

REPORT ON MACHINERY.

No. 26060.
TUE. MAR. 31. 1914

Received at London Office

of writing Report 19 When handed in at Local Office 30. 3. 1914 Port of Sunderland.

in Survey held at Sunderland. Date, First Survey Oct 2. 1913. Last Survey 23. March 1914
Book. on the Steel S/S "Nuceria" (Number of Visits 28)

ster Built at S' land. By whom built J. L. Thompson & Sons Ltd. Tons Gross 4762 Net 2872
When built 1914

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Registered Horse Power Owners International Line S.S. Co. (Marwood) Port belonging to Whitby
n. Horse Power as per Section 28 390 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

GINES, &c.—Description of Engines J. L. P. A. No. of Cylinders 3 No. of Cranks 3
n. of Cylinders 25 1/2, 42, 70 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 14.4 Material of screw shaft W. I.
as fitted 14.2

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
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
s are fitted, is the shaft lapped or protected between the liners Length of stern bush 5ft

n. of Tunnel shaft as per rule 12.86 Dia. of Crank shaft journals as per rule 13.5
as fitted 12.8 Dia. of Crank pin 13 5/8 Size of Crank webs Patent Dia. of thrust shaft under
bars 13 5/8 Dia. of screw 17.6 Pitch of Screw 16.6 No. of Blades 4 State whether moveable f Total surface 92 f

n. of Feed pumps 2 Diameter of ditto 4 Stroke 25 1/2 Can one be overhauled while the other is at work yes
n. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 25 1/2 Can one be overhauled while the other is at work yes
n. of Donkey Engines 4 Sizes of Pumps 10x10-2 dph 5-6 dph No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room 4 of 3 1/2 In Holds, &c. two 3 1/2 in each

n. of Bilge Injections 1 sizes 5 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
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 yes
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
Dates of examination of completion of fitting of Sea Connections 4. 2. 1914 of Stern Tube 3. 2. 1914 Screw shaft and Propeller 4. 2. 1914
the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

PLERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons Ltd. S.B.
Total Heating Surface of Boilers 6300 f Is Forced Draft fitted no No. and Description of Boilers 3 Ordinary type
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 28. 2. 1914 No. of Certificate 3192

Can each boiler be worked separately yes Area of fire grate in each boiler 56 f No. and Description of Safety Valves to
each boiler 2 Spring Area of each valve 7.06 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 1' 6" Mean dia. of boilers 14.9" Length 11 f Material of shell plates S
Thickness 1 5/32 Range of tensile strength 28 1/2 - 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d r. lap
Long. seams T.R. A.B.S Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 9/16 Lap of plates or width of butt straps 1' 6 3/8
Percentage of strength of longitudinal joint rivets 92.18 Working pressure of shell by rules 181 Size of manhole in shell 16" x 12"
plate 85.4

Size of compensating ring 8 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3' 6"
Length of plain part top 78 1/2 Thickness of plates crown 5 1/4 bottom 6 1/4 Description of longitudinal joint Welded No. of strengthening rings
Working pressure of furnace by the rules 183 Combustion chamber plates: Material S Thickness: Sides 3/8 Back 3/8 Top 3/8 Bottom 1 1/2
Pitch of stays to ditto: Sides 9 1/2 x 9 Back 9 x 10 Top 9 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181

Material of stays S Diameter at smallest part 2.038 Area supported by each stay 90 Working pressure by rules 203 End plates in steam space:
Material S Thickness 1 1/2 Pitch of stays 20 x 17 How are stays secured d nuts Working pressure by rules 184 Material of stays S
Diameter at smallest part 6.1 Area supported by each stay 340 Working pressure by rules 187 Material of Front plates at bottom S
Thickness 7/8 Material of Lower back plate S Thickness 3/2 Greatest pitch of stays 10 x 14 1/2 Working pressure of plate by rules 187
Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 7/8 Back 7/8 Mean pitch of stays 9 x 9
Pitch across wide water spaces 1.2 1/2 Working pressures by rules 248 Girders to Chamber tops: Material S Depth and
Thickness of girder at centre 7 1/2 x 1 two Length as per rule 26 1/2 Distance apart 9 Number and pitch of stays in each 2 @ 9

Working pressure by rules 185 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
separately 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
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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— Propeller + shaft, coupling bolts + nuts, 1 set
two main bearing bolts + nuts, 2 top and bottom end bolts + nuts, set of feed
and bilge pump valves, air + fire pump valves, Ballast + feed pumps
valves, set of check valves, 2 Safety + escape valve spring, assorted
iron nuts + bolts

The foregoing is a correct description,
John Dickinson & Sons, Limited, Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1913. Oct. 2. Dec. 3. 5. 11. 17. 24. Jan. 7. 14. 20. 21. 28. Feb. 3. 4. 9. 10. 12. 13
	During erection on board vessel - - -	19. 21. 25. Mar. 4. 5. 6. 7. 10. 11. 18. 23.
	Total No. of visits	(28)

Is the approved plan of main boiler forwarded herewith **Yes** ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders	2 Oct 1913	Slides	5 Oct	Covers	5 Oct	Pistons	5 Oct	Rods	5 Oct
Connecting rods	11 Dec	Crank shaft	24 Dec	Thrust shaft	24 Dec	Tunnel shafts	24 Dec	Screw shaft	7 Jan
Stern tube	7 Jan	Steam pipes tested	4. 3. 14	Engine and boiler seatings	5. 3. 14	Engines holding down bolts	5. 3. 14		
Completion of pumping arrangements	23. 3. 1914	Boilers fixed	6-3. 14	Engines tried under steam	7-3. 14				
Main boiler safety valves adjusted	7. 3. 14	Thickness of adjusting washers	PB f 7/16 a 1/4 CB 1/16 a 7/16 SB f 5/16 a 5/16						
Material of Crank shaft	S	Identification Mark on Do.	R J T F	Material of Thrust shaft	S	Identification Mark on Do.	R J T F		
Material of Tunnel shafts	S	Identification Marks on Do.	R J T F	Material of Screw shafts	W. J.	Identification Marks on Do.	R J T F		
Material of Steam Pipes	C ✓	Test pressure	400 lbs ✓						

General Remarks (State quality of workmanship, opinions as to class, &c. Engines + boilers built under special survey. Materials + workmanship good. Engines and boilers examined under full steam + found satisfactory. It is submitted that this vessel is eligible for the record in the Register Book of L.M.C 3-1914.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 3.14.

J.W.D.
3/3/14
T.P.R.

The amount of Entry Fee	.. £ 3 : - :	When applied for,	
Special £ 39 . 10 :	When received,	25. 3. 14
Donkey Boiler Fee £ :		
Travelling Expenses (if any) £ :		22. 4. 14

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

Committee's Minute FRI. APR. - 3. 1914
Assigned + L.M.C 3.14

