

REPORT ON MACHINERY.

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

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

Master *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" / as fitted 11.2"* Material of screw shaft *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 10.147" / as fitted 103/8"* Dia. of Crank shaft journals *as per rule 10.65" / as fitted 11"* 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 WEARS 6 x 8 1/2 x 15" / 2 BALLAST 8 x 5 x 8" / 1 @ 3"* 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. *1 Hold. 2 @ 2 1/2" No 2 Hold 2 @ 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 or Level*

BOILERS, &c.—(Letter for record *Y*) Manufacturers of Steel *Eutzhaffnungshutte, Henschel How, Cobwell How, Scottish I.R. 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 *DECK 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 *Double 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 *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 23 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 1/4" / bottom 39 1/4"* Thickness of plates *39 1/4"* Description of longitudinal joint *weld* 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 *Nuts* 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 *D.N.T. Washers* Working pressure by rules *186* Material of stays *Steel*
 Area at smallest part *7.0 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" 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 11 1/2"* 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. 2 sets of feed pump valves & seats. 1 set of Bilge Pump valves, 2 sets 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. J. Jones 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 - *11-18-19-21-22-25-27-29-30* Feb 1-4-5-8-9. *11-12-15-17-18-19-22-24-25-26* Mar 1-4-8-11-15-18-24-26-27-29. April 3-5-7-8-14-15-16. Total No. of visits *79* Is the approved plan of main 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 *24-27-3-26* 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. 1/32 F. 5 A. STAR 20 1/32 F. 3 A* 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. Jones
22/4/26

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

J. J. Jones
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI, 23 APR 1926*
Assigned *+ L.M.C 4:26 C.P.*

