

REPORT ON MACHINERY.

No. 86346

Received at London Office WED. 4-OCT. 1916

Date of writing Report 19 When handed in at Local Office 10 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 13-1-15 Last Survey 29-9-1916
 Reg. Book. on the S.S. "Baron Incheape" "Megna" (Number of 40 Tons Gross)

Master Thomas Baine Built at Port Glasgow By whom built Rumell & Co (671) When built 1916

Engines made at Glasgow By whom made Strowan & Co (636) when made 1916

Boilers made at Glasgow By whom made Strowan & Co (636) when made 1916

Registered Horse Power 556 Owners James Housie & Co Port belonging to London

Nom. Horse Power as per Section 28 556 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 27" 45" 74" Length of Stroke 57 Revs. per minute 65 Dia. of Screw shaft 13.26 as per rule 13.26 Material of steel
 as fitted 15.35 screw shaft

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 length 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 yes If two
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 5-1 1/2"

Dia. of Tunnel shaft 13.6 as per rule 13.6 Dia. of Crank shaft journals 14.5 as per rule 14.5 Dia. of Crank pin 14.5 Size of Crank webs 9 1/4" Dia. of thrust shaft under
 collars 14 3/4" Dia. of screw 18-6" Pitch of Screw 19-0" No. of Blades 4 State whether moveable yes Total surface 110 ft²

No. of Feed pumps 2 Diameter of ditto 4 1/4" Stroke 27" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps (2) 9 1/2" x 7 1/2", 9 1/2" x 12", 8" x 5 1/2" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room (4) 3 1/2" In Holds, &c. (2) in each hold 3 1/2" tunnel well

No. of Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3 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 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

What pipes are carried through the bunkers ford sections How are they protected under floor

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

Dates of examination of completion of fitting of Sea Connections 9/9/16 of Stern Tube 9/9/16 Screw shaft and Propeller 9/9/16

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel William Beardmore & Co Limited

Total Heating Surface of Boilers 8301 Is Forced Draft fitted yes No. and Description of Boilers three single ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 14/6/16 No. of Certificate 13443

Can each boiler be worked separately yes Area of fire grate in each boiler 62 ft² No. and Description of Safety Valves to
 each boiler 1 pair direct spring Area of each valve 11.04" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 15-3" Length 12-6" Material of shell plates steel

Thickness 1 3/32" Range of tensile strength 28 to 32 Are the shell plates welded no Descrip. of riveting: cir. seams lap double
 long. seams butt tube Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8.625" Lap of plates or width of butt straps 18 3/4"

Per centages of strength of longitudinal joint rivets 87 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"
 plate 83.5"

Size of compensating ring 30" x 34" x 1 1/2" No. and Description of Furnaces in each boiler 3 Deighton Material steel Outside diameter 49 1/2"

Length of plain part top 1 1/2" Thickness of plates bottom 1 1/16" Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnaces by the rules 180 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 21/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 1/4" x 10 1/2" Back 10" x 8" Top 9 1/4" x 10 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181

Material of stays steel Diameter at smallest part 2-07" Area supported by each stay 98" Working pressure by rules 188 End plates in steam space: yes

Material steel Thickness 1 1/2" Pitch of stays 18 3/4" x 20 1/2" How are stays secured 2 nuts Working pressure by rules 182 Material of stays steel

Diameter at smallest part 7-06" Area supported by each stay 386" Working pressure by rules 190 Material of Front plates at bottom steel

Thickness 29/32" Material of Lower back plate steel Thickness 25/32" Greatest pitch of stays 13" Working pressure of plate by rules 192

Diameter of tubes 2 1/2" Pitch of tubes 3 3/8" x 3 3/4" Material of tube plates steel Thickness: Front 29/32" Back 23/32" Mean pitch of stays 10 7/32"

Pitch across wide water spaces 13 1/4" Working pressures by rules 180 Girders to Chamber tops: Material steel Depth, and
 thickness of girder at centre 10 1/4" x 1" Length as per rule 38 5/8" Distance apart 10 1/2" Number and pitch of stays in each (3) 9 1/4"

Working pressure by rules 198 Superheater or Steam chest; how connected to boiler van Can the superheater be shut off and the boiler worked
 separately yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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VERTICAL DONKEY BOILER—

Manufacturers of Steel

None

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting Long. seams
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied: 2 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts & nuts, feed and bilge pump valves, iron bolts & nuts of various sizes.

The foregoing is a correct description,

for David Rowan & Co. Manufacturer.

Dates of Survey while building: During progress of work in shops - 1916 Jan 13, Jun 28, Aug 18, Oct 28, 1916, Mch 22, Apr 10, 11, 21, May 2, 5, 8, 11, 16, 22, 25, 29, Jun 5, 6, 9, 12, 14, 22, 26, 28, July 13, 17, 20
 During erection on board vessel - Aug 4, 9, 10, 17, Sept 1, 5, 8, 12, 13, 18, 19, 26, 29.
 Total No. of visits 40

Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " "

Dates of Examination of principal parts: Cylinders 16/5/16 Slides 6/6/16 Covers 6/6/16 Pistons 4/6/16 Rods 6/6/16
 Connecting rods 4/6/16 Crank shaft 4/6/16 Thrust shaft 28/6/16 Tunnel shafts 28/6/16 Screw shaft 6/6/16 Propeller 6/6/16
 Stern tube 14/6/16 Steam pipes tested 12/9/16 Engine and boiler seatings Engines holding down bolts 8/9/16
 Completion of pumping arrangements 29/9/16 Boilers fixed 8/9/16 Engines tried under steam 29/9/16
 Main boiler safety valves adjusted 26/9/16 Thickness of adjusting washers: For Boiler $P \frac{1}{2} S \frac{1}{2}$ For Boiler $P \frac{1}{2} S \frac{3}{8}$ For Boiler $P \frac{3}{8} S \frac{3}{8}$
 Material of Crank shaft *Steel* Identification Mark on Do. *28/6/16* Material of Thrust shaft *Steel* Identification Mark on Do. *28/6/16*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *26/6/16* Material of Screw shafts *Steel* Identification Marks on Do. *40718 28/6/16 8/9/16*
 Material of Steam Pipes *lap welded iron* Test pressure 540 lbs

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

These engines & boilers have been built under special survey the materials & workmanship are of good description, they have been well fitted on board & tried under steam. This machinery is now in my opinion eligible to have notification of + L.M.C. 9.15 (at red) in the Register Book.

THE RECORD + L.M.C. 9.16. FD

The amount of Entry Fee .. £ 3 : : When applied for, 3/10/16
 Special £ 47 : 16 : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : : When received, 5/10/16 6/10/16

Committee's Minute GLASGOW

Assigned + L.M.C. 9.16

MACHINERY CERTIFICATE
 WRITTEN 4-10-16

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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1st. 30/9/16