

# REPORT ON MACHINERY.

No. 16997

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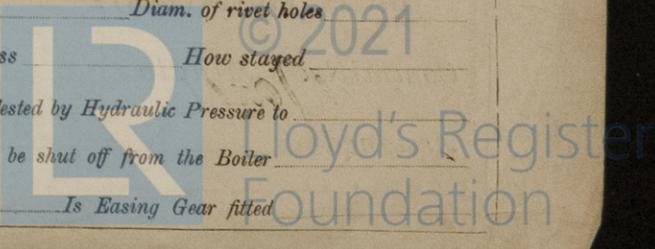
Date of writing Report 13<sup>th</sup> Sept, 1926 When handed in at Local Office 13<sup>th</sup> Sept, 1926 Port of Leith  
 No. in Survey held at Leith Date, First Survey 8<sup>th</sup> Feb Last Survey 8<sup>th</sup> Sept, 1926  
 Reg. Book. on the Steam Tug "Wellington" (Number of Visits 32)  
 Master                      Built at Leith By whom built J. C. & Son, Leith (No 136) Tons { Gross 285.42  
 Engines made at Leith By whom made John C. & Son, Leith (No 249) when made 1926 Net                       
 Boilers made at Glasgow By whom made The John S. B. & P. Co (1921) Ltd. when made 1926  
 Registered Horse Power                      Owners Alexandra Towing Co Ltd Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 140 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 17 1/2, 28, 47 1/2 Length of Stroke 28 Revs. per minute 104 Dia. of Screw shaft as per rule 9.76 Material of Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight  
 in the propeller boss oil gland 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 41  
 Dia. of Tunnel shaft as per rule 8.56 Dia. of Crank shaft journals as per rule 8.98 Dia. of Crank pin 9 Size of Crank webs 6 1/2 x 17 Dia. of thrust shaft under  
 collars 9 Dia. of screw 10-0 Pitch of Screw 12-6 No. of Blades 4 State whether moveable no Total surface 45 1/4  
 Feed pumps 2 Diameter of ditto 3 1/8 Stroke 13 1/2 Can one be overhauled while the other is at work yes  
 of Bilge pumps 2 Diameter of ditto 3 1/8 Stroke 13 1/2 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 1 Sizes of Pumps 7" x 4 1/2" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2-2" & 1 spec 2 1/2" In Holds, &c. total 1-2" & 1-2"  
 No. of Bilge Injections 1 sizes 5 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes-2 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 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  
 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  
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door                      worked from                     

**OILERS, &c.**—(Letter for record S.) Manufacturers of Steel The Steel Co of Scotland Ltd  
 Total Heating Surface of Boilers 2200 sq ft Is Forced Draft fitted no No. and Description of Boilers one Single Ended  
 Working Pressure 200 lbs Tested by hydraulic pressure to 350 lbs Date of test 22.6.26 No. of Certificate 17153  
 Can each boiler be worked separately                      Area of fire grate in each boiler 64.5 sq ft No. and Description of Safety Valves to  
 each boiler double spring loaded Area of each valve 7.06 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 about 9" Mean dia. of boilers                      Length                      Material of shell plates  
 Thickness                      Range of tensile strength                      Are the shell plates welded or flanged                      Descrip. of riveting: cir. seams  
 Long. seams                      Diameter of rivet holes in long. seams                      Pitch of rivets                      Lap of plates or width of butt straps  
 Percentages of strength of longitudinal joint                      Working pressure of shell by rules                      Size of manhole in shell                       
 Size of compensating ring                      No. and Description of Furnaces in each boiler                      Material                      Outside diameter                       
 Length of plain part                      Thickness of plates                      Description of longitudinal joint                      No. of strengthening rings                       
 Working pressure of furnace by the rules                      Combustion chamber plates: Material                      Thickness: Sides                      Back                      Top                      Bottom                       
 Pitch of stays to ditto: Sides                      Back                      Top                      If stays are fitted with nuts or riveted heads                      Working pressure by rules                       
 Material of stays                      Area at smallest part                      Area supported by each stay                      Working pressure by rules                      End plates in steam space:                       
 Material                      Thickness                      Pitch of stays                      How are stays secured                      Working pressure by rules                      Material of stays                       
 Area at smallest part                      Area supported by each stay                      Working pressure by rules                      Material of Front plates at bottom                       
 Thickness                      Material of Lower back plate                      Thickness                      Greatest pitch of stays                      Working pressure of plate by rules                       
 Diameter of tubes                      Pitch of tubes                      Material of tube plates                      Thickness: Front                      Back                      Mean pitch of stays                       
 Pitch across wide water spaces                      Working pressures by rules                      Girders to Chamber tops: Material                      Depth and                       
 Thickness of girder at centre                      Length as per rule                      Distance apart                      Number and pitch of stays in each                       
 Working pressure by rules                      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                     

