltd.

Total Heating Surface of Boilers 3217 ft² Is Forced Draft fitted No No. and Description of Boilers Two Single-Ended (Main)
 Working Pressure 180 lb./in² Tested by hydraulic pressure to 360 lb. Date of test 18/11/20 No. of Certificate 15593
 Can each boiler be worked separately yes Area of fire grate in each boiler 45 ft² No. and Description of Safety Valves to
 each boiler 2 Spring Loaded Area of each valve 7.07 in² Pressure to which they are adjusted 185 lb./in² Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Well clear Mean dia. of boilers 12'-6" Length 10'-6" Material of shell plates Steel
 Thickness 1 1/32" Range of tensile strength 28/32 tons/in² Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. Lap
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8" Lap of plates or width of butt straps 1'-4 3/4"
 Per centages of strength of longitudinal joint 89.25 Working pressure of shell by rules 182 lb./in² Size of manhole in shell 16"x12"
 Size of compensating ring Plate flanged No. and Description of Furnaces in each boiler 2 corrugated Material Steel Outside diameter 4'-1"
 Length of plain part top Thickness of plates crown Description of longitudinal joint weld No. of strengthening rings none
 Working pressure of furnace by the rules 180 lb. Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 2 3/2"
 Pitch of stays to ditto: Sides 9 1/4"x8 1/4" Back 8 7/8"x8 1/2" Top 9 1/4"x8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182 lb.
 Material of stays Steel Area at smallest part 1.76 in² Area supported by each stay 77.6 in² Working pressure by rules 181 lb. End plates in steam space:
 Material Steel Thickness 1" Pitch of stays 16"x14 3/4" How are stays secured 2 Nuts Working pressure by rules 189 lb. Material of stays Steel
 Area at smallest part 4.57 in² Area supported by each stay 236 in² Working pressure by rules 201 lb. Material of Front plates at bottom Steel
 Thickness 3/32" Material of Lower back plate Steel Thickness 2 3/2" Greatest pitch of stays 13 1/4"x8 1/4" Working pressure of plate by rules 190 lb.
 Diameter of tubes 3" Pitch of tubes 4 1/2"x4 1/2" Material of tube plates Steel Thickness: Front 2 1/2" Back 3/4" Mean pitch of stays 10 7/16"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 189 lb. Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9"x1 1/2" Length as per rule 2'6 3/2" Distance apart 8 1/4" Number and pitch of stays in each 2 @ 9 1/4"
 Working pressure by rules 251 lb. Steam dome: description of joint to shell None fitted % 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 ✓

35 SUPERHEATER. Type None fitted Date of Approval of Plan ✓ 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 ✓
 Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 connecting rod top-end bolts & nuts,

2 connecting rod bottom-end bolts & nuts.

2 main bearing-bolts with nuts.

1 set coupling bolts with nuts.

1 set feed & bilge pump valves.

A quantity of assorted bolts & nuts and iron & mild steel of various sizes.

The foregoing is a correct description,

BOW, M LACHLAN & CO., LTD.

J. Macdonald

DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920 Jun 28-30 Sep 6. 10. 24-30 Oct 14. 18-25 Nov 9. 18-23 Dec 1. 7-20 (1921) Jan 10. 13. 17. 21. 27 Feb 8-18
During erection on board vessel - - - Mar 8. 11. 14. Apr 11. 12. 19. May 10. 12. 23.
Total No. of visits 31.

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " " None.

Dates of Examination of principal parts—Cylinders 23/11/20 Slides 1/12/20 Covers 1/12/20 Pistons 1/12/20 Rods 23/11/20
Connecting rods 7/12/20 Crank shaft 24/9/20 Thrust shaft 24/9/20 Tunnel shafts 24-9-20 Screw shaft 24-9-20 Propeller 24/11/21
Stern tube 14/10/20 Steam pipes tested 12/4/21 Engine and boiler seatings 18/2/21 Engines holding down bolts 11/3/21
Completion of pumping arrangements 12/5/21 Boilers fixed 11/3/21 Engines tried under steam 12/5/21
Completion of fitting sea connections 18/2/21 Stern tube 18/2/21 Screw shaft and propeller 18/2/21
Main boiler safety valves adjusted 19/4/21 Thickness of adjusting washers P. Bl. 1/4" P. 7/16" S. 5/16" 3/32" 5/16" S.

Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.

Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.

Material of Steam Pipes S. S. Steel Test pressure 540 lbs./in²

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 No 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 and in accordance with the Rules; the materials & workmanship are sound & good. They have been fitted on board in an efficient manner, tried under working conditions and found satisfactory.

The machinery is eligible, in our opinion, to be classed with record of L.M.C. 5, 21. Dec. light.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 5. 21 CL

Roll

3/6/21

J. D. Boyle

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 42 : 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 31. 5. 21
When received, 3. 6. 21

Committee's Minute

GLASGOW

31 MAY 1921

Assigned

+ L.M.C. 5, 21.

MACHINERY CERT.
WRITTEN 1.6.21



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Foundation