

REPORT ON MACHINERY.

No. 81421

Received at London Office JUN 19 1919

Writing Report 14th June 1919 When written in at Local Office 10 Port of Belfast
 Survey held at Belfast Date, First Survey 21st Feb 1919 Last Survey 11th June 1919
 on the T.S.S. "Albion Star" (Number of Visits 34)

Built at Belfast By whom built Workman Clark & Co Ltd Tons Gross 7920 Net 4908
 when built 1919
 made at Belfast By whom made when made
 made at By whom made when made

rated Horse Power 1138 Owners The Blue Star Line Ltd Port belonging to London
 Horse Power as per Section 28 1138 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

INES, &c.—Description of Engines Twin Screw Triple Expansion No. of Cylinders 6 No. of Cranks 6
 of Cylinders 26 1/2 - 44 - 73 Length of Stroke 48 Revs. per minute 82 Dia. of Screw shaft as per rule 14.8 as fitted 15.75 Material of screw shaft J. Steel

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 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

shafts are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 63
 Dia. of Tunnel shaft as per rule 13.7 as fitted 13.87 Dia. of Crank shaft journals as per rule 14.37 as fitted 14.75 Dia. of Crank pin 4 3/4 Size of Crank webs 23 x 9 Dia. of thrust shaft under
 rollers 15 Dia. of screw 17.3 Pitch of Screw 18.0 No. of Blades 4 State whether moveable Yes Total surface 90 sq ft

No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines See others of vessel No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 6 - 3 1/2 In Holds, &c. / 2 - 3 1/2 + 1 - 2 1/2

No. of Bilge Injections 2 sizes 13 Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 1 - 3 1/2
 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 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 Below
 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 Fore hold suction How are they protected 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
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top of Engine Room

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel Beardmore & Co Ltd Glasgow

Total Heating Surface of Boilers 7079 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Double End Cylinders
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 1-3-19 No. of Certificate
 Can each boiler be worked separately Yes Area of fire grate in each boiler 146 1/2 sq ft No. and Description of Safety Valves to
 each boiler 3 Direct Spring Area of each valve 14.9 sq 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 about 14 Mean dia. of boilers 16 - 3 Length 20 - 6 Material of shell plates Steel
 Thickness 1 1/2 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam Lap Rivet
 cir. seam Spanto Lubbock diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 1/2 Lap of plates or width of butt straps 22 1/2
 Percentages of strength of longitudinal joint rivets 85.2 plate 85.7 Working pressure of shell by rules 207 lbs Size of manhole in shell 16 x 12
 No. of compensating ring McVeils No. and Description of Furnaces in each boiler 8 Deighton Material Steel Outside diameter 44 1/2
 Length of plain part top 4 bottom 10 Thickness of plates crown 3 1/2 bottom 3 3/2 Description of longitudinal joint Weld No. of strengthening rings
 Working pressure of furnace by the rules 213 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1/2
 No. of stays to ditto: Sides 9 x 8 1/2 Back 7 x 6 1/2 Top 7 x 6 1/2 If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 211 lbs
 Material of stay Steel Area at smallest part 2.06 sq supported by each stay 1.78 sq Working pressure by rules 241 lbs End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 2 1/2 x 16 - How are stays secured Nuts inside Working pressure by rules 201 lbs Material of stays Steel
 Area at smallest part 7.06 sq Area supported by each stay 3.36 sq Working pressure by rules 218 lbs Material of Front plates at bottom Steel
 Thickness 1 Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 x 3 5/8 Material of tube plate Steel Thickness: Front 1 1/4 Back 3/4 Mean pitch of stays 1 1/2 x 7 1/2
 Working pressures across wide water spaces 18 1/2 Working pressures by rules 203 lbs Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre (8 x 4) x 2 Length as per rule 52 1/2 Distance apart 8 1/2 x 7 Number and pitch of stays in each 6 - 6 1/2 + 8 1/2
 Working pressure by rules 235 lbs 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 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 Valves Pressure to which each is adjusted Is Easing Gear fitted



