

Date of writing Report 28-5-1926 When handed in at Local Office 29-5-1926 Port of Belfast
No. in Survey held at Belfast Date, First Survey 18-Jan-1926 Last Survey 20-May-1926
Reg. Book. on the New Steel Y.S.S. "San Nicolas" (Number of Visits 45)
Master Built at Belfast By whom built Harland & Wolff Ltd Tons Gross Not
Engines made at Belfast By whom made Harland & Wolff Ltd When built 1926
Boilers made at Belfast By whom made Harland & Wolff Ltd when made 1926
Registered Horse Power Owners P&O Shipping Coy Ltd Port belonging to London
Nom. Horse Power as per Section 28 196 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Triple Expansion No. of Cylinders 6 No. of Cranks 6
Dia. of Cylinders 13'2" x 23'2" x 36" Length of Stroke 24" Revs. per minute 125 Dia. of Screw shaft as per rule 4'6" Material of screw shaft 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
in the propeller boss Yes If the liner is in more than one length are the joints burned 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 3'-0" aft 1'9" fwd
Dia. of Tunnel shaft as per rule 6'85" Dia. of Crank shaft journals as per rule 4'19" Dia. of Crank pin 4'24" Size of Crank webs 11'8" x 11'2" Dia. of thrust shaft under
collars 4'24" Dia. of screw 9'-0" Pitch of Screw 9'-6" No. of Blades 4 State whether moveable No Total surface 28 sq ft each propeller
No. of Feed pumps 2 Diameter of ditto 2'4" Stroke 13'2" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 2'4" Stroke 13'2" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 6 Ballast Weirs 9'10" x 2'4" (2) (aux feed & fire weirs 1'2" x 5'2" x 15, 2 oil fuel 1'2" x 3'2" x 6)
In Engine Room 1 @ 3'2", 1 @ 2'7" & 2 @ 2'7" cockpans No. and size of Suctions connected to both Bilge and Donkey pumps
1 @ 2" pump room Holds carrying petroleum in bulk In Holds, &c. 1 @ 3'2" each buoyancy tank, 1 @ 2'2" cockpan
No. of Bilge Injections 2 sizes 4" Connected to condenser, or to circulating pump 0.9 Is a separate Donkey Suction fitted in Engine room & size Yes, 3'2"
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
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
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 Engines off Is it fitted with a watertight door Worked from

BOILERS, &c.—(Letter for record 3) Manufacturers of Steel D. Colville & Son Ltd Glasgow 258
Total Heating Surface of Boilers 3410 sq ft Is Forced Draft fitted No No. and Description of Boilers Two Single Ended (258)
Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 14-12-1926 No. of Certificate 882 & 883
Can each boiler be worked separately Yes Equivalent Area of fire grate in each boiler 49 sq ft No. and Description of Safety Valves to
each boiler 2 Spring loaded Area of each valve 9'6" 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 2'-0" Mean dia. of boilers 14'-3" Length 10'-6" Material of shell plates Steel
Thickness 1'5" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1'4" Pitch of rivets 8'2" Lap of plates or width of butt straps 18'8"
Per centages of strength of longitudinal joint rivets 85.0% plate 92.4% Working pressure of shell by rules 180 lbs Size of manhole in shell 16' x 12'
Size of compensating ring 2'8" x 3'-0" No. and Description of Furnaces in each boiler 3 CF Morrison Material Steel Outside diameter 3'-4" 1/16"
Length of plain part top 1'4" bottom 1'4" Thickness of plates crown 1'4" bottom 1'4" Description of longitudinal joint welded No. of strengthening rings 4
Working pressure of furnace by the rules 191 lbs Combustion chamber plates: Material Steel Thickness: Sides 5'8" Back 5'8" Top 5'8" Bottom 3'4"
Pitch of stays to ditto: Sides 8'2" x 8'2" Back 9'4" x 4'2" Top 8'8" x 8'8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 188 lbs
Material of stays Steel Area at smallest part 1'4" 6" Area supported by each stay 1'2" 25" 6" Working pressure by rules 210 lbs End plates in steam space:
Material Steel Thickness 1'8" Pitch of stays 1'2" x 20'2" How are stays secured D.N. Wash Working pressure by rules 182 lbs Material of stays Steel
Area at smallest part 6'33" Area supported by each stay 3'46" Working pressure by rules 182 lbs Material of Front plates at bottom Steel
Thickness 1'8" Material of Lower back plate Steel Thickness 1'6" Greatest pitch of stays 13'2" x 4'2" Working pressure of plate by rules 224 lbs
Diameter of tubes 3'4" Pitch of tubes 4'2" x 4'2" Material of tube plates Steel Thickness: Front 1'8" Back 1'6" Mean pitch of stays 11'4" x 8'2"
Pitch across wide water spaces 14'4" x 8'2" Working pressures by rules 184 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 2 @ 8'4" x 3'4" Length as per rule 2'-6" 5'8" Distance apart 8'2" Number and pitch of stays in each 3 @ 8"
Working pressure by rules 215 lbs Steam dome: description of joint to shell None % 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 so, is a report now forwarded?

