Rpt. 4.

REPORT ON MACHINERY.

No. 30646

FRI. 06 JUN 1919

Date of writing Report ____ 19__ When handed in at Local Office 8/8/ 18 Received at London Office ____ Port of Hull

No. in Reg. Book. ____ Survey held at Hull Date, First Survey 23/11/17 Last Survey 1-8- 1918 (Number of Visits 31)

on the Thomas Bartlett Tons Gross 290 Net 127

Master ____ Built at Beverley By whom built Cook Welton & Gemmell Ltd When built 1918

Engines made at Hull By whom made Amos & Smith Ltd (No 2944) when made 1918

Boilers made at Hull By whom made Amos & Smith Ltd (No 2944) when made 1918

Registered Horse Power ____ Owners British Admiralty Port belonging to ✓

Nom. Horse Power as per Section 28 87 ✓ Is Refrigerating Machinery fitted for cargo purposes no ✓ Is Electric Light fitted no ✓

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12½"-21"-35" ✓ Length of Stroke 26" ✓ Revs. per minute 114 ✓ Dia. of Screw shaft as per rule 7.56" as fitted 7 5/8" 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 34" ✓

Dia. of Tunnel shaft as per rule 6.57" ✓ as fitted 6¾" Dia. of Crank shaft journals as per rule 6.9" ✓ as fitted 7⅛" Dia. of Crank pin 7⅛" ✓ Size of Crank webs 14"×4 9/16" Dia. of thrust shaft under collars 7⅛" ✓ Dia. of screw 9'-6" ✓ Pitch of Screw 11'-1½" ✓ No. of Blades 4 ✓ State whether moveable No ✓ Total surface 35½ ✓

No. of Feed pumps 2 ✓ Diameter of ditto 2½" ✓ Stroke 12" ✓ Can one be overhauled while the other is at work yes ✓

No. of Bilge pumps 2 ✓ Diameter of ditto 2½" ✓ Stroke 12" ✓ Can one be overhauled while the other is at work yes ✓

No. of Donkey Engines 2 3" ejector ✓ Sizes of Pumps 6"×3"×6" & 6"×4"×6" ✓ No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one 2" forward, one 2" aft, & one 2" bilge aft ✓ In Holds, &c. one 2" from fore hold, one 2" from slush well, also seperate 2" ejetor suction from slush well ✓

No. of Bilge Injections 1 ✓ sizes 3½" ✓ 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 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 ✓

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 Forward Suctions ✓ How are they protected Wood covering ✓

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 and Sons Limited

Total Heating Surface of Boilers 1590 ☐ft ✓ 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 26/6/18 ✓ No. of Certificate 3301 ✓

Can each boiler be worked separately ✓ Area of fire grate in each boiler 48·75 ☐ft ✓ No. and Description of Safety Valves to each boiler two, spring loaded ✓ Area of each valve 4·9 ☐" ✓ Pressure to which they are adjusted 185 lbs ✓ Are they fitted with easing gear yes ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 10½" ✓ ~~Mean~~ INT dia. of boilers 162" ✓ Length 10'-6 5/8" Material of shell plates Steel ✓

Thickness 13/32" ✓ Range of tensile strength 28-32 Tons ✓ Are the shell plates welded or flanged No ✓ Descrip. of riveting: cir. seams double ✓

long. seams TR DBS ✓ Diameter of rivet holes in long. seams 1 5/32" ✓ Pitch of rivets 8" ✓ ~~Lap of plates or~~ width of butt straps 17" ✓

Per centages of strength of longitudinal joint rivets 89·3 ✓ plate 85·5 ✓ Working pressure of shell by rules 180 lbs Size of manhole in shell 16"×12" ✓

Size of compensating ring 9"×1 3/32" ✓ No. and Description of Furnaces in each boiler 3 plain ✓ Material Steel ✓ Outside diameter 40 9/16" ✓

Length of plain part top 81½" ✓ bottom 76" ✓ Thickness of plates crown 25/32 ✓ bottom 25/32 ✓ Description of longitudinal joint Welded ✓ No. of strengthening rings ✓

Working pressure of furnace by the rules 188 ✓ Combustion chamber plates: Material Steel ✓ Thickness: Sides 11/16" ✓ Back 21/32" ✓ Top 11/16" ✓ Bottom 7/8" ✓

Pitch of stays to ditto: Sides 9½"×9 3/8" ✓ Back 9"×9" ✓ Top 9½"×9½" ✓ If stays are fitted with nuts or riveted heads nuts ✓ Working pressure by rules 181 ✓

