

# REPORT ON MACHINERY.

No. 41698

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of writing Report 10. 2. 22 When handed in at Local Office 10. 2. 22 Port of Glasgow  
 in Survey held at Dumbarton Date, First Survey 4-11-1916 Last Survey February 1922  
 Book. on the T.S.S. "Chilka" (Number of Visits 50.)  
 Gross 4360  
 Net 2209  
 Built at Dumbarton By whom built Wm Denny & Bros Ltd (1141) When built 1922  
 Engines made at Dumbarton By whom made Wm Denny & Bros Ltd (885) when made 1922  
 Masts made at Dumbarton By whom made Wm Denny & Bros Ltd (885) when made 1922  
 Horse Power 3550 Owners British India S.N.C. Ltd Port belonging to  
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INE ENGINES, &c.—Description of Engines Brown Curtis D.P. and Turbines No. of Turbines (4) 2 H.P. & 2 L.P.  
 Diameter of Rotor Shaft Journals, H.P. 4" L.P. 6 3/4" Diameter of Pinion Shaft 4 1/2" 1st Red shaft 7 pinion shaft 9"  
 Diameter of Journals 4 1/2" x 9" Distance between Centres of Bearings 29" Diameter of Pitch Circle H.P. 7.2842 L.P. 9.4246 1/4 3542  
 Diameter of Wheel Shaft 1 1/2" Distance between Centres of Bearings 4' 10 1/2" Diameter of Pitch Circle of Wheel 6' 7.698"  
 Diameter of Thrust Shaft under Collars 1 1/2" Diameter of Tunnel Shaft as fitted 10 7/8"  
 Screw Shafts 2, Continuous Diameter of same as fitted 11 3/8" Diameter of Propeller 13' 3" Pitch of Propeller 14' 9"  
 State whether Moveable Yes Total Surface 57.47 Diameter of Rotor Drum, H.P. L.P. Astern  
 Revs. per Minute at Full Power, Turbine Propeller 100

## ICULARS 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									
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size of Feed pumps 2 main 12" x 9" x 21  
 size of Bilge pumps 2 7" x 8" x 15 1/2 Centrifugal electrically driven emergency pump 5" bore  
 size of Bilge suction in Engine Room (5) 3 1/2" in boiler room (2) 3" In Holds, &c. No. 1 (2) 3 1/2" No. 2 (2) 3 1/2" No. 3 (2) 3 1/2" No. 4 (2) 3 1/2" No. 5 (1) 3 1/2"  
 3" in each cofferdam  
 Bilge Injections 2 Sizes 9" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine Room & size Yes (3) 3 1/2"  
 Are the bilge suction pipes fitted with roses Yes 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 Wood Covering  
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes  
 Is it fitted with a watertight door Yes worked from upper platform  
 TRS, &c.—(Letter for record 7) Manufacturers of Steel Wm Beardmore & Co Ltd 3 S.B. & 1 Aust. S.B.  
 Testing Surface of Boilers 8775 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended  
 g Pressure 215 Tested by hydraulic pressure to 377 1/2 Date of test 3/2/20, 30/2/20 No. of Certificate 15614, 15659  
 boiler be worked separately Yes Area of fire grate in each boiler 67.5 No. and Description of Safety Valves to  
 Area of each valve 8.29 Pressure to which they are adjusted 220 Are they fitted with easing gear Yes  
 distance between boilers or uptakes and bunkers or woodwork 2' 0" Mean dia. of boilers 5' 9" Length 11' 9" Material of shell plates steel  
 Range of tensile strength 29.5.83 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 5/16" top  
 Diameter of rivet holes in long. seams 9/16" Pitch of rivets 10 3/8" Lap of plates or width of butt straps 1'-11"  
 rivets 85.29 Working pressure of shell by rules 226 Size of manhole in shell 17" x 13"  
 plates 89.4  
 compensating ring 34" x 34" x 1 1/2" No. and Description of Furnaces in each Boiler 3 Monitors Material steel Outside diameter 49 3/4"  
 plain part Thickness of plates crown 3/16 bottom 1/16 Description of longitudinal joint weld No. of strengthening rings  
 pressure of furnace by the rules 227 Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/32" Spinner  
 stays to ditto: Sides 8" x 7 1/2" Back 7 1/2" x 8 1/4" Top 7 3/8" x 8 7/8" If stays are fitted with nuts or riveted heads nuts inside Working pressure by rules 220  
 of stays 200 2 1/2" diameter at smallest part 100 Area supported by each stay 63 Working pressure by rules 215 End plates in steam space  
 steel Thickness 1 3/32" Pitch of stays 19" x 16" How are stays secured with outside Working pressure by rules 215 Material of stays steel  
 at smallest part 6.41 Area supported by each stay 305 Working pressure by rules 217 Material of Front plates at bottom steel  
 Material of Lower back plate steel Thickness 15/16 Greatest pitch of stays 13 1/2" Working pressure of plate by rules 242  
 of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates steel Thickness: Front 3/32" Back 25/32" Mean pitch of stays 10 1/4"  
 ss wide water spaces 10 1/2" with 1/2" double Working pressures by rules 257 Girders to Chamber tops: Material steel Depth and  
 of girder at centre 9" x 25/32" double Length as per rule 31" Distance apart 8 7/16" Number and pitch of stays in each (3) 8 7/16"  
 pressure by rules 210 Steam dome: description of joint to shell none % of strength of joint Diameter  
 of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets  
 pressure of shell by rules Crown plates: Thickness How stayed

