

Rpt. 4.

## REPORT ON MACHINERY.

No. 8562

Date of writing Report 17<sup>th</sup> April 1926 When handed in at Local Office 20<sup>th</sup> April 1926 Port of Dundee Received at London Office 21 APR 1926

No. in Survey held at Dundee Date, First Survey 1<sup>st</sup> September Last Survey 16<sup>th</sup> April 1926  
Reg. Book. on the S.S. "CLONLARA" (Number of Visits 79.)

Master Built at Dundee By whom built The Caledon S. B. & E. Co. Ltd When built 1926  
Engines made at Dundee By whom made The Caledon Shipbuilding & Engineering Co. Ltd when made 1926  
Boilers made at Dundee By whom made The Caledon Shipbuilding & Engineering Co. Ltd when made 1926  
Registered Horse Power Owners The Limerick S. S. Co. Ltd Port belonging to Limerick  
Nom. Horse Power as per Section 28 239 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 20" x 33" x 53" Length of Stroke 39 Revs. per minute 85 Dia. of Screw shaft as per rule 11" 27" Material of screw shaft as fitted 11" 2" Steel  
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 47"  
Dia. of Tunnel shaft as per rule 10" 14 7/8" Dia. of Crank shaft journals as per rule 10" 6 5/8" Dia. of Crank pin 11" Size of Crank webs 20 3/4" x 7" Dia. of thrust shaft under collars 11" Dia. of screw 13-6" Pitch of Screw 14-6" No. of Blades 4 State whether moveable No Total surface 57 sq ft  
No. of Feed pumps 2 Diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 4 Sizes of Pumps 2 FEED WAYS 6 x 8 1/2 x 18" 2 BALLAST 8 x 9 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 2 @ 2 1/2" Stokehold 2 @ 2 1/2" + 1 @ 3" In Holds, &c. No 1 Hold. 2 @ 2 1/2" No 2 Hold 2 @ 2 1/2"  
has 3 + 4 Holds 2 @ 2 1/2" Tunnel well 1 @ 2 1/2"  
No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3"  
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 none  
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks 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 above 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 Bilge suction to No 1 & 2 Holds How are they protected Strong 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 Bridge OK Level.

BOILERS, &c.—(Letter for record T) Manufacturers of Steel Gutehoffnungshütte, Henschel How. Cowell How. Scott & H. Beardmore & Co  
Total Heating Surface of Boilers 43254 Is Forced Draft fitted No No. and Description of Boilers Two single ended multitubular  
Working Pressure 185 lbs Tested by hydraulic pressure to 330 lbs Date of test 27-1-26 No. of Certificate 1007  
Can each boiler be worked separately Yes Area of fire grate in each boiler 61.84 sq ft No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 8.29 sq in Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 15'0" Length 11'6" Material of shell plates Steel  
Thickness 1 7/16" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D. R.  
long. seams All Straps T. R. Diameter of rivet holes in long. seams 1 9/32" Pitch of rivets 9 3/16" Lap of plates or width of butt straps 19 1/8"  
Per centages of strength of longitudinal joint rivets 85.7 Working pressure of shell by rules 186 lbs Size of manhole in shell 16 x 12"  
Size of compensating ring 37 1/2 x 33 1/2 x 1 1/4 No. and Description of Furnaces in each boiler 3 Corrugated Material Steel Outside diameter 49 1/4"  
Length of plain part top 39 1/2" Thickness of plates crown 39 1/2" Description of longitudinal joint welded No. of strengthening rings none  
Working pressure of furnace by the rules 192 Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4"  
Pitch of stays to ditto: Sides 8 3/4 x 8 Back 8 x 7 1/2 Top 8 3/4 x 8 If stays are fitted with nuts or riveted heads hats Working pressure by rules 192  
Material of stays Iron Area at smallest part 1'45 sq in Area supported by each stay 70 Working pressure by rules End plates in steam space:  
Material Steel Thickness 1 9/32" Pitch of stays 20 1/2 x 20 How are stays secured S.N. Wash Working pressure by rules 186 Material of stays Steel  
Area at smallest part 7'06 sq in Area supported by each stay 410 Working pressure by rules 191 Material of Front plates at bottom Steel  
Thickness 27/32 Material of Lower back plate Steel Thickness 49/64 Greatest pitch of stays 13 3/4 x 8 Working pressure of plate by rules 250  
Diameter of tubes 3 1/4" Pitch of tubes 12 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 27/32 Back 3/4 Mean pitch of stays 9"  
Pitch across wide water spaces 14 1/4 + 50 x 27/32 Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 9 1/2 x 1 1/2 Length as per rule 37 1/4 Distance apart 8 Number and pitch of stays in each 3 @ 8 3/4  
Working pressure by rules 189 Steam dome: description of joint to shell % of strength of joint  
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed  
UPERHEATER. 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

