

# REPORT ON MACHINERY.

No. 73606

Received at London Office FRI. OCT. 11 1920

Date of writing Report 10 When handed in at Local Office 10 Port of NEWCASTLE-ON-TYNE

No. in Survey held at South Shields Date, First Survey 19th Nov 1918 Last Survey 8th Sept 1920  
 Reg. Book. 79714 on the Steel S.S.K. JOLLY MARIE (Number of Visits 26)

Master                      Built at Newcastle By whom built J.S.D. Morris & Co. Tons { Gross 366  
 Net 147  
 When built 1920

Engines made at S. Shields By whom made Geo. T. Gray & Co. Ltd. when made 1920

Boilers made at Newcastle By whom made Palmer's S.S. & Iron Co. Ltd. (St. 955) when made 1920

Registered Horse Power                      Owners Walford Lines Ltd. Port belonging to London

Nom. Horse Power as per Section 28 64 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

**ENGINES, &c.**—Description of Engines Inverted Compound No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 17" x 34" Length of Stroke 24" Revs. per minute 100 Dia. of Screw shaft 7.6" Material of screw shaft Iron  
 as per rule 7.6" as fitted 8"

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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2'-8"

Dia. of Tunnel shaft 7.2" Dia. of Crank shaft journals 7.2" Dia. of Crank pin 7.2" Size of Crank webs 11 x 5 Dia. of thrust shaft under collars 7.2" Dia. of screw 8'-9" Pitch of Screw 11'-3" No. of Blades 4 State whether moperable Yes Total surface                     

No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 3/8" Stroke 13" Can one be overhauled while the other is at work Yes

No. of Donkey Engines One Sizes of Pumps 5 1/2 x 3 1/2 x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2" In Holds, &c. Main Hold 2 of 2" One of 4"

No. of Bilge Injections 1 sizes 2 3/4" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 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 Hold suction pipes 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

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

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

Total Heating Surface of Boilers 1180 Is Forced Draft fitted Yes No. and Description of Boilers One Multiple - Cylindrical

Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 9.7.20 No. of Certificate 9436

Can each boiler be worked separately Yes Area of fire grate in each boiler 36 sq No. and Description of Safety Valves to each boiler Two Spring-loaded Area of each valve 5.9 sq Pressure to which they are adjusted 132 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 22" 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                     

Per centages 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                       
 top                      bottom                      crown                      bottom                     

Working pressure of furnace by the rules                      Combustion chamber plates: Material                      Thickness: Sides                      Back                      Top                      Bottom                     

Pitch of stays to ditto: Sides                      Back                      Top                      Are stays 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                     

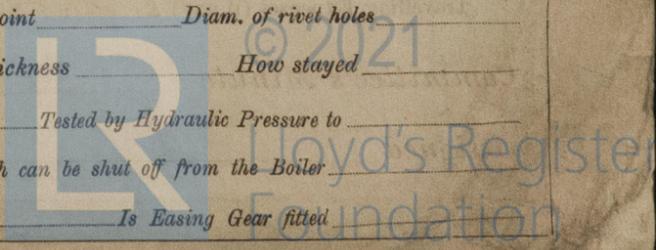
**SUPERHEATER.** Type                      Date of Approval of Plan                      Tested by Hydraulic Pressure to                     

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                     

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

014480-014491-0064



IS A DONKEY BOILER FITTED? *no.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two top end bolts nuts also bottom end bolts nuts - Two main-bearing bolts. One set Coupling bolts - set of feed bilge pump valves - propeller - Assorted bolts nuts & Lion One set piston bolts nuts, One set of air circulating pumps' valves.*

The foregoing is a correct description,

*For Geo. J. Gray* *Manufacturers of Main Engines*

Dates of Survey while building { During progress of work in shops - - 1918. Nov. 19. 24. Dec. 11. Feb. 13. Apr. 24. Jun. 4. Jul. 29. Sept. 1. 3. 8. 22. 29. Nov. 12. Dec. 30. During erection on board vessel - - - 1920. Jun. 21. 26. Mar. 16. Apr. 28. May. 4. 19. Jul. 4. 20. Aug. 18. 19. 25. Sept. 8. Total No. of visits 26. Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 13. 2. 19 Slides 13. 2. 19 Covers 29. 9. 19 Pistons 29. 9. 19 Rods 19. 11. 18 Connecting rods 19. 11. 18 Crank shaft 4. 6. 19 Thrust shaft 7. 7. 20 Tunnel shafts ✓ Screw shaft 7. 7. 20 Propeller 7. 7. 20 Stern tube 20. 7. 20 Steam pipes tested 18. 8. 20 Engine and boiler seatings 30. 7. 20 Engines holding down bolts 19. 8. 20 Completion of pumping arrangements 25. 8. 20 Boilers fixed 25. 8. 20 Engines tried under steam 8. 9. 20 Completion of fitting sea connections 30. 7. 20 Stern tube 30. 7. 20 Screw shaft and propeller 30. 7. 20 Main boiler safety valves adjusted 8. 9. 20 Thickness of adjusting washers *Put 1/2" Slack?*

Material of Crank shaft S.M.S. Identification Mark on Do. 4821 J.R.W. Material of Thrust shaft S.M.S. Identification Mark on Do. 4821 J.R.W. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S.M.S. Identification Marks on Do. 4821 J.R.W. Material of Steam Pipes S.D. 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 *Yes* If so, state name of vessel *% Ravelin*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good. The main bolts & engines have been efficiently installed on board. The engines and auxiliary machinery were tried under steam at the wharf and the safety valves were adjusted under steam to their working pressure. In our opinion the vessel is eligible for classification.*

*L.M.C. 9.20 (machinery aft)* It is submitted that this vessel is eligible for THE RECORD. *+ LMC 9.20*

NEWCASTLE-ON-TYNE

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 ... £ 1 : - When applied for, 30 SEP 1920 For mach. install. only Special ... £ 5 : 13 When received, 16/10/20 86620 Donkey Boiler Fee ... £ Travelling Expenses (if any) £

Committee's Minute Assigned TUE. OCT. 12 1920 + L.M.C. 9.20

*R. Lee Amers + Leonard Shalleros* Engineer Surveyor to Lloyd's Register of Shipping.



Date of writing Report No. in Survey held Reg. Book. 79714 on the Muster Engines made at Boilers made at Registered Horse Power MULTITUBULAR (Letter for record Boilers on S.S. No. of Certificate 94 safety valves to each Are they fitted with ea Smallest distance betw Material of shell plate Descrip. of riveting: Lap of plates or width rules 131.5th Si boiler two plain Description of longitudi plates: Material Sta Top 9x8 1/2 If stays smallest part 1.45 Pitch of stays 6 1/2 x 16 Area supported by ea lower back plate 40 Pitch of tubes 4 1/4 x 4 water spaces 14 order at centre 8 1/2 Working pressure by diameter Pitch of rivets WATER HEATER Date of Test diameter of Safety Valve GENERAL RE The Boilers ha and efficien and found Sa for Survey of Survey Fee Travelling Expens Committee's M signed