

REPORT ON MACHINERY

No. 6911
MON. 4 SEP. 1916

Received at London Office

Writing Report 19 When handed in at Local Office AUG 30 1916 19 Port of Newcastle-on-Tyne
 Survey held at Newcastle Date, First Survey 1916 Last Survey 3rd Aug 1916
 on the T.S.S. Mahana (Number of Visits _____)
 Tons { Gross _____
 Net _____
 Built at Belfast By whom built Wockman Clark & Co No. 349 When built _____
 Made at Newcastle By whom made Parsons Marine Steam Turbine Co No. 106 when made _____
 Owners _____ when made _____
 Horse Power _____ Port belonging to _____
 Horse Power at Full Power _____ Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

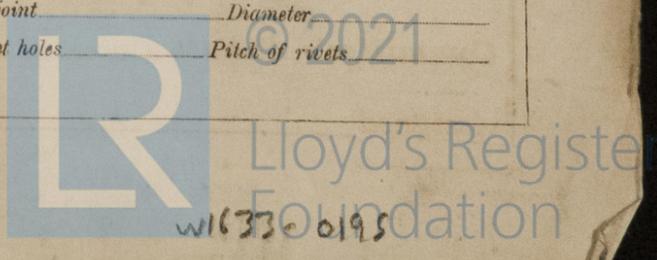
LINE ENGINES, &c.—Description of Engines Geared Turbines No. of Turbines 4
 of Rotor Shaft Journals, H.P. 6" L.P. 6" Diameter of Pinion Shaft 5 1/2"
 of Journals 5 1/2" Distance between Centres of Bearings 2' - 3 1/2" Diameter of Pitch Circle _____
 of Wheel Shaft 1 1/4" Distance between Centres of Bearings 5' - 2 1/4" Diameter of Pitch Circle of Wheel _____
 Face _____ Diameter of Thrust Shaft under Collars _____ Diameter of Tunnel Shaft _____ as per rule _____
 Diameter of same _____ as fitted _____ Diameter of Propeller _____ Pitch of Propeller _____
 State whether Moveable _____ Total Surface _____ Diameter of Rotor Drum, H.P. 1'-7" L.P. 3'-3" Astern 2'-6"
 at Bottom of Groove, H.P. Sole L.P. Soles 1 1/2" Astern Soles 1 1/2" Revs. per Minute at Full Power, Turbine about 1800 Propeller about 100

CULARS 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.
PROPELLER									
RODS									
BOLTS									
PLATES									

size of Feed pumps _____
 size of Bilge pumps _____
 size of Bilge suction in Engine Room _____
 In Holds, &c. _____
 Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine Room & size _____
 Are the roses in Engine room always accessible _____
 Are the bilge suction pipes fitted with roses _____
 Are they Valves or Cocks _____
 Are the Discharge Pipes above or below the deep water line _____
 Are the Blow Off Cocks fitted with a spigot and brass covering plate _____
 How are they protected _____
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges _____
 Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.—(Letter for record _____) Manufacturers of Steel _____
 Heating Surface of Boilers _____ Is Forced Draft fitted _____ No. and Description of Boilers _____
 Pressure _____ Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____
 Boiler be worked separately _____ Area of fire grate in each boiler _____ No. and Description of Safety Valves to _____
 Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 Distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers _____ Length _____ Material of shell plates _____
 Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____
 Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 Working pressure of shell by rules _____ Size of manhole in shell _____
FURNACES—No. and Description of Furnaces in each Boiler _____ Material _____ Outside diameter _____
 Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Working pressure by rules _____
 Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space _____
 Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and _____
 Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____
 Steam dome: description of joint to shell _____ % of strength of joint _____ Diameter _____
 Description of longitudinal joint _____ Diameter of rivet holes _____ Pitch of rivets _____
 Crown plates: Thickness _____ How stayed _____



SUPERHEATER. Type _____ 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? _____ If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

For geared turbines
FOR THE PARSONS MARINE STEAM TURBINE CO. LIMITED
J. J. J. J.
 Manufacturer. DIRECTOR.

Dates of Survey while building	During progress of work in shops -- } During erection on board vessel --- } Total No. of visits	1915	1916
		Apr. 19 Nov 10 Dec 28	Jan 6 Feb 24 Mar 21-29 Apr 13 May 5 8 10 29 30 Jun 1 8 21 Jul 15 31
		23 +	

Is the approved plan of main boiler forwarded herewith _____
 " " " donkey " " " _____
 Dates of Examination of principal parts—Casings 21/2/16 Rotors 16/2/16 Blading 22/2/16 Gearing 5/5/16
 Rotor shaft 22/2/16 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 fired _____ Engines tried under steam _____
 Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
 Material and tensile strength of Rotor shaft Steel, 35 tons Identification Mark on Do. CC 2-16
 Material and tensile strength of Pinion shaft Nickel steel 58 tons Identification Mark on Do. CC 5-16
 Material of Wheel shaft Steel Identification Mark on Do. CC 5-16 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 a duplicate of a previous case no If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. These geared turbines have been constructed under special survey & the materials & workmanship are found & good. They have been tried under steam in the shop & found satisfactory. They are being forwarded to Belfast to be fitted on board.

The amount of Entry Fee ... £ Less payable _____ When applied for, _____
 Special ... £ 244 Belfast 19 _____
 Donkey Boiler Fee ... £ Please credit _____ When received, _____
 Travelling Expenses (if any) £ Newcastle: with 7.1917 _____
part of fee

Committee's Minute FRI. 13 JUL. 1917

Assigned _____

J. C. Cooper & Thomas Field
 Engineer Surveyor to Lloyd's Register of Shipping.