

WED. JUN. 23 1920

## REPORT ON MACHINERY.

No. 40065

WED. JUN. 23 1920

Received at London Office

Writing Report

19

When handed in at Local Office

19. 6.

1920 Port of

Glasgow

Survey held at

Glasgow

Date, First Survey

2. 5. 19.

Last Survey

16<sup>th</sup> June 1920

Book.

on the

SS MANGALORE

(Number of Visits 64)

Gross

Tons

Net

Built at

Glasgow

By whom built

G. Connell &amp; Co. Ltd.

When built 1920

Engines made at

Manchester

By whom made

Metropolitan Vickers

when made 1919

Engines made at

Glasgow

By whom made

Metropolitan Vickers

when made 1920

Machinery installed at

Glasgow

By whom made

Metropolitan Vickers

Port belonging to

Horse Power at Full Power

5000

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

" " 1113

Description of Engines

Rateau Impulse H.P. &amp; L.P.

(See separate Manchester Report No. 4523)

No. of Turbines Two

DOUBLE REDUCTION GEARING

Diameter of Pinion Shaft

1st Red 6" 2nd 13"

Diameter of Pitch Circle

1st Red 84" 2nd 20.12"

Diameter of Pitch Circle of Wheel

17 1/2"

Diameter of Thrust Shaft under Collars

17 1/2"

Diameter of Propeller

18-6"

Pitch of Propeller

18-6"

Diameter of Rotor Drum, H.P.

116"

Diameter of Rotor Drum, L.P.

116"

Diameter of Rotor Drum, Astern

116"

Revs. per Minute at Full Power, Turbine

3000

Revs. per Minute at Full Power, Propeller

80

## DETAILS OF BLADING.

## H.P.

## L.P.

## ASTERN.

	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
PANSION	15 1/2"	3-2 1/2"	2	3 1/2"	3-5 1/2"	1	2 1/2"	3-3 1/2"	2
"	1 1/2"	3-3 1/2"	1	3 1/2"	3-5 1/2"	1			
"	1 1/2"	3-3 1/2"	1	4 3/4"	3-6 3/4"	1			
"	1 3/4"	3-3 3/4"	1	5 1/2"	3-7 1/2"	1			
"	2 1/4"	3-4 1/4"	1	6 3/8"	3-8 3/8"	1	3" 5/8"	3-1 1/2"	2
"				8 1/4"	3-10 1/4"	1			
"				10 1/4"	4-0 1/4"	1			

size of Feed pumps (2 main) 14" x 10 1/2" x 24" (1 aux) 10 1/2" x 8" x 21"

size of Bilge pumps (1) 7" x 8" x 18" (1) 10" x 8" x 18" (1) 10 1/2" x 12" x 24" Lubricating oil (1 working) 6 1/2" x 8" x 18" (1 spare) 6 1/2" x 8" x 18"

size of Bilge suction in Engine Room (2) 3 1/2" Stokholm (2) 3 1/2"

In Holds, &c. No 1-2-3-4-5-6-7 (2) 3 1/2" Tunnel well (1) 3 1/2"

Large Injections 1 sizes 12" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine Room & size 3 1/2"

Are the roses in Engine room always accessible Yes

Are they Valves or Cocks Both

Are the Discharge Pipes above or below the deep water line below

Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

How are they protected -

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SUPERHEATER. Type *None* Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure \_\_\_\_\_  
Date of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the B \_\_\_\_\_  
Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear report \_\_\_\_\_

IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? \_\_\_\_\_

SPARE GEAR. State the articles supplied: *1 bolt & nut for main gear bearing, 2 bolts & nuts for pinion bearing, 1 set of 1/20" valves bolts & nuts for gear case joint, 2 thermometers for oil & air system, 1 set bearings for gear wheel shaft, 1 set bearings for 2nd Rev shaft & thrust shoes, 1 set for a Pump Valves, 1 set Bridge Pump Valves, 1 set Valve for oil Pump, 1 bucket & rod for lubricating oil Pump, 1 escape Valve Spring for each side, 1 set for air Pump, 1 piston bucket & rod for air Pump, 1 piston bucket & rod for feed Pump, Impeller, Crank Shaft Piston rods and connecting rods and bushes for circulating Pump, 1 set of assorted bolts and nuts bars and a Plate of Steel and other articles*

