

# REPORT ON MACHINERY

No. 73689

Received at London Office

Date of writing Report Sept 25<sup>th</sup> 1920 When handed in at Local Office Sept 25<sup>th</sup> 1920 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle-on-Tyne Date, First Survey 29<sup>th</sup> Mar 17 Last Survey 25<sup>th</sup> Sept 1920  
 Reg. Book. on the Screw Steamer "Mod" now "Giovanna Florio" (Number of Visits 9) Tons 5141  
 Gross 5141  
 Net 3225

Master NE 2090 Built at Newcastle By whom built Northumbrian S. & C. When built 1920

Engines made at Newcastle By whom made With custom name Eng. Co. Ltd when made 1920  
 No. 2290

Boilers made at do By whom made do when made 1920

Registered Horse Power 367 371 Owners J. A. Christensen & V. Florio Port belonging to Christiana  
Palermo

Nom. Horse Power as per Section 28 367 371 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 25-41-69 Length of Stroke 48 Revs. per minute 62 Dia. of Screw shaft 14 1/2 Material of Steel  
 as per rule 14 1/2 as fitted 14 1/2 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 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 5-0

Dia. of Tunnel shaft 12 1/2 as per rule 12 1/2 Dia. of Crank shaft journals 13 1/2 as per rule 13 1/2 Dia. of Crank pin 14 Size of Crank webs 22 x 8 1/2 Dia. of thrust shaft under  
 as fitted 13 1/2 as fitted 14 1/2 collars 14 Dia. of screw 17-3 Pitch of Screw 18-3 No. of Blades 4 State whether moveable No Total surface 92 sq ft

No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2 Sizes of Pumps 12 x 10 1/2 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4-3 1/2 In Holds, &c. 2-3 1/2 in each hold, 1-2 1/2 in  
tunnel well

No. of Bilge Injections / sizes 8 Connected to condenser, or to circulating pump Yes 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 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 None How are they protected No  
 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 Top platform

**BOILERS, &c.**—(Letter for record 5) Manufacturers of Steel John Spencer & Sons

Total Heating Surface of Boilers 5901 Is Forced Draft fitted No No. and Description of Boilers 3 Single Ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 2-14-20 No. of Certificate 2-9376  
 1-15-3-20 1-9374

Can each boiler be worked separately Yes Area of fire grate in each boiler 52 sq ft No. and Description of Safety Valves to  
 each boiler 2 Spring loaded Area of each valve 5.94 sq in 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 24 Mean dia. of boilers 13-9 1/2 Length 10-9 Material of shell plates Steel  
 Thickness 1 1/2 Range of tensile strength 28 1/2 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 9-Lap  
 long. seams D.P. strips with Pin Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 3/4 Lap of plates or width of butt straps 17 1/4  
 Per centages of strength of longitudinal joint rivets 86.4 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12  
 plate 86.4

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Deightons Material Steel Outside diameter 41 1/2  
 Length of plain part top 1 1/2 Thickness of plates crown 1 1/2 Description of longitudinal joint Melted No. of strengthening rings 0  
 bottom 1 1/2 bottom 1 1/2

Working pressure of furnace by the rules 182 Combustion chamber plates: Material Steel Thickness: Sides 3/32 Back 3/32 Top 3/32 Bottom 3/32  
 Pitch of stays to ditto: Sides 10 1/2 x 9 3/8 Back 10 1/2 x 9 3/8 Top 10 1/2 x 9 3/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs  
 Material of stays Steel Area at smallest part 2.03 Area supported by each stay 98.40 Working pressure by rules 185 End plates in steam space:  
 Material Steel Thickness 1 3/8 Pitch of stays 24 x 19 1/4 How are stays secured D.P. x washers Working pressure by rules 185 Material of stays Steel  
 Area at smallest part 8.29 Area supported by each stay 47.40 Working pressure by rules 181 Material of Front plates at bottom Steel  
 Thickness 1 Material of Lower back plate Steel Thickness 3/32 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 190  
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates Steel Thickness: Front 1 Back 3/4 Mean pitch of stays 11 1/2  
 Pitch across wide water spaces 14 1/2 Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 9 x 1 1/2 Length as per rule 30 Distance apart 10 1/2 Number and pitch of stays in each 2-9 3/8  
 Working pressure by rules 185 lbs Steam dome: description of joint to shell None % of strength of joint -

Diameter 8 3/8 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 -

Is Easing Gear fitted -

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Top end and 2 bottom end bolts & nuts. 2 main bearing bolts & nuts. A set of shaft coupling bolts & nuts. Iron plates of various thicknesses. Bolts & nuts of various sizes. A set of feed & bilge pump valves. A spare propeller.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

*J. Harrison* Manufacturer.  
Secretary.