Material of stays Steel ✓ Area at smallest part 2·07 ☐" ✓ Area supported by each stay 90·250 ☐" ✓ Working pressure by rules 206 ✓ End plates in steam space:

Material Steel ✓ Thickness 1 1/16" ✓ Pitch of stays 17⅜"×17" ✓ How are stays secured DN9 W ✓ Working pressure by rules 181 Material of stays Steel ✓

Area at smallest part 6·10 ☐" ✓ Area supported by each stay 295 ☐" Working pressure by rules 215 Material of Front plates at bottom Steel ✓

Thickness 31/32" ✓ Material of Lower back plate Steel ✓ Thickness 15/16" ✓ Greatest pitch of stays 14"×9" ✓ Working pressure of plate by rules 219

Diameter of tubes 3½" ✓ Pitch of tubes 5"×4¾" ✓ Material of tube plates Steel ✓ Thickness: Front 21/32" ✓ Back ⅞" ✓ Mean pitch of stays 10" ✓

Pitch across wide water spaces 14" ✓ Working pressures by rules 184 lbs Girders to Chamber tops: Material Steel ✓ Depth and thickness of girder at centre 8½"×1¾" ✓ Length as per rule 32" ✓ Distance apart 9½" ✓ Number and pitch of stays in each Two, 9½" ✓

Working pressure by rules 194 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 ✓

W282-0069

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:—Two top end bolts and nuts, two bottom end bolts and nuts, one set of coupling bolts and nuts, two main bearing bolts and nuts, one set of air, feed & bilge pump valves, one set of piston studs and nuts, three condenser tubes, three boiler tubes, one escape valve spring each size, two donkey pump suction and delivery valves and a quantity of assorted bolts and nuts, and iron of various sizes

The foregoing is a correct description,

For AMOS & SMITH LTD.

E. J. Robinson SECRETARY

Manufacturer.

Dates of Survey while building — During progress of work in shops: 1917 - Nov 23 Dec 3. 15. Feb 1. 21. Mar 15. 22. Apr 2. 11. 18. 27 May 2. 6. 8. 15. 16. 22. 28. 29. 30

During erection on board vessel: Jun 4. 5. 6. 7. 8. 11. 13. 14. 15. 17. 18. 19. 20. 21. 22. 25. 26. 28. 29. Jul 2. 3. 4. 5. 8. 10. 11 17. 22. 24. 30 Aug 1

Total No. of visits 57

Is the approved plan of main boiler forwarded herewith previously sent

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 8/6/18 Slides 6/6/18 Covers 4/6/18 Pistons 6/6/18 Rods 6/6/18

Connecting rods 6/6/18 Crank shaft 13/6/18 Thrust shaft 18/6/18 Tunnel shafts — Screw shaft 8/5/18 Propeller 29/5/18

Stern tube 29/5/18 Steam pipes tested 22/7/18 Engine and boiler seatings 3/7/18 Engines holding down bolts 17/7/18

Completion of pumping arrangements 1/8/17 Boilers fixed 24/7/18 Engines tried under steam 1/8/17

Completion of fitting sea connections 16/5/18 Stern tube 16/5/18 Screw shaft and propeller 16/5/18

Main boiler safety valves adjusted 25/7/18 Thickness of adjusting washers Port 11/32" Stbd 11/32"

Material of Crank shaft Iron Identification Mark on Do 1890 J.R Material of Thrust shaft Iron Identification Mark on Do. 1882 J.R

Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts Iron Identification Marks on Do. 1877 PF

Material of Steam Pipes S.D. Copper Test pressure 360 lbs

Is an installation fitted for burning oil fuel — 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 yes If so, state name of vessel John Bonkworth

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

The Machinery of this vessel has been constructed under special survey in accordance with the approved plans, and the rules of the Society. The materials and workmanship are good. The boiler and steam pipes have been tested as above and found sound and good. The machinery has been properly fitted and secured on board the vessel, and on completion was tested at full power for two hours as required by the Admiralty, and found satisfactory. The safety valves have been adjusted under steam, and tested for accumulation which did not exceed 188 lbs

In my opinion the vessel is eligible for the record of + LMC 8-18

It is submitted that this vessel is eligible for THE RECORD. +LMC. 8. 18. RR

W294 13/8/18. J.L.

John Robertson

Engineer Surveyor to Lloyd's Register of Shipping.

Hull

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ...	£ 2 : — :	When applied for,	
Special	£ 26 : 2 :	8/8	1918
Donkey Boiler Fee ...	£ : :	When received,	
Travelling Expenses (if any)	£ : :	19/8	1918

EC

Committee's Minute FRI. AUG. 16. 1918

Assigned + LMC 8.18