The foregoing is a correct description,

*David Rowan & Co Ltd* Manufacturer.  
*per Alex Sand*

Dates of Survey while building { During progress of work in shops - - 1918 May 20 Sept 14 Oct 4 Dec 11 1919 Feb 11 Apr 1-16 June 3-16 July 14 Aug 25-29 Sept 15-16 Nov 3-5 20-25 Dec 1-10 24-25 29 1920 Jan 12-13-16 19-20-21-28 Feb 10-12  
During erection on board vessel - - 19 22-23-25-29 Apr 1-2 6-7 9 19 20-23 May 4-12 17-24 31 June 1-7 8-9 11  
Total No. of visits *64* Is the approved plan of main boiler forwarded herewith \_\_\_\_\_

Dates of Examination of principal parts—Casings \_\_\_\_\_ Rotors \_\_\_\_\_ Blading \_\_\_\_\_ Gearing \_\_\_\_\_

Rotor shaft \_\_\_\_\_ Thrust shaft *20.1.20* Tunnel shafts *21.2.20* Screw shaft *29.12.19* Propeller \_\_\_\_\_

Stern tube *25.12.19* Steam pipes tested *12.5.20 24.5.20* Engine and boiler seatings *16.12.19* Engines holding down bolts \_\_\_\_\_

Completion of pumping arrangements *8.6.20* Boilers fixed *4.5.20* Engines tried under steam *1.6.20*

Main boiler safety valves adjusted *24.5.20* Thickness of adjusting washers *DE P 3/8 S 3/2 Sta P 3/2 S 3/2 SE Post P 3/2*

Material and tensile strength of Rotor shaft \_\_\_\_\_ Identification Mark on Do. \_\_\_\_\_

Material and tensile strength of Pinion shaft *1st Rev 40 tons 2nd 34 638 tons Nickel Steel* Identification Mark on Do. *X*

Material of Wheel shaft *Steel* Identification Mark on Do. *LL 702 735 1127* Material of Thrust shaft *Steel* Identification Mark on \_\_\_\_\_

Material of Tunnel shafts *Steel* Identification Marks on Do. *X* Material of Screw shafts *Steel* Identification Marks on \_\_\_\_\_

Material of Steam Pipes *Iron* Test pressure *600 lb*

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

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery a duplicate of a previous case *No* If so, state name of vessel \_\_\_\_\_

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

*X* HP Pinion Shaft *HP 657 9032 1268 1590* LP Pinion Shaft *LP 657 71268 6049536* HP 2nd Shaft *HP 2869 899* LP 2nd Shaft *LP 875 896 918 919*  
TM 21.2.20 TM 21.2.20 TM 21.2.20 TM 21.2.20 TM 21.2.20 TM 21.2.20

The Machinery & Boilers of this Vessel has been Construction \_\_\_\_\_

Special Survey in accordance with the Rules and the approved Plans \_\_\_\_\_

Materials and workmanship are good, the Machinery has been tried \_\_\_\_\_

Working Conditions and found to work satisfactorily and is eligible in our \_\_\_\_\_

to be Classed with records of + LMC 6-20, and a Filter for oil for \_\_\_\_\_

F.P. above 150° F. - a letter received from Messrs D. Brown & Co Ltd, \_\_\_\_\_

Particulars in Register Book (Column 13) is attached hereto.

The amount of Entry Fee ... £ 3 : 0 : When applied for, \_\_\_\_\_

Balance of Special ... £ 60 : 39 : 21.6.20 \_\_\_\_\_

Donkey Boiler Fee ... £ : : When received, \_\_\_\_\_

Travelling Expenses (if any) £ : : \_\_\_\_\_

Committee's Minute **GLASGOW 22 JUL 1920**

Assigned *+ LMC 6.20.* MACHINERY CERT. WRITTEN 23/6/20

*Fitted for oil fuel 6.20 F.P. above 150°F*

Lloyd's Register Foundation