**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                     

5070-5081-0-013805-0205



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed & bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes.

The foregoing is a correct description,

JOHN CRAN & SOMERVILLE LTD.

J. Duncan Cran.

Manufacturer.

Dates of Survey while building: During progress of work in shops: 1926 Jan 12, 21, Feb 16, 25, Mar 17, Apr 7, 14, May 6, 15, 25, June 1, 2, 5, 11, 17, 21, 22, 24; During erection on board vessel: June 28, July 5, 6, 13, 14, 15, 22, Aug 10, 19, 24, Sept 1, 2, 4, 8; Total No. of visits: 32. Is the approved plan of main boiler forwarded herewith: yes

Dates of Examination of principal parts: Cylinders 7.4.26, Slides 5.7.26, Covers 5.7.26, Pistons 25.5.26, Rods 13.5.26, Connecting rods 13.5.26, Crank shaft 26.4.26, Thrust shaft 10.8.26, Tunnel shafts 10.8.26, Screw shaft 21.6.26, Propeller 21.6.26, Stern tube 3.6.26, Steam pipes tested 19.8.26, Engine and boiler seatings 24.6.26, Engines holding down bolts 24.8.26, Completion of pumping arrangements 2.9.26, Boilers fixed 22.7.26, Engines tried under steam 2.9.26, Completion of fitting sea connections 24.6.26, Stern tube 24.6.26, Screw shaft and propeller 24.6.26, Main boiler safety valves adjusted 1.9.26, Thickness of adjusting washers S.V. 3/8", P.V. 3/8" E, Material of Crank shaft Steel, Identification Mark on Do. 1360, Material of Thrust shaft Steel, Identification Mark on Do. 122, Material of Tunnel shafts Steel, Identification Marks on Do. 122, Material of Screw shafts Steel, Identification Marks on Do. 1398, Material of Steam Pipes Copper, Test pressure 400 lbs per sq in, Is an installation fitted for burning oil fuel: no, Is the flash point of the oil to be used over 150°F: yes, Have the requirements of Section 49 of the Rules been complied with: yes, Is this machinery duplicate of a previous case: no, If so, state name of vessel: yes

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery has been built under Special Survey, the material and workmanship being good and proved satisfactory on steam trial. It is submitted that this vessel is eligible for a record of + L.M.C. 9.26 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 9.26. 06.

JWD 14/9/26

ARK

The amount of Entry Fee ... £ 3 : - : When applied for, Special See attached £ 35 : - : 13-9-1926, Donkey Boiler Fee ... £ 20 : 6 : When received, Travelling Expenses (if any) £ : : 13.6.27

A. T. Thomas Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 17 SEP 1926

TUES. 31 MAY 1927

Committee's Minute Assigned + L.M.C. 9:26



GEN. Rpt. Date of No. 1 Reg. B. Master Engineer Boiler Nomina. MUL. Manufa. Total H. No. and Tested by Area of Area of n case of Smallest smallest largest in thickness ng. seams percentage percentage thickness material length of imensions nd plates are st be plates an pitch rders to centre each 2 isile stren ch of stays rking pres ckness 7 h of stays rking Pres meter At b Over rking press meter At tur Over t