The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED,

J. S. Keay.

Manufacturer.

Dates of Survey while building	{	During progress of	1926 Jan. 18. 20. 21. 25 Feb. 1. 4. 5. 9. 10. 11. 12. 15. 16. 17. 19. 20. 22. 26 Mar. 1. 2. 4. 5. 8. 11. 15. 17. 18
		work in shops - -	
		During erection on	23. 26 April. 2. 7. 10. 12. 13. 14. 23. 27. 28. 30 May 3. 7. 13. 18. 20 = 45
	{	board vessel - - -	
	{	Total No. of visits	45


Is the approved plan of main boiler forwarded herewith *W.S.*

Is the approved plan of main boiler forwarded herewith

” ” ” *donkey* ” ”

Dates of Examination of principal parts—Cylinders 1-K-76 Slides 10-K-76 Covers 2-3-76 Pistons 73-3-76 Rods 2-3-76
Connecting rods 73-3-76 Crank shaft K-3-76 Thrust shaft 8-3-76 Tunnel shafts ✓ Screw shaft 76-3-76 Propeller 1-K-76
Stern tube 1-K-76 Steam pipes tested 24-K-76 & 4-K-76 Engine and boiler seatings 10-K-76 Engines holding down bolts 4-5-76
Completion of pumping arrangements 4-5-76 Boilers fixed 30-K-76 Engines tried under steam 20-5-76
Completion of fitting sea connections 12-K-76 Stern tube 12-K-76 Screw shaft and propeller 12-K-76
Main boiler safety valves adjusted 12-5-76 Thickness of adjusting washers 9 Bl 3 1/8" 1 3/8" 8 Bl 1 3/8" 5 3/8"
Material of Crank shaft Steel Identification Mark on Do. 439 WB Material of Thrust shaft Steel Identification Mark on Do. 439 WB
Material of Tunnel shafts ✓ Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 439 WB
Material of Steam Pipes Solid drawn Copper ✓ Test pressure 360 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 yes ✓ If so, state name of vessel USS Inuvumba ✓

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

The Machinery of this vessel has been built under Special Survey. Materials & Workmanship good. Hydraulic Tests satisfactory. The whole of the Machinery has been satisfactorily installed & fixed in the vessel and was tried under steam, and is in good & safe working condition and eligible in my opinion to be classed and have records,  LMC. 5-26. Sail Shafts C.L. Electric Light, Fitted for oil fuel 5-26. Flash point above 150° F.

It is submitted that
this vessel is eligible for

THE RECORD. + LMC 5. 26. CL

Fitted for oil fuel ⁵²⁶ F.P. above 150° F.

The amount of Entry Fee	...	£	3	:	0	0	:	When applied for,
Special	...	£	49	:	0	0	:	27 th May 1922
Electric Light	...	£	10	✓	0	0	:	When received,
Donkey Boiler Fee	...	£	10	✓	0	0	:	5-6-22
Travelling Expenses (if any)	£			:			:	1922

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 1 JUN 1926

Assigned

+ L. M. 5:26 C. L.
Filled for Oil Fuel 5:26 F. above 150°F

CERTIFICATE WRITTEN

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Foundation