1000-0009



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 4 Piston rings for each of H.P. & M.P. Pistons. 6 Junk ring bolts. 2 each of main bearing. Top & bottom end bolts & nuts. 1 set of coupling bolts & nuts. 1 Pair of Crosshead Braces. 2 Eccentric strap bolts & nuts. 6 Condenser tubes & 12 ferrules for each of main & auxiliary Condensers. 1 set of air pump valves & 1 valve guard. 1 set of feed pump valves & 1 set of feed check valves. 1 Safety valve spring. 1 spring for each size of escape valve. 12 plan & 2 stay tubes for boiler. assorted bolts nuts & bar iron.

The foregoing is a correct description,

THE CALEDON SHIPBUILDING & ENGINEERING CO. LD

J. E. Duff

SECRETARY

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1-7-10-14-15-21-24-25-28 Oct 6-8-9-13-19-26-28 Nov 2-5-11-16-17-23-25-26 Dec 2-3-7-11-14-17-21-24-28-30-31 JAN 5-6-8  
During erection on board vessel - 11-16-19-21-22-26-27-29-30 Feb 1-4-5-8-9  
Total No. of visits 79

Is the approved plan of main boiler forwarded herewith

Yes

Is the approved plan of donkey boiler forwarded herewith

Yes

Dates of Examination of principal parts—Cylinders 30-1-26 Slides 8-2-26 Covers 21-1-26 Pistons 12-1-26 Rods 11-12-25

Connecting rods 11-12-25 Crank shaft 21-1-26 Thrust shaft 21-1-26 Tunnel shafts 21-1-26 Screw shaft 21-1-26 Propeller 21-1-26

Stern tube 21-1-26 Steam pipes tested 24-2-26 Engine and boiler seatings 8-2-26 Engines holding down bolts 15-3-26

Completion of pumping arrangements 14-4-26 Boilers fixed 15-3-26 Engines tried under steam 8-4-26

Completion of fitting sea connections 8-2-26 Stern tube 8-2-26 Screw shaft and propeller 8-2-26

Main boiler safety valves adjusted 3-4-26 Thickness of adjusting washers PORT. 1/2" F. 5" A. STAR 3/2" F. 3" A. LLOYD'S NO 498

Material of Crank shaft Steel Identification Mark on Do. 21-1-26 J.E.S. Material of Thrust shaft Steel Identification Mark on Do. 21-1-26 J.E.S.

Material of Tunnel shafts Steel Identification Marks on Do. 21-1-26 J.E.S. Material of Screw shafts Steel Identification Marks on Do. 21-1-26 J.E.S.

Material of Steam Pipes Seamless Steel Test pressure 600 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 no If so, state name of vessel ✓

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

These Engines and Boilers have been built under Special Survey and in accordance with the Rules.

The materials and workmanship are sound & good.

They have been fitted on board in an efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of + L.M.C 4-26.

It is submitted that this vessel is eligible for THE RECORD

+ LMC 4. 26. CL.

C. J. Duff 22/4/26

J. E. Duff

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : 0 :  
Special ... £ 59 : 15 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 20/4/1926  
When received, 1-5-26

Committee's Minute

FRI, 23 APR 1926

Assigned

+ LMC 4:26 C.L.

CERTIFICATE WRITTEN



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