

# REPORT ON MACHINERY.

No. 28567

Date of writing Report 20<sup>th</sup> May 1915 When handed in at Local Office 26-5 1915 Port of Hull Received at London Office SAT. JUN. 12. 1915

No. in Survey held at Hull Date, First Survey 27. 1. 15 Last Survey 15. 5. 1915

Reg. Book. on the steel **"ARMAGEDDON"** (Number of Visits 27)

Master Seely Built at Seely By whom built Boehrer & Sons Ltd. Tons Gross 323  
Net 129

Engines made at Hull By whom made C. W. Holmes & Co. Ltd. when made 1915

Boiler made at Hull By whom made C. W. Holmes & Co. Ltd. when made 1915

Registered Horse Power 87 Owners Cargill Stea. Fishing Co Port belonging to Hull

Nom. Horse Power as per Section 28 87 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 13. 23. 37 Length of Stroke 26 Revs. per minute 7.84 Dia. of Screw shaft 7.84 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 yes 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 2-11 1/2

Dia. of Tunnel shaft 7.04 Dia. of Crank shaft journals 7.39 Dia. of Crank pin 7.5 Size of Crank webs 14 1/2 x 14 Dia. of thrust shaft under collars 7.2 Dia. of screw 9.6 Pitch of Screw 10.9 No. of Blades 4 State whether moveable no Total surface 32 1/2

No. of Feed pumps 1 Diameter of ditto 2 3/4 Stroke 14 3/4 Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 3/4 Stroke 14 3/4 Can one be overhauled while the other is at work ✓ Engine H.P. 69.3

No. of Donkey Engines One Sizes of Pumps 6" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps 5-2" Forecastle, Main hold, Forward slush well, Spare bunker, after slush well, 2 1/2" ejector

In Engine Room 2-2" One forward, One aft In Holds, &c. 5-2" Forecastle, Main hold, Forward slush well, Spare bunker, after slush well, 2 1/2" ejector

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size 2 1/2" 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 no

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 Hold suction How are they protected 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

Dates of examination of completion of fitting of Sea Connections 17. 2. 15 of Stern Tube 17. 2. 15 Screw shaft and Propeller 17. 2. 15

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door worked from

**BOILERS, &c.**—(Letter for record S.) Manufacturers of Steel Messrs. Stewart & Lloyds

Total Heating Surface of Boilers 1435 Is Forced Draft fitted no No. and Description of Boilers One Single-ended

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 31. 3. 15 No. of Certificate 3068

Can each boiler be worked separately ✓ Area of fire grate in each boiler 47.8 No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 4.9 Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5" Mean dia. of boilers 13.9 Length 10.6 Material of shell plates S.

Thickness 1 1/4 Range of tensile strength 28 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams BR long. seams T.R.D.B. Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 8 1/16 Lap of plates or width of butt straps 17 1/2

Per centages of strength of longitudinal joint rivets 87 Working pressure of shell by rules 201 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/4" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 3-4"

Length of plain part top 6-5 3/4 crown 13" bottom 76" Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 207 Combustion chamber plates: Material S. Thickness: Sides 23/32 Back 23/32 Top 3/4 Bottom 3/2

Pitch of stays to ditto: Sides 10 x 8 1/2 Back 8 3/4 x 9 3/8 Top 11 x 8 1/2 If stays are fitted with nuts or riveted heads no Working pressure by rules 208

Material of stays S. Diameter at smallest part 2.07 Area supported by each stay 93.5 Working pressure by rules 200 End plates in steam space: Material S. Thickness 1/32 Pitch of stays 18 1/2 x 18 1/2 How are stays secured ON.W.S. Working pressure by rules 205 Material of stays S.

Diameter at smallest part 7.5 Area supported by each stay 341 Working pressure by rules 228 Material of Front plates at bottom S.

Thickness 1" Material of Lower back plate S. Thickness 1" Greatest pitch of stays 13 3/4 x 9 3/4 Working pressure of plate by rules 207

Diameter of tubes 3 1/2 Pitch of tubes 4 1/8 x 4 7/8 Material of tube plates S. Thickness: Front 1" Back 7/8 Mean pitch of stays 9 3/4 x 9 3/4

Pitch across wide water spaces 13 3/4 Working pressures by rules 202 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 11 1/8 x 1 3/4 Length as per rule 3-1 1/2 Distance apart 11" Number and pitch of stays in each 3 28 1/2

Working pressure by rules 205 Superheater or Steam chest, how connected to boiler no Can the superheater be shut off and the boiler worked separately no

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

IS A DONKEY BOILER FITTED? no. 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 each feed and bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.

The foregoing is a correct description,

Arthur Palmer

Manufacturer.

Dates of Survey while building: 1915:—  
During progress of work in shops: Jan 27, 28, Feb 4, 11, 16, 17, 19, 22, 23, 25, Mar 1, 5, 11, 15, 24, 26, 30, 31, Apr 6, 14, 19  
During erection on board vessel: May 5, 6, 8, 12, 13, 15  
Total No. of visits: 27

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 11.3.15, Slides 15.3.15, Covers 15.3.15, Pistons 15.3.15, Rods 26.3.15, Connecting rods 14.4.15, Crank shaft 30.3.15, Thrust shaft 30.3.15, Tunnel shafts ✓, Screw shaft 17.2.15, Propeller 17.2.15, Stern tube 17.2.15, Steam pipes tested 6.5.15, Engine and boiler seatings 17.2.15, Engines holding down bolts 8.5.15, Completion of pumping arrangements 13.5.15, Boilers fixed 5.5.15, Engines tried under steam 8.5.15, Main boiler safety valves adjusted 8.5.15, Thickness of adjusting washers FV 3/32" AV 1/32"

Material of Crank shaft S, Identification Mark on Do. 1444, Material of Thrust shaft S, Identification Mark on Do. 6831, Material of Tunnel shafts ✓, Identification Marks on Do. ✓, Material of Screw shafts S, Identification Marks on Do. 1432

Material of Steam Pipes Copper solid drawn, Test pressure 400lbs. hyd. press.

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 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 and workmanship are sound and good. The Boiler tested by hydraulic pressure and with the engines secured on board and 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 5.15. in the Register's book.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.15.

J.W.D. 14/6/15. A.P.R.

The amount of Entry Fee ... £ 1 : :  
Special ... £ 13 : 1 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : 8 : 2

When applied for, 28/5 1915  
When received, 31/5 1915

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

Committee's Minute TUE JUN 15 1915  
Assigned + LMC 5.15

ADMINISTRATIVE WRITERS

