

REPORT ON MACHINERY.

No. 9380

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Date of writing Report 19 When handed in at Local Office Belfast Port of Belfast

No. in Survey held at Reg. Book. Belfast Date First Survey 13-17-24 Last Survey July 15th 1925

on the New Steel Y.S.S. Imvruha (No 402) (Number of Visits 3rd) Gross Tons 300 Net Tons 250

Master Harland & Wolff Ltd Built at Belfast By whom built Harland & Wolff Ltd When built 1925

Engines made at Glasgow By whom made A & J Inglis Ltd when made 1925

Boilers made at Belfast By whom made Harland & Wolff Ltd when made 1925

Registered Horse Power 196 Owners Lago Shipping Co Ltd Port belonging to London

Nom. Horse Power as per Section 28 196 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c. Description of Engines Twin Triple Expansion No. of Cylinders 6 No. of Cranks 6

Dia. of Cylinders 13 1/2 x 13 1/2 x 36 Length of Stroke 24 Revs. per minute 125 Dia. of Screw shaft 4 1/2 Material of screw shaft 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 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 no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 3'0" aft 1'9" fwd

Dia. of Tunnel shaft 6.85 Dia. of Crank shaft journals 4.19 Dia. of Crank pin 4.21 Size of Crank webs 4 1/8 x 4 1/2 Dia. of thrust shaft under collars 4 1/8 Dia. of screw 9.0 Pitch of Screw 9.6 No. of Blades 4 State whether moceable no Total surface 28 each propeller

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Donkey Engines 6 Sizes of Pumps 1 Ball Valve 1 1/2 x 1 1/2 1 Jawed 1 1/2 x 1 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps 10 1/2" each

In Engine Room 1 @ 3 1/2" dia 1 @ 2 1/2" dia 2 @ 1 1/2" dia In Holds, &c. 1 @ 2 1/2" each

No. of Bilge Injections 7 sizes 4" Connected to condenser, or to circulating pump CP Is a separate Donkey Suction fitted in Engine room & size yes 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 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 no

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 no worked from no

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel D. Nichol & Sons Ltd.

Total Heating Surface of Boilers 3402 sq ft Is Forced Draft fitted no No. and Description of Boilers Two single ended (258)

Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 7-5-25 + 9-6-25 No. of Certificates 865 + 866

Can each boiler be worked separately yes Area of fire grate in each boiler 49 sq ft No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 9.67 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" Mean dia. of boilers 14'-3" Length 10'-6" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.

long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18 1/8"

Per centages of strength of longitudinal joint 85.04 Working pressure of shell by rules 180 lbs Size of manhole in shell 16 x 18

Size of compensating ring 2'-8" x 3'-0" No. and Description of Furnaces in each boiler 3 corr Material Steel Outside diameter 3'-4 1/2"

Length of plain part 191 lbs Thickness of plates 1 1/2" Description of longitudinal joint weld No. of strengthening rings no

Working pressure of furnace by the rules 191 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4"

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 9 1/2" x 1 1/2" Top 8 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 188 lbs

Material of stays Steel Area at smallest part 1.46 sq ft Area supported by each stay 47.25 Working pressure by rules 210 lbs End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 1 1/2" x 20" How are stays secured D.N. Wash Working pressure by rules 182 lbs Material of stay Steel

Area at smallest part 6.33 sq ft Area supported by each stay 346 sq ft Working pressure by rules 187 lbs Material of Front plates at bottom Steel

Thickness 1 1/4" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 13 1/2" x 4 1/2" Working pressure of plate by rules 224 lbs

Diameter of tubes 3 1/4" Pitch of tubes 14 1/2" x 1 1/2" Material of tube plates Steel Thickness: Front 1 1/8" Back 1 1/8" Mean pitch of stays 11 1/2" x 8 1/2"

Pitch across wide water spaces 14 1/2" x 8 1/2" Working pressures by rules 187 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 2 @ 8 1/2" x 3 1/4" Length as per rule 2'-6 1/8" Distance apart 8 1/8" Number and pitch of stays in each 3 @ 8"

Working pressure by rules 215 lbs Steam dome: description of joint to shell none % of strength of joint no

Diameter no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no

Pitch of rivets no Working pressure of shell by rules no Crown plates no Thickness no How stayed no

SUPERHEATER. Type none Date of Approval of Plan no Tested by Hydraulic Pressure to no

Date of Test no Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler no

Diameter of Safety Valve no Pressure to which each is adjusted no Is Easing Gear fitted no



