

## REPORT ON MACHINERY.

No. 2179

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Port of Barrow-in-Furness

No. in Survey held at Barrow.  
Reg. Book.

Date, First Survey, 16th July 1925 Last Survey, 1 May 1926

(Number of Visits 103)

on the single screw steamer "Nova Scotia" (bickers L<sup>d</sup> 623)Gross 6796  
Tons  
Net 3841  
When built 1926Master Built at Barrow. By whom built bickers L<sup>d</sup>Engines made at Barrow. By whom made bickers L<sup>d</sup> when made 1926Boilers made at Barrow. By whom made bickers L<sup>d</sup> when made 1926Registered Horse Power Owners Warren Line L<sup>d</sup> (Furness Withy & Co.) Port belonging to Liverpool

Nom. Horse Power as per Section 28 1047 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines *Balanced Quadruple Expansion*. No. of Cylinders 4 No. of Cranks 4  
Dia. of Cylinders 31", 43", 62", 90" Length of Stroke 54" Revs. per minute 80 Dia. of Screw shaft as per rule 18" Material of screw shaft as fitted 19" 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 6'-6"  
Dia. of Tunnel shaft as per rule 16" Dia. of Crank shaft journals as per rule 14" Dia. of Crank pin 18" Size of Crank webs 11 1/2" x 34 3/4" Dia. of thrust shaft under collars 18 1/8" Dia. of screw 19'-4" Pitch of Screw 19'-1 1/2" No. of Blades 4 State whether moveable No Total surface 123 1/2 sq ft  
No. of Feed pumps 2 *Kickalls* Diameter of ditto 10" 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 28 1/2" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 5 Sizes of Pumps 4 x 10, 10 x 10, 4 x 6, 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 1 of 3", 3 of 3 1/2" and 1 of 3" in Tunnel bell. In Holds, &c. 2 of 3" in h<sup>o</sup> 7, 2 of 3" in h<sup>o</sup> 2, 2 of 2 1/2" in h<sup>o</sup> 3, 2 of 3" in h<sup>o</sup> 4, 1 of 2 1/2" in duct bell.  
No. of Bilge Injections 1 sizes 14" Connected to condenser, or to circulating pump *Cir pump* Is a separate Donkey Suction fitted in Engine room & size 2 of 5"  
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 Both  
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 Yes Is it fitted with a watertight door Yes worked from Bridge on Upper deck

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel *Mrs Bradmore & Co.*  
Total Heating Surface of Boilers 16095 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 5 *S.E. Mult Cylindrical*  
Working Pressure 215 lb Tested by hydraulic pressure to 373 lb Date of test 16-12-25, 29-12-25, 12-1-26 No. of Certificate 405 406  
Can each boiler be worked separately Yes Area of fire grate in each boiler 45.44 sq ft No. and Description of Safety Valves to each boiler Two high lift *Springloaded* Area of each valve 4.07 sq in Pressure to which they are adjusted 220 lb Are they fitted with easing gear Yes  
Smallest distance between boilers on upper and lower decks 1'-8" *Meas* dia. of boilers 16'-9" Length 12'-0" Material of shell plates *Stal*  
Thickness 1 1/2" Range of tensile strength 35/34 ton Are the shell plates welded or flanged No Descrip. of riveting: cir. seams *AR Lap*  
long. seams *VR ARS* Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 10 1/2" *Lap of plates on width of butt straps 23"*  
Per centages of strength of longitudinal joint rivets 85% 57.39 Working pressure of shell by rules 216 lb Size of manhole in shell 21 1/2" x 17 1/2"  
Size of compensating ring 4 1/4" x 9" x 1 1/2" No. and Description of Furnaces in each boiler 4 *Drighon* Material *Stal* Outside diameter 41 1/8"  
Length of plain part top Thickness of plates crown 7 1/4" Description of longitudinal joint *Weld* No. of strengthening rings  
bottom Thickness of plates bottom 7 1/4" Working pressure of furnace by the rules 241 lb Combustion chamber plates: Material *Stal* Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 1/8"  
Pitch of stays to ditto: Sides 10 3/8" x 7 1/4" Back 10 1/2" x 7 1/4" Top 10 3/8" x 8" If stays are fitted with nuts or riveted heads *hubs* Working pressure by rules 214 lb End plates in steam space:  
Material of stays *Stal* Diameter Area at smallest part 1 3/4" Area supported by each stay 81.5 sq in Working pressure by rules 224 lb Material of stays *Stal*  
Material *Stal* Thickness 1 3/16" Pitch of stays 18 1/2" x 16 1/4" How are stays secured *Double hubs* Working pressure by rules 214 lb Material of stays *Stal*  
Area at smallest part 2 3/4" Area supported by each stay 300.6 sq in Working pressure by rules 218 lb Material of Front plates at bottom *Stal*  
Thickness 15/16" Material of Lower back plate *Stal* Thickness 29/32" Greatest pitch of stays 14 1/8" x 10 1/2" Working pressure of plate by rules 214 lb  
Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates *Stal* Thickness: Front 15/16" Back 29/32" Mean pitch of stays 14 1/2" *dia of Circle*  
Pitch across wide water spaces 14" Working pressures by rules 222 lb Girders to Chamber tops: Material *Stal* Depth and thickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 2'-8 3/8" Distance apart 8" Number and pitch of stays in each 2 @ 10 3/4"  
Working pressure by rules 220 lb 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 *North Eastern* Date of Approval of Plan Tested by Hydraulic Pressure to 430 lb  
Date of Test 5<sup>th</sup> and 8<sup>th</sup> March 1926 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes  
Diameter of Safety Valve 3" Pressure to which each is adjusted 225 lb Is Easing Gear fitted Yes

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?



