

REPORT ON MACHINERY.

No. 45385

Received at London Office 10 Feb 1926

Date of writing Report 4. 2. 1926 When handed in at Local Office 4. 2. 1926 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 17. 4. 25 Last Survey 3-2-1926
Reg. Book. on the new steel S/S "GRAIGWEN" (Number of Visits 35) Tons Gross 3697 Net 2277

Master Built at Port Glasgow By whom built R. Duncan & Co. Ld. (N^o 366) When built 1925

Engines made at Glasgow By whom made W. Rowan & Co. Ld. (N^o 817) when made 1925

Boilers made at Glasgow By whom made W. Rowan & Co. Ld. (N^o 817) when made 1925

Registered Horse Power Owners The Spring Shipping Co. Ld. Port belonging to Cardiff

Nom. Horse Power as per Section 28 392 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

Dia. of Cylinders 25"-41"-68" Length of Stroke 45" Revs. per minute 80 Dia. of Screw shaft as per rule 13.697" Material of steel as fitted 14 3/8" screw shaft

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 no 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 no Length of stern bush 4'-9" No. 006

Dia. of Tunnel shaft as per rule 12.28" Dia. of Crank shaft journals as per rule 12.894" Dia. of Crank pin 13 1/2" Size of Crank webs 20"x8 1/2" Dia. of thrust shaft under

collars 13 1/2" Dia. of screw 17'-0" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable no Total surface 84 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 9" 12" 12" 8 1/2" 5" 8" 6 1/2" 4" 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 @ 2 1/2" In Holds, &c. N^o 1 hold - 2 @ 2 3/4" N^o 2 hold - 2 @ 3 1/2"

N^o 3 hold - 2 @ 2 3/4" Hold well - 1 @ 3" Tunnel well - 1 @ 2 1/2"

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump b.p. Is a separate Donkey Suction fitted in Engine room & size yes 4 1/2"

Are all the bilge suction pipes fitted with mud boxes having straight tail pipes. (Bilge injection) 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 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 forward hold suction How are they protected under 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 upper deck

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Rheinische Stahlwerke, Duisburg & Thiesemann & Co. Ltd

Total Heating Surface of Boilers 6800 sq ft Is Forced Draft fitted no No. and Description of Boilers Three single ended marine

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 12-8-25 No. of Certificate 16903

Can each boiler be worked separately yes Area of fire grate in each boiler 59 sq ft No. and Description of Safety Valves to

each boiler Two direct spring Area of each valve 8.290" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers on wood deck 15" corner to corner 2nd dia. of boilers 15'-0" Length 11'-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. seams WP. lap

long. seams BS. TR Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 15/16" Lap of plates or width of butt straps 18 3/4"

Per centages of strength of longitudinal joint rivets 86.8 plate 86.01 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring flanged 4 No. and Description of Furnaces in each boiler 3 Deighton Material S Outside diameter 43 27/32"

Length of plain part top 35" bottom 64" Thickness of plates crown 35" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 180 Combustion chamber plates: Material S Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 7/8"

Pitch of stays to ditto: Sides 9 1/2" x 9" Back 9 1/2" x 8 3/4" Top 9 1/2" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays S Area at smallest part 1.849" Area supported by each stay 83 1/2" Working pressure by rules 183 End plates in steam space:

Material S Thickness 1 1/2" Pitch of stays 21" x 19" How are stays secured DN Working pressure by rules 182 Material of stays S

Area at smallest part 5930" Area supported by each stay 3530" Working pressure by rules 85 Material of Front plates at bottom S

Thickness 3/32" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 13 1/8" x 8 3/4" Working pressure of plate by rules 182

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates S Thickness: Front 21/32" Back 23/32" Mean pitch of stays 10"

Pitch across wide water spaces 13 1/8" Working pressures by rules 183 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 9 3/8" x 7/8" x 2 Length as per rule 37 1/8" Distance apart 9 1/2" Number and pitch of stays in each 3 @ 9"

Working pressure by rules 183 Steam dome: description of joint to shell none % 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 none 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 Valve Pressure to which each is adjusted Is Easing Gear fitted

W403-0111

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