

REPORT ON MACHINERY.

No. 6665

THUR. 16 SEP 1909

4.

Port of Belfast Date, first Survey 27 Aug 1908 Last Survey 14 Sep 1909
Received at London Office (Number of Visits 76)

Survey held at Belfast in Book on the S.S. Lucas Tench Gross 8039 Net 5086
When built 1909

Built at Belfast By whom built Holland & Wolff L^{rs} when made
By whom made when made

Registered Horse Power 823 Owners Robt S. Cas L^{rs} Port belonging to Liverpool
Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Triple Expansion of Cylinders 8 No. of Cranks 8
of Cylinders 22-31 1/2-46-65 length of Stroke 48 Revs. per minute 80 Dia. of Screw shaft 13 1/2 Material of screw shaft 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
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 4'-6"
Dia. of Tunnel shaft 12.3 as per rule 12.3 Dia. of Crank shaft journals 12.9 as per rule 12.9 Dia. of Crank pin 13 1/2 Size of Crank webs 24 1/2 x 9 1/2 of thrust shaft under
of Cranks 13 1/2 as fitted 12.8 Dia. of screw 5'-10" Pitch of Screw 20'-3" No. of Blades 3 State whether moveable Yes Total surface 6 1/2 sq ft.

of Feed pumps None Can one be overhauled while the other is at work Yes
of Bilge pumps one Diameter of ditto 28" Stroke 28" Can one be overhauled while the other is at work Yes
of Donkey Engines See above No. and size of Suctions connected to both Bilge and Donkey pumps
In Holds, &c. 9-3 1/2 6-2 1/2

Engine Room 4-3 1/2 4-2 1/2
of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump Pumps separate Donkey Suction fitted in Engine room & size 2 1/2 4 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 Both
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

How are they protected Wood casing
What pipes are carried through the bunkers Fauc well sustian 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
Dates of examination of completion of fitting of Sea Connections 31/5/09 of Stern Tube 12/5/09 Screw shaft and Propeller 31/5/09

the Screw Shaft Tunnel watertight States Is it fitted with a watertight door Yes worked from Main deck
MILLERS, &c.—(Letter for record 3) Manufacturers of Steel W. Colville & Sons L^{rs}

Total Heating Surface of Boilers 9280 sq ft Forced Draft fitted No No. and Description of Boiler 2-1/2 End of link
Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 28-4-09 No. of Certificate 418

Can each boiler be worked separately Yes Area of fire grate in each boiler 135 sq ft No. and Description of Safety Valves to
each boiler Triple-Drum of pair Pressure to which they are adjusted 215 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 5 ft Mean dia. of boilers 5'-6" Length 19'-0" Material of shell plates Steel
Thickness 1 1/2" Range of tensile strength 29-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam Lap 2 x 4

long. seams Butt Lap Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates on width of butt straps 23 1/2"
Per centages of strength of longitudinal joint rivets 96.9 Working pressure of shell by rules 249 lbs Size of manhole in shell 16" x 12"
plate 83.5 Working pressure of shell by rules 215 lbs Material Steel Outside diameter 45 1/2"

Size of compensating rings None No. and Description of Furnaces in each boiler 8-None Material Steel Outside diameter 45 1/2"
Length of plain part top 9" Thickness of plates crown 3 1/2" Description of longitudinal joint Weld No. of strengthening rings 27 on C.C. bottom
bottom 9" Working pressure of furnace by the rules 239 lbs Combustion chamber plates: Material Steel Thickness: Sides 5 1/2" Back 5 1/2" Top 5 1/2" Bottom 4 1/2"

Pitch of stays to ditto: Sides 8 x 7 1/2 Back 8 x 7 1/2 Top 8 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 227 lbs and plates in steam space:
Material of stay Steel Diameter at smallest part 1 1/2" Area supported by each stay 62 sq" Working pressure by rules 217 lbs Material of stays Steel

Material Steel Thickness 1 1/2" Pitch of stays 14 x 15 1/2 How are stays secured Nuts & Washers Working pressure by rules 255 lbs Material of Front plates at bottom Steel
Diameter at smallest part 2 1/2" Area supported by each stay 268 sq" Working pressure by rules 255 lbs Working pressure of plate by rules 218 lbs

Thickness 14-15 Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 14-15 Back 13 Mean pitch of stays 8 x 8
Diameter of tubes 2 1/4" Pitch of tubes 4" x 4" Material of tube plate Steel Thickness: Front 1 1/2" Back 1 1/2" Material of flue plates Steel Depth and
Pitch across wide water spaces 14" Working pressures by rules 335 lbs Girders to Chamber tops: Material Steel

thickness of girder at centre 9" x 7 1/2" Length as per rule 49 1/2" Distance apart 8 x 9" Number and pitch of stays in each 6-4 1/2"
Working pressure by rules 296 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
separately Yes 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

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