

REPORT ON MACHINERY.

Received at London Office

13 MAY 1926

Date of writing Report *May 1926* When handed in at Local Office

Port of *Barrow-in-Warwick*

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

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

(Number of Visits) *103*

on the *Single screw steamer "Nova Scotia" (bickers L^d 623)*

Tons } Gross *6796*
 } Net *3841*

Master *Barrow* Built at *Barrow*

By whom built *bickers L^d*

When built *1926*

Engines made at *Barrow*

By whom made *bickers L^d*

when made *1926*

Boilers made at *B*

By whom made *B*

when made *1926*

Registered Horse Power

Owners *Warren Line L^d (Yarness 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 1/2"* Material of screw shaft *Ingot 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 *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 1/4"* Dia. of Crank shaft journals *as per rule 14 1/2"* Dia. of Crank pin *18 3/4"* 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* 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* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *1 of 5"; 3 of 3 1/2" and 1 of 3" in Tunnel bell* In Holds, &c. *2 of 3" in h^o 1; 2 of 3" in h^o 2; 2 of*

2 1/2" in h^o 3; 2 of 3" in h^o 4; 1 of 2 1/2" in duct lead

No. of Bilge Injections *1* sizes *1 1/4"* Connected to condenser, or to circulating pump *Circ 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 *Yes*

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 or 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^l 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 *45.4 sq ft* No. and Description of Safety Valves to

each boiler *Two high lift Springloaded* Area of each valve *4.07 sq ft* Pressure to which they are adjusted *220 lb* Are they fitted with easing gear *Yes*

Smallest distance between boilers *on plates and bunkers on woodwork* *1'-8"* dia. of boilers *16'-9"* Length *12'-0"* Material of shell plates *Steel*

Thickness *1 1/32"* Range of tensile strength *30/34 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 9/16"* Pitch of rivets *10 1/2"* *lap of plates or width of butt straps* *2 1/2"*

Per centages of strength of longitudinal joint *rivets 85.7; plate 88.1; 87.39* Working pressure of shell by rules *216 lb* Size of manhole in shell *21 1/2" x 17 1/2"*

Size of compensating ring *7 1/4" x 9" x 1 1/32"* No. and Description of Furnaces in each boiler *4 Cf. Dighton* Material *Steel* Outside diameter *41 1/8"*

Length of plain part *top* Thickness of plates *bottom* *7 1/16"* Description of longitudinal joint *Weld* No. of strengthening rings

Working pressure of furnace by the rules *241 lb* Combustion chamber plates: Material *Steel* 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 3/16" x 8"* If stays are fitted with nuts or riveted heads *hats* Working pressure by rules *217 lb*

Material of stays *Steel* Area at smallest part *1 3/4"* Area supported by each stay *81.5 sq ft* Working pressure by rules *224 lb* End plates in steam space:

Material *Steel* Thickness *1 3/16"* Pitch of stays *18 1/2" x 16 1/4"* How are stays secured *Double nuts* Working pressure by rules *217 lb* Material of stays *Steel*

Area at smallest part *2 3/4"* Area supported by each stay *300.6 sq ft* Working pressure by rules *218 lb* Material of Front plates at bottom *Steel*

Thickness *15/16"* Material of Lower back plate *Steel* Thickness *29/32"* Greatest pitch of stays *14 1/8" x 10 1/2"* Working pressure of plate by rules *217 lb*

Diameter of tubes *3 1/4"* Pitch of tubes *4 3/8" x 4 3/8"* Material of tube plates *Steel* Thickness: Front *15/16"* Back *29/32"* Mean pitch of stays *14 1/2" Circle*

Pitch across wide water spaces *14"* Working pressures by rules *222 lb* Girders to Chamber tops: Material *Steel* 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 *Yes* % of strength of joint *Yes*

Diameter *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivet holes *Yes*

Pitch of rivets *Yes* Working pressure of shell by rules *Yes* Crown plates *Yes* Thickness *Yes* How stayed *Yes*

SUPERHEATER. Type *both Easton* Date of Approval of Plan *Yes* Tested by Hydraulic Pressure to *430 lb*

Date of Test *5th and 8th 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?

1100-0014



