

REPORT ON MACHINERY.

No. 27910.

Port of Glasgow

Received at London Office WFT. 7 JUL 1909

No. in Survey held at Glasgow
Reg. Book. S/S "Dunedin"Date, first Survey 22nd October 1908 Last Survey 28th June 1909
(Number of Visits 56)

Master H J Case Built at Glasgow By whom built C Bonnell & Co Ltd
Engines made at Glasgow By whom made Dunoon & Jackson Ltd when made 1909
Boilers made at ditto By whom made ditto when made 1909
Registered Horse Power Owners Dunedin S/S Co Ltd Port belonging to Leith
Nom. Horse Power as per Section 28 518 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 24"-43"-72" Length of Stroke 48" Revs. per minute 72 Dia. of Screw shaft as per rule 14.1" Material of screw shaft Iron
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 — If two
liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 5.05"
Dia. of Tunnel shaft as per rule 13.1" Dia. of Crank shaft journals as per rule 12.1" Dia. of Crank pin 14.4" Size of Crank webs 28.9 1/2" Dia. of thrust shaft under
collars 14.4" Dia. of screw 14.6" Pitch of Screw 18-6" No. of Blades 4 State whether moveable Yes Total surface 954
No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 5 Sizes of Pumps 4.5, 4.5, 4.5, 4.5, 4.5 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2.3 1/2" Strokehold 2.3 1/2" In Holds, &c. 2.3 1/2" in each hold
No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump Cir Is a separate Donkey Suction fitted in Engine room & size Yes 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 —
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks No
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
Dates of examination of completion of fitting of Sea Connections 24 May of Stern Tube 24 May Screw shaft and Propeller 24 May
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper R Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Belleville
Total Heating Surface of Boilers 7680 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 8.4.09 No. of Certificate 9846
Can each boiler be worked separately Yes Area of fire grate in each boiler 49.845 No. and Description of Safety Valves to
each boiler Double Spring Area of each valve 8.29 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15.1 3/8" Length 19.6" Material of shell plates 8
Thickness 13/8" Range of tensile strength 28-32 Are the shell plates welded or flanged — Descrip. of riveting: cir. seams DR
long. seams TR.D.B.S. Diameter of rivet holes in long. seams 17/16" Pitch of rivets 97/8" Top of plates or width of butt straps 1-9 1/4"
Per centages of strength of longitudinal joint rivets 88.5 Working pressure of shell by rules 201 Size of manhole in shell 16 x 12"
Size of compensating ring 30" No. and Description of Furnaces in each boiler 3 Monomotion Material S Outside diameter 8-10"
Length of plain part top 39 1/16" Thickness of plates crown 39 1/16" Description of longitudinal joint weld No. of strengthening rings 29 1/2"
Working pressure of furnace by the rules 184 Combustion chamber plates: Material S Thickness: Sides 21/32" Back 5/8" Top 21/32" Bottom 29/32"
Pitch of stays to ditto: Sides 8 1/2" Back 7 1/2" Top 9 1/2" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 190
Material of stays S Diameter at smallest part 1.9 23/32" Area supported by each stay 48.46 Working pressure by rules 188 Material of stays S
Diameter at smallest part 5.79 Area supported by each stay 287.5 Working pressure by rules 206 Material of Front plates at bottom S
Thickness 31/32" Material of Lower back plate S Thickness 1/8" Greatest pitch of stays 19 1/2" Working pressure of plate by rules 193
Diameter of tubes 2 1/2" Pitch of tubes 3 1/4" Material of tube plates S Thickness: Front 31/32" Back 13/16" Mean pitch of stays all 9 1/8"
Pitch across wide water spaces 13 1/2" Working pressures by rules 197 Girders to Chamber tops: Material Iron Depth and
thickness of girder at centre 11 x 1 (2) Length as per rule 3-3 Distance apart 8 1/8" Number and pitch of stays in each 3 at 9 1/8"
Working pressure by rules 201 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description	Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length		
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied :—


Propeller Shaft. 2 Connecting Rod Bolts & Nuts for each end. 2 Main Bearing Bolts
1 Set of Coupling Bolts. 1 Set of Feed & Bilge Pump Valves. 1 Set of Piston Rings & P
HP. A Quantity of Assorted Bolt & Nut & more of various sizes.

The foregoing is a correct description,
For DUNSMUIR & JACKSON, Limited
James Fletcher Manufacturer.

Dates of Survey while building	During progress of work in shops—	1908: Oct. 22, 26, 28, 30. Nov. 4, 9, 12, 14, 19, 24. Dec. 3, 4, 9, 14, 19, 23, 29.
	During erection on board vessel—	1909: Jan. 12, 14, 19, 26, 29. Feb. 1, 4, 9, 13, 17, 22, 24, 27. Mar. 2, 11, 15, 17, 22, 29. Apr. 6, 8, 10, 14, 23, 26, 27.
	Total No. of visits	May. 6, 13, 19, 24, 26, 31. June 2, 4, 11, 15, 22, 24, 28. July 2.

Is the approved plan of main boiler forwarded herewith *forwarded with R/L 24448*

Dates of Examination of principal parts—	Cylinders 29-3-09	Slides 9-2-09	Covers 29-3-09	Pistons 17-2-09	Rods 17-2-09
Connecting rods	8-4-09	Crank shaft 15-3-09	Thrust shaft 22-2-09	Tunnel shafts 15-3-09	Screw shaft 2-3-09
Propeller	23-4-09	Stern tube 23-4-09	Steam pipes tested 4-6-09	Engine and boiler seatings 24-5-09	Engines holding down bolts 10-6-09
Completion of pumping arrangements	22-6-09	Boilers fixed 10-6-09	Engines tried under steam 2-7-09		
Main boiler safety valves adjusted	15-6-09	Thickness of adjusting washers	PV 1/16 SV 3/8 PV 3/8 SV 3/8 PV 7/16 SV 1/2		
Material of Crank shaft	S	Identification Mark on Do.	WGM	Material of Thrust shaft	S
Material of Tunnel shafts	S	Identification Marks on Do.	ditto	Material of Screw shafts	S
Material of Steam Pipes	Steel	Test pressure	540 lbs		

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been constructed & fitted on board under special survey in accordance with the approved plan & they have been securely fitted on board & the workmanship & material are of good quality. The Machinery is in my opinion eligible for the record of
 LMC 7-09
 This Vessel is a duplicate of the S/S "Glencherry" Glasgow Report. No. 24448

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.09
 FD. Elec light.
 ARR 8-7-09
 8/7/09

The amount of Entry Fee.	£ 3 : -	When applied for.	3/7/09
Special	£ 45 : 13	When received.	7-7-09
Donkey Boiler Fee	£ - : -		
Travelling Expenses (if any)	£ - : -		

Committee's Minute GLASGOW 6 JUL 1909
 Assigned + LMC 7.09
 7.0