

REPORT ON MACHINERY.

No. 16305
16 JUNE 1925

Received at London Office

Date of writing Report 2nd June 1925 When handed in at Local Office 15th 6th 1925 Port of WIDULESBRO
 Date, First Survey 23 April Last Survey 8 June 1925
 in Survey held at Hartlepool (Number of Vistas 26)
 on the S.S. "LIMA" Gross 3865.39 Tons
 Master Built at Hartlepool By whom built Furness Withya & Co. Ltd. When built 1907
 Engines made at Hartlepool By whom made Richardsons Westgarth & Co. Ltd. when made 1907
 Boilers made at ditto By whom made ditto when made 1907
 Registered Horse Power 497 Port belonging to Lisbon
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Length of Stroke 48" Revs. per minute 14.75 Dia. of Screw shaft 15.12 Material of steel
 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
 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 5'-1 1/2"
 Dia. of Tunnel shaft 13.4" Dia. of Crank shaft journals 14.5" Dia. of Crank pin 15" Size of Crank webs 29.9 1/2" Dia. of thrust shaft under
 collars 16" Dia. of screw 17-6 Pitch of Screw 1 1/2" No. of Blades 4 State whether moveable yes Total surface yes
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yes Weirs main feed
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes pumps 11 1/2" x 8" x 18"
 No. of Donkey Engines 2 Sizes of Pumps Ballast 10 1/2" x 12" x 10" dup No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Five of 4" In Holds, &c. Two of 4" in each hold
 No. of Bilge Injections 1 sizes 6 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size yes 4"
 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 Bilge & tank forward suction How are they protected strong 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 yes of Stern Tube yes Screw shaft and Propeller yes
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from cylindrical grating
 OILERS, &c. — (Letter for record 3) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 6868 Is Forced Draft fitted yes No. and Description of Boilers Three single ended
 Working Pressure 200 lb Tested by hydraulic pressure to 400 lb Date of test 13.9.07 No. of Certificate 358
 Can each boiler be worked separately yes Area of fire grate in each boiler 53 sq ft No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 15.46 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 14" Mean dia. of boilers 14' 0" Length 12' 0" Material of shell plates Steel
 Thickness 1 1/16" Range of tensile strength 28/31 3/4 Are the shell plates welded or flanged no Descrip. of riveting: air seams DRS and
 long seams TR DRS Diameter of rivet holes in long seams 1 1/32" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 2 1/4"
 Per centages of strength of longitudinal joint: rivets 88.5 Working pressure of shell by rules 235 Size of manholes in shell 13" x 16 1/2"
 plates 85.6 Size of compensating ring 14 x 1 1/16" No. and Description of Furnaces in each boiler 3 Lead pipe bulb Material Steel Outside diameter 40 1/16"
 Length of plain part 19" Thickness of plates 32 Description of longitudinal joint welded No. of strengthening rings 3
 Working pressure of furnace by the rules 234 Combustion chamber plates: Material Steel Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 1 3/16"
 Pitch of stays to ditto: Sides 8 x 8 1/2" Back 8 x 7 1/2" Top 8 x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 229
 Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 8 x 8 1/2" Working pressure by rules 205 End plates in steam space
 Material Steel Thickness 1 1/16" Pitch of stays 16 x 9 1/2" How are stays secured DR Rivets Working pressure by rules 200 Material of stays Steel
 Diameter at smallest part 2 3/8" Area supported by each stay 16 x 9 1/2" Working pressure by rules 216 Material of Front plates at bottom Steel
 Thickness 3/8" Material of Lower back plate Steel Thickness 3/8" Greatest pitch of stays 15 x 8" Working pressure of plate by rules 216
 Diameter of tubes 2 1/4" Pitch of tubes 4 x 4" Material of tube plates Steel Thickness: Front 1 1/16" Back 3/4" Mean pitch of stays 8"
 Pitch across wide water spaces 14" Working pressure by rules 236 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7 1/2" x 1 3/4" Length as per rule 3 1/2" Distance apart 7" Number and pitch of stays in each 3 x 8"
 Working pressure by rules 201 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately yes Diameter 14" Length 14" Thickness of shell plates 1 1/16" Material Steel Description of longitudinal joint DRS Diam. of rivet
 holes 1 1/32" Pitch of rivets 9 3/8" Working pressure of shell by rules 236 Diameter of flue 14" Material of flue plates Steel Thickness 1 1/16"
 If stiffened with rings yes Distance between rings 14" Working pressure by rules 236 End plates: Thickness 1 1/16" How stayed DRS
 Working pressure of end plates 201 Area of safety valves to superheater yes Are they fitted with easing gear yes

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

2 con. rod top end bolts & nuts. 2 bottom end do
4 main bearing ditto. 24 coupling ditto. 1 set valves for feed pumps. 1 set
valves for bilge pumps. 1 group set valves and seats for Wiers feed pumps.
2 steam chests for ditto. 1 tail shaft. 1 propeller boss. 3 propeller blades
1 slide rod. $\frac{1}{2}$ crank shaft. 1 pair crank pin bearings. 2 pair
Crownhead bearings. 2 pair eccentric straps. 2 pump links complete
100 boiler tubes. Bolts, nuts and iron.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1925 April 23, 24, 28, 30. May 5, 8, 9, 12, 13, 13, 15, 18, 19, 19, 20, 20, 21, 22, 26, 27, 28 June
During erection on board vessel - - - 5, 6, 8
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith

Yes

Dates of Examination of principal parts—	Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts		
Completion of pumping arrangements	Boilers fixed	Engines tried under steam			
Main boiler safety valves adjusted	Thickness of adjusting washers				
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.		
Material of Steam Pipes		Test pressure			

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This vessel's machinery was built under the survey of the Germanischer Lloyd, and the boilers to Board of Trade survey also.

The dimensions have been found to be as stated in the foregoing.

The machinery has been examined throughout and found to be, or put, in good and safe working condition and is eligible to have the notation LMC 6.25.

For details of examination held and repairs effected see accompanying report.

The amount of Entry Fee ... £
Special ... £ 32 : 16 : 3
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for:

18. 6. 1925

When received:

20. 6. 1925

R.D. Shilston

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

Committee's Minute

TUES. 30 JUN 1925

Assigned

Lmb 6.25

J.D. C.L.

CERTIFICATE MUSTER



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