

Received at London Office

Date of writing Report 30th Sep 1919 When handed in at Local Office 19 Port of Belfast

No. in Survey held at Belfast Date, First Survey 17th Dec 1918 Last Survey 25th Sep 1919

Reg. Book. on the S.S. Gorgala (Number of Visits 58) Gross 5221

Master P. H. Beeching Built at Belfast By whom built Markman Clark & Co Ltd Tons Net 3153

Engines made at Belfast By whom made when made

Boilers made at By whom made when made

Registered Horse Power 517 Owners British India S. N. Co Ltd Port belonging to Glasgow

Nom. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Engines, &c.—Description of Engines Single Screw Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27"-44"-73" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft as per rule 14.6" Material of screw shaft as fitted 15.5" I. Stab

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 Yes 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 Yes Length of stern bush 60 1/2"

Dia. of Tunnel shaft as per rule 13.3" as fitted 13.5" Dia. of Crank shaft journals as per rule 13.9" as fitted 14.5" Dia. of Crank pin 4 1/2" Size of Crank webs 28" x 9" Dia. of thrust shaft under collars 14 1/2" Dia. of screw 17"-6" Pitch of Screw 16"-6" No. of Blades 4 State whether moveable Yes Total surface 102 1/2 sq ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines See other sheet No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4-3 1/2 In Holds, &c. 9-3 1/2 1-3

No. of Bilge 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 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 Yes

Are all connections with the sea direct on the skin of the ship Except Main Tank Injections 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 Below

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 Face hold suction How are they protected Wood casings

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 Top platform E. Room

Boilers, &c.—(Letter for record S) Manufacturers of Steel Port Salut Steel Works

Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End. Cylindrical

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 21-8-19 No. of Certificate 530

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 sq ft No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 9.62 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Plant 2 ft dia. of boilers 15'-6" Length 11'-6" Material of shell plates Steel

Thickness 1/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam Lap & Riv

Long. seams Butt Lap Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 1/2"

Percentages of strength of longitudinal joint rivets 88.3 plate 85.6 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Plate Flange and Description of Furnaces in each boiler 3-Beighton Material Steel Outside diameter 50 3/8"

Length of plain part top 5" bottom 8" Thickness of plates crown 3 1/2" bottom 3 3/2" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 1/2" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 10 5/8" x 9 1/4" Back 9 1/2" x 8 3/4" 10 5/8" x 9 1/4" stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 180 lbs

Material of stays Steel Area at smallest part 23 5/8" x 40" Area supported by each stay 98 1/2" sq Working pressure by rules 180 lbs End plates in steam space:

Material Steel Thickness 1/32" Pitch of stays 2 1/2" x 2 1/2" How are stays secured Water Working pressure by rules 180 lbs Material of stays Steel

Area at smallest part 8" x 29" Area supported by each stay 45 9/8" sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel

Thickness 5/8" Material of Lower back plate Steel Thickness 27/32" Greatest pitch of stays 13 5/8" Working pressure of plate by rules 189 lbs

Diameter of tubes 2 1/4" Pitch of tubes 4" x 3 5/8" Material of tube plate Steel Thickness: Front 3/32" Back 1/4" Mean pitch of stays 12" x 7 1/2"

Pitch across wide water spaces 13 5/8" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 6" x (7 1/2" x 2) Length as per rule 35 9/16" Distance apart 10 5/8" Number and pitch of stays in each 3-9 1/4"

Working pressure by rules 182 lbs Steam dome: description of joint to shell % of strength of joint

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

Working pressure of shell by rules Crown plates Thickness How stayed

Superheater. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

Pressure to which each is adjusted Is Easing Gear fitted

W184-0115 (12)

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *See other sheet*

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO., LIMITED.

J. Cunningham

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *17th Oct. 1918 to 25th Sep. 1919*
{ During erection on board vessel -- }
Total No. of visits *58*

Is the approved plan of main boiler forwarded hereunder? *Yes - B type*

Dates of Examination of principal parts—Cylinders *18-8-18* Slides *18* Covers *8* Pistons *8* Rods *8*
Connecting rods *29-8-19* Crank shaft *25-8-19* Thrust shaft *18* Tunnel shafts *5* Screw shaft *21-8-19* Propeller *13-8-19*
Stern tube *13-8-19* Steam pipes tested *29-8-19* Engine and boiler seatings *18-9-19* Engines holding down bolts *10-9-19*
Completion of pumping arrangements *23-9-19* Boilers fixed *10-9-19* Engines tried under steam *23-9-19*
Completion of fitting sea connections *20-8-19* Stern tube *26-8-19* Screw shaft and propeller *26-8-19*
Main boiler safety valves adjusted *23-9-19* Thickness of adjusting washers *7-12/32*
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 27-6-19* Material of Thrust shaft *do* Identification Mark on Do. *do*
Material of Tunnel shafts *do* Identification Marks on Do. *LLOYDS 27-6-19* Material of Screw shafts *do* Identification Marks on Do. *LLOYDS 27-6-19*
Material of Steam Pipes *W. Iron* Test pressure *540 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? *Yes* If so, state name of vessel *S.S. Gogra.*

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

The machinery of this vessel has been built under Special Survey and in accordance with the Rules. The workmanship and the materials are of good description, and on trial in Belfast Lough the machinery worked satisfactorily.

In my opinion it is eligible for record + L.M.C. 9-19 with notation "Furled Draft" and "Electric Light"

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 9-19 F.D.

Retd.
7/10/19

R. F. Benvenuto
Engineer Surveyor to Lloyd's Register of Shipping.

Additional
The amount of Entry Fee £ *3* : - : When applied for, *2-10-1919*
Special Fee £ *45* : 18 : When received, *24/10/1919*
Paid by *Harvallo*
Donkey Boiler Fee £ : :
Letter to Sec. £ *2-10-19*
Travelling Expenses (if any) £ *134* : :
Chargeable to G.M.S. *1919*

Committee's Minute

FRI. 10 OCT. 1919

Assigned

+ L.M.C. 9-19

F.D. MACHINERY CERTIFICATE
WRITTEN

Rpt. 9a.

Port of *Belfast*

Continuation of Report No. 82/4 dated 30-9-19 on the

S.S. Gogra

Auxiliary Pumps

1 Ballast *10 1/2 x 14 x 24*
2 Feed *10 1/2 x 8 x 21*
1 General *9 1/2 x 7 x 18*
1 Ice Separator *12 x 8 x 10*

Principal Items of Spare Gear

1 Propeller Shaft
1 Propeller
1/2 Crank Shaft
1 Eccentric Strap
1 Top end brass
1 Top & one bottom half Main bearing
2 Connecting rods top end bolts & nuts
2 - - - - - bottom - - - - -
2 Main bearing bolts & nuts
6 Shaft Coupling
2 Feed pump valves
2 Belts
3 Main feed check valves
3 Donkey
50 assorted bolts & nuts
6 Studs each size in Boiler mounting
6 cylinders cover studs & nuts
6 Steam chest
12 Condenser tubes & 50 females
Bar flat & round iron
6 fire pump valves
1 Feed pump escape valve spring
12 Boiler tubes, plain.
Spare gear for Aux. Pumps etc.

R. F. Benvenuto

W184-0115 (2/2)