

REPORT ON MACHINERY.

No. 67151

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of writing Report 11th Feb 1915 When handed in at Local Office 11th Feb 1915 Port of NEWCASTLE-ON-TYNE

in Survey held at South Shields Date, First Survey July 22 1914 Last Survey Feb 3 1915
 Reg. Book. S. S. Larenberg (Number of Plates 30 + 8) Gross 3265
 on the S. S. Larenberg Tons Net 2003

Master Bakker Built at Capelle By whom built Tuijk & Zonen When built 1915
 Engines made at S. Shields By whom made E. J. Grey when made 1915

Boilers made at Hellburn By whom made Palmer Shipbuilding & Iron Co when made 1915
 Registered Horse Power 1450 Owners Stoom Maatschappij Hillegersburg Port belonging to Amsterdam

Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓
 Com. Horse Power as per Section 28 213

ENGINES, &c.—Description of Engines Triple Expansion Inverted No. of Cylinders Three No. of Cranks 3
 No. of Cylinders 2 1/2, 3 1/2 & 6 1/2 Length of Stroke 42 Revs. per minute 66 Dia. of Screw shaft 12 1/8 Material of Steel
 as per rule 12 1/8 as fitted 12 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
 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 54"

Dia. of Tunnel shaft 11 3/4 as per rule 11 3/4 Dia. of Crank shaft journals 12 1/8 as per rule 12 1/8 Dia. of Crank pin 12 3/8 Size of Crank webs 8 1/2 x 7 1/2 Dia. of thrust shaft under
 collars 12 3/8 Dia. of screw 16.0 Pitch of Screw 17.0 No. of Blades 4 State whether moveable No Total surface 83 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 6 x 4 x 6 x 8 1/2 x 10 1/4 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three 3 1/2" to fit at Capelle In Holds, &c. Two 3 1/2" in No. 1, Two 3 1/2" in No. 2.

No. of Bilge Injections 1 size 6" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room of size Yes, 3 1/2"
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible ✓ Are the sluices on Engine room bulkheads always accessible ✓

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 ✓

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 24-11-14 of Stern Tube 22-2-15 Screw shaft and Propeller 22-2-15

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine room platform
 BOILERS, &c.—(Letter for record S) Manufacturers of Steel See attached report on boilers

Total Heating Surface of Boilers 4490 Forced Draft fitted No No. and Description of Boilers Two, Single Ended
 Working Pressure 180 lb per sq in Tested by hydraulic pressure to 360 lb per sq in Date of test 29/12/14 No. of Certificate 8746

Can each boiler be worked separately Yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves Two
 each boiler Yes, direct spring Area of each valve 7.07 sq in Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Over 18" Mean dia. of boilers 15.3 7/16 Length 10.6 Material of shell plates Steel
 Thickness 3/16 Range of tensile strength 45,000 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams

long. seams ✓ Diameter of rivet holes in long. seams 3/16 Pitch of rivets 2 1/2 Lap of plates or width of butt straps 1 1/2
 Per centages of strength of longitudinal joint 85 Working pressure of shell by rules 180 Size of manhole in shell 18"

No. and Description of Furnaces in each boiler Two Material Steel Outside diameter 48"
 Length of plain part 10.6 Thickness of plates 3/16 Description of longitudinal joint Butt No. of strengthening rings Two

Working pressure of furnace by the rules 180 Combustion chamber plates: Material Steel Thickness: Sides 3/16 Back 3/16 Top 3/16 Bottom 3/16
 Pitch of stays to ditto: Sides 2 1/2 Back 2 1/2 Top 2 1/2 If stays are fitted with nuts or riveted heads ✓ Working pressure by rules 180

Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 1.5 Working pressure by rules 180 End plates in steam space ✓
 Material Steel Thickness 3/16 Pitch of stays 2 1/2 How are stays secured By nuts Working pressure by rules 180 Material of stays Steel

Diameter at smallest part 1 1/2 Area supported by each stay 1.5 Working pressure by rules 180 Material of Front plates at bottom Steel
 Thickness 3/16 Material of Lower back plate Steel Thickness 3/16 Greatest pitch of stays 2 1/2 Working pressure of plate by rules 180

Diameter of tubes 2 1/2 Pitch of tubes 2 1/2 Material of tube plates Steel Thickness: Front 3/16 Back 3/16 Mean pitch of stays 2 1/2
 Pitch across wide water spaces 2 1/2 Working pressure by rules 180 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 4" Length as per rule 10.6 Distance apart 2 1/2 Number and pitch of stays in each Two, 2 1/2"
 Working pressure by rules 180 Superheater or Steam chest; how connected to boiler By pipe Can the superheater be shut off and the boiler worked

separately Yes Diameter 10.6 Length 10.6 Thickness of shell plates 3/16 Material Steel Description of longitudinal joint Butt Diam. of rivet
 holes 3/16 Pitch of rivets 2 1/2 Working pressure of shell by rules 180 Diameter of flue 10.6 Material of flue plates Steel Thickness 3/16

If stayed with rings ✓ Distance between rings 2 1/2 Working pressure by rules 180 End plates: Thickness 3/16 How stayed By nuts
 Working pressure of end plates 180 Area of safety valves to superheater 1.5 Are they fitted with easing gear ✓

