

# REPORT ON MACHINERY.

No. 32989

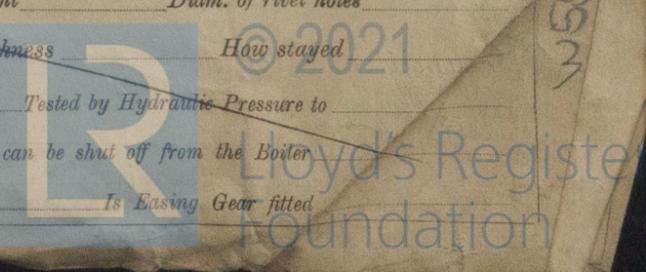
Date of writing Report Oct 29<sup>th</sup> 1921 When handed in at Local Office 21/10/1921 Port of Hull Received at London Office SAT. 22 OCT. 1921  
 No. in Survey held at Hull Date, First Survey 26/8/20 Last Survey 18/10/1921  
 Reg. Book. on the SS "BRAEMORE" (Number of Visits 43)

Master \_\_\_\_\_ Built at St. Yarmouth By whom built Pitchers & Co Tons } Gross  
 Engines made at Hull By whom made Amos Smith Ltd (No 3256) when made 1921 Net  
 Boilers made at Hull By whom made Amos Smith Ltd (No 3256) when made 1921  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Section 28 91 Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted Yes

**ENGINES, &c.**—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 13"-22½"-37" Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft 7.66 Material of screw shaft S  
 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 no 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 no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 2'-10"  
 Dia. of Tunnel shaft as per rule 6.77 Dia. of Crank shaft journals as per rule 7.11 Dia. of Crank pin 7½" Size of Crank webs 11 3/4 x 4 3/4 Dia. of thrust shaft under rollers 7½" Dia. of screw 9'-6" Pitch of Screw 10'-6" No. of Blades 4 State whether moceable no Total surface 33 sq  
 No. of Feed pumps 2 Diameter of ditto 2 7/8" Stroke 12" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 2 7/8" Stroke 12" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps 7.5x8" 6x6x6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 5-2" 3in ER. & 2 in stokehold In Holds, &c. 2-2" in hold. 1-2 1/4" to fore peak tank, and 1-2 1/4" to after peak tank  
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2" ejector  
 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 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  
 How are they protected Forward Suctions wood casing  
 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  Is it fitted with a watertight door  worked from

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel John Spencer & Son  
 Total Heating Surface of Boilers 1610 sq Is Forced Draft fitted no No. and Description of Boilers One Single ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5.4.21 No. of Certificate 3478  
 Can each boiler be worked separately  Area of fire grate in each boiler 50 sq No. and Description of Safety Valves to each boiler 2-Spring Area of each valve 5.94 sq Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork no Inside Mean dia. of boilers 13'-9 3/4" Length 10' Material of shell plates S  
 Thickness 1 1/8" Range of tensile strength 28/32 Are the shell plates welded or flanged  Descrip. of riveting: cir. seams DRR  
 Longitudinal seams DR OBS Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 7 13/16" Lap of plates or width of butt straps 17 1/2"  
 Percentages of strength of longitudinal joint rivets 93.5 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"  
 Plate 84.8 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3'-5 5/8"  
 Length of plain part top 72.5" crown 13" Description of longitudinal joint welded No. of strengthening rings no  
 bottom 67" Thickness of plates bottom 16" Working pressure of furnace by the rules 290 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 21/32" Top 3/4" Bottom 23/32"  
 No. of stays to ditto: Sides 9 1/2 x 9 3/8" Back 9 x 9" Top 9 1/2 x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 197  
 Material of stays S Area at smallest part 2.066 sq Area supported by each stay 90.25 Working pressure by rules 206 End plates in steam space: Material S Thickness 1 1/8" Pitch of stays 17 1/2" x 18" How are stays secured DR nuts Working pressure by rules 190 Material of stays S  
 Area at smallest part 6.6 Area supported by each stay 315 Working pressure by rules 220 Material of Front plates at bottom S  
 Thickness 3/16" Material of Lower back plate S Thickness 15/16" Greatest pitch of stays 14 x 7" Working pressure of plate by rules 220  
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/4 x 4 1/4" Material of tube plates S Thickness: Front 31/32" Back 7/8" Mean pitch of stays 9 1/2 x 9 1/2"  
 Distance across wide water spaces 14" Working pressures by rules 185 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9"-1 3/4" Length as per rule 31.5" Distance apart 9 1/2" Number and pitch of stays in each 2-9 1/2"  
 Working pressure by rules 230 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 \_\_\_\_\_



2010-3956-0102

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.. State the articles supplied:— Two each top and bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts and nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts, etc.

The foregoing is a correct description,

For AMOS & SMITH LTD.

J. J. Robinson Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 Aug 26 Oct 4-26 Nov 8 Dec 9-11 20 22 29 1921 Jan 3 7 14 24 28 Feb 1 4 7 14 18 19 March 4 7 Apr 14 5 Jun 22 Aug 11 26 Sept 12 13 14 15 19 21 23 Total No. of visits 48 Is the approved plan of main boiler forwarded herewith 700

Dates of Examination of principal parts—Cylinders 3.1.21. Slides 24.1.21. Covers 24.1.21. Pistons 24.1.21. Rods 1.2.21. Connecting rods 1.2.21. Crank shaft 22.12.20. Thrust shaft 6.1.21. Tunnel shafts ✓ Screw shaft — Propeller — Stern tube — Steam pipes tested 30.9.21 Engine and boiler seatings 12.9.21 Engines holding down bolts 30.9.21 Completion of pumping arrangements 3.10.21 Boilers fixed 30.9.21 Engines tried under steam 11.10.21 Completion of fitting sea connections — Stern tube ✓ Screw shaft and propeller — Main boiler safety valves adjusted 4.10.21 Thickness of adjusting washers P 13/32 S 5/16 Material of Crank shaft S. Identification Mark on Do. 2298. Material of Thrust shaft S. Identification Mark on Do. 2300. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ Identification Marks on Do. ✓ Material of Steam Pipes Copper Test pressure 260 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. The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound and good. The boiler tested by hydraulic pressure and with the engines secured on board & tested under steam they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of + LMC 10-21 in the Register book.

It is submitted that this vessel is eligible for THE RECORD + LMC 10-21 CL.

Robt 23/10/21

The amount of Entry Fee ... £ 2 : 0 : 0 Special ... £ 22 : 15 : 0 Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : : When applied for, 21/10/21 When received, 22.10.21

J. G. Mackillop Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI OCT. 28 1921 Assigned + LMC 10-21 C.L.

MACHINERY CERT WRITTEN