Dates of Survey while building  
 During progress of work in shops: 1914, Mar. 29, May 3, June 19, Sept. 13, 1919, Mar. 14, 17, 25, 26, 31, May 15, 20, June 4, July 3, 10, 25.  
 During erection on board vessel: 1920, Oct. 14, 16, 20, 21, 22, 28, 30, Jan. 9, 13, Feb. 2, 4, 5, 6, 9, 11, 17, 19, 20, 23, 24, 25, 26, 27, Mar. 2, 3, 10, 12, 15, 16, 19, 22, 23, 26, 29, 30, 31, Apr. 1, 22, 29, May 2, 21, 25, 31, June 3, 4, 8, 11, 12, 14, 29, July 5, 12, 22, 24, 29, Aug. 5, 9, 11, 12, 18, 20, 25, 30, 31, Sept. 8.  
 Total No. of visits: 21, 22, 23, 24, 26, 27, 28. — 9.

Is the approved plan of main boiler forwarded herewith? *Yes*  
 " " " donkey " " " *None*  
 Dates of Examination of principal parts—Cylinders 29.7.20 Slides 12.8.20 Covers 29.7.20 Pistons 29.7.20 Rods 25.3.20  
 Connecting rods 25.3.20 Crank shaft 30.10.19 Thrust shaft 25.3.20 Tunnel shafts 23.3.20 Screw shaft 31.3.20 Propeller 22.7.20  
 Stern tube 25.3.20 Steam pipes tested 24.3.20 Engine and boiler seatings 29.7.20 Engines holding down bolts 8.9.20  
 Completion of pumping arrangements 21.9.20 Boilers fixed 21.9.20 Engines tried under steam 21.9.20  
 Completion of fitting sea connections 25.3.20 Stern tube 25.3.20 Screw shaft and propeller 31.3.20  
 Main boiler safety valves adjusted 21.9.20 Thickness of adjusting washers *Star - S-1/2 P-9/16. Outer S-1/2 P-1/2. Port S-1/2 P-1/2.*  
 Material of Crank shaft *steel* Identification Mark on Do. *L.P. 0.4* Material of Thrust shaft *steel* Identification Mark on Do. *L.P. 4.4*  
 Material of Tunnel shafts *Iron* Identification Marks on Do. *L.P. 3.20* Material of Screw shafts *Iron* Identification Marks on Do. *L.P. 3.1*  
 Material of Steam Pipes *1 1/2" steel x 2 L.M. wrought Iron* Test pressure *540 lbs*  
 Is an installation fitted for burning oil fuel? *Yes* Is the flash point of the oil to be used over 150°F. *Yes*  
 Have the requirements of Section 49 of the Rules been complied with? *Yes*  
 Is this machinery duplicate of a previous case? If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel machinery has been surveyed during construction, and the materials and workmanship are good and in accordance with the approved plans and the Society's rules. The boilers are fitted for burning oil fuel with a flash point above 150°F. but these fittings have been removed for the present, & coal will be used on the voyage. She is therefore eligible in our opinion to have the notation of +L.M. 9.20 made in the R. Book.*

P.S. This vessel originally named "Mod", has been sold to Italian owners & is now named "Giosanna Florio", port of Registry Palermo.  
 It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.20. FITTED FOR O.I.L FUEL 9.20 FP ABOVE 150°F.  
*Rell. 22/10/20*

The amount of Entry Fee ... £ 3 : : When applied for,  
 Special ... £ 38 : 7 : 19 OCT 1920  
 Donkey Boiler Fee ... £ : : When received,  
 Traveling Expenses (if any) £ : : 2/11/20 *Abby*

*Francis Petton Rell Armer*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned  
 + L.M.C. 9.20  
 Fitted for oil fuel 9.20  
 F.P. above 150°F



Certificate (if required) to be sent to NEWCASTLE-ON-TYNE  
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 No. 2