

# REPORT ON MACHINERY.

No. 15348  
3/556

Received at London Office WED. MAR. 13 1918.

Date of writing Report 9/5/18 When handed in at Local Office 1918 Port of Glasgow

No. in Survey held at Glasgow Reg. Book. on the S/S "Wellmark" Date, First Survey 16/2/15 Last Survey 7/3/1918

Master Built at Glasgow By whom built Greenock & Glasgow 830122 When built

Engines made at Glasgow By whom made Cunliffe & Jackson Ltd (H615) when made 1918

Boilers made at ditto By whom made ditto (H62) when made 1918

Registered Horse Power Owners The Berholm Line Steamers Ltd Port belonging to Greenock.

Net Horse Power as per Section 28 220 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

No. of Cylinders 21-35-57 Length of Stroke 36 Revs. per minute Dia. of Screw shaft as per rule 11.7 as fitted 12.38 Material of screw shaft Iron

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

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 49 1/2

Dia. of Tunnel shaft as per rule 10.26 as fitted 10.58 Dia. of Crank shaft journals as per rule 10.77 as fitted 11.77 Dia. of Crank pin 11 1/8 Size of Crank webs 7 1/8 x 22 Dia. of thrust shaft under

collars 11 Dia. of screw 14-9 Pitch of Screw 115-6 No. of Blades 4 State whether moveable no Total surface 75-24

No. of Feed pumps 2 Diameter of ditto 3 1/4 Stroke 18 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 18 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 4 1/2-10 4 1/2-10 4 1/2-10 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-2 3/4 1-3 In Holds, &c. Forehold 2-2 3/4 After hold 2-2 3/4 and

1-2 1/2 funnel well hold.

No. of Bilge Injections 1 size 4 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 4 1/2-3

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 none

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 stowhold 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

Dates of examination of completion of fitting of Sea Connections 29/10/17 of Stern Tube 15/3/18 Screw shaft and Propeller 15/3/18

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck.

BOILERS, &c.—(Letter for record R) Manufacturers of Steel Glasgow Iron Steel Co. Ltd

Total Heating Surface of Boilers 2434 Is Forced Draft fitted no No. and Description of Boilers 2 Single Ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 7.9.15 No. of Certificate 19236

Can each boiler be worked separately yes Area of fire grate in each boiler 56 3/8 No. and Description of Safety Valves to

each boiler 2 Double Spring Area of each valve 704 Pressure to which they are adjusted 185 lb. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean dia. of boilers 14 1/4 Length 10-6 Material of shell plates S

Thickness 1 1/4 Range of tensile strength 28-32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR

long. seams TR. O.B.S Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 1-6 3/4

Per centages of strength of longitudinal joint rivets 91.4 plate 85.29 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12

Size of compensating ring 6 3/4 x 13 1/6 No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 3-9

Length of plain part top bottom Thickness of plates crown bottom 1 1/2 Description of longitudinal joint weld No. of strengthening rings

Working pressure of furnace by the rules 182 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 13/16

Pitch of stays to ditto: Sides 7 1/8 x 8 1/2 Back 8 3/4 x 8 Top 7 1/8 x 8 3/4 If stays are fitted with nuts or riveted heads DN Working pressure by rules 194

Material of stays Iron Diameter at smallest part 1.99 Area supported by each stay 70 Working pressure by rules 210 End plates in steam space:

Material S Thickness 1 1/2 Pitch of stays 19 3/8 x 18 How are stays secured DN Working pressure by rules 186 Material of stays S

Diameter at smallest part 5 1/8 Area supported by each stay 335 Working pressure by rules 181 Material of Front plates at bottom S

Thickness 1 1/2 Material of Lower back plate S Thickness 29/32 Greatest pitch of stays 15 x 8 3/4 Working pressure of plate by rules 188

Diameter of tubes 3 1/2 Pitch of tubes 4 7/8 x 5 Material of tube plates S Thickness: Front 1 1/2 Back 29/32 Mean pitch of stays 9 7/8

Pitch across wide water spaces 14 1/2 Working pressures by rules 181 Girders to Chamber tops: Material Iron Depth and

thickness of girder at centre 8 x 1 (2) Length as per rule 2-6 3/4 Distance apart 8 3/4 Number and pitch of stays in each 3 at 4 7/8

Working pressure by rules 189 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

If 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

M. S. Pipes

125

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