W158-0025



SUPERHEATER. Type *new* 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:— *as per list appended*

The foregoing is a correct description,  
*M. K. Wisniewski* Manufacturer. *Director*

Dates of Survey while building { During progress of work in shops -- 1919 Nov 4, 18 Dec 5 1920 Jan 23 Feb 24 Mar 2, 9, 19 Apr 13, 20 May 14 Jun 1, 10, 25 July 6, 31 Aug 6, 13, 17, 31  
During erection on board vessel -- (1921) Jan 2, 9, 23 Dec 2, 7, 30 1921 Jan 14, 18 Feb 2, 9, 25 Mar 4, 11 Apr 15 May 4, 13, 18 Jun 7 Aug 12 Sep 13, 16, 20, 26 Oct 14  
Total No. of visits 50  
Is the approved plan of main boiler forwarded herewith *yes*  
" " " *yes*  
" " " *yes*  
" " " *yes*  
Dates of Examination of principal parts—Casings 25/6/20, 13/8/20 Rotors 18/11/21 Blading 18/11/21 Gearing 18/11/21  
Rotor shaft 18/11/21 Thrust shaft 9/2/21 Tunnel shafts 9/2/21 Screw shaft 9/2/21 Propeller 9/2/21  
Stern tube 9/2/21 Steam pipes tested 12/8/21 Engine and boiler seatings 23/11/20 Engines holding down bolts 25/9/21  
Completion of pumping arrangements 26/1/22 Boilers fixed 25/9/21 Engines tried under steam 1/2/22  
Main boiler safety valves adjusted 26/1/22 Thickness of adjusting washers *2 1/2, 3 1/2, 4 1/2, 5 1/2, 6 1/2, 7 1/2, 8 1/2, 9 1/2, 10 1/2, 11 1/2, 12 1/2, 13 1/2, 14 1/2, 15 1/2, 16 1/2, 17 1/2, 18 1/2, 19 1/2, 20 1/2, 21 1/2, 22 1/2, 23 1/2, 24 1/2, 25 1/2, 26 1/2, 27 1/2, 28 1/2, 29 1/2, 30 1/2, 31 1/2, 32 1/2, 33 1/2, 34 1/2, 35 1/2, 36 1/2, 37 1/2, 38 1/2, 39 1/2, 40 1/2, 41 1/2, 42 1/2, 43 1/2, 44 1/2, 45 1/2, 46 1/2, 47 1/2, 48 1/2, 49 1/2, 50 1/2*  
Material and tensile strength of Rotor shaft *S.M. Steel* Identification Mark on Do. *5808*  
Material and tensile strength of Pinion shaft *Steel* Identification Mark on Do. *5808*  
Material of Wheel shaft *Steel* Identification Mark on Do. *5808*  
Material of Thrust shaft *Steel* Identification Mark on Do. *5808*  
Material of Tunnel shafts *Steel* Identification Marks on Do. *5808*  
Material of Screw shafts *Steel* Identification Marks on Do. *5808*  
Material of Steam Pipes *Steel* Test pressure *645*  
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.) *Then engines and boilers have been built under special survey, the materials and workmanship are of good description, they have been well fitted on board & tried under steam. This machinery is in my opinion eligible to have notice of + L.M.C. 2-22, and fitted for oil fuel F.P. above 150°F. in the Register Book. It is submitted that this vessel is eligible for THE RECORD. F. L.M.C. - 2.22. F.D. C.L.*

*Fitted for Oil fuel, 2.22, F.P. above 150°F. 4 steam turbines geared to 2 screw shafts.*  
The amount of Entry Fee ... £ 6 : : When applied for, 14/2/22.  
Special ... £ 113 : 1 : 0 : :  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : :  
When received, 1.3.22

Committee's Minute GLASGOW 14 FEB 1922

Assigned + LMC 222 F.D.  
*Fitted for oil fuel 2.22 F.P. above 